



In the shadow of state-led agrarian reforms: smallholder pervasiveness in rural China

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Abstract

Agricultural modernisation is a longstanding goal of China's Party-state. Since the early 2000s, it has pursued this goal through policies designed to facilitate land consolidation and support the expansion of large agricultural enterprises – 'New Agricultural Operators' (NAOs). In this paper we explore the effect of these policies on the livelihoods of a cohort of smallholder orange growers in the mountainous regions of Hubei province and the local political economy. An analysis of data from a 2019 survey of 266 households and interviews with villagers, agribusiness executives, cooperative leaders, and government officials, we find smallholder farmers are earning good incomes as independent commodity producers, withstanding attempts by local officials at land consolidation, and bypassing NAOs to self-determine their own modes of production and exchange. Our results speak to the ongoing debate about the future of smallholder farming in China, identify the strengths and limitations of recent state-centric analyses of agrarian transition, and re-iterate the pitfalls of the central government's agricultural modernisation agenda.

Keywords Agrarian change · Land reforms · China · Cooperatives · Agribusiness · Smallholder farmers

Introduction

Like most middle-income countries, smallholder farming is an enduring feature of China's agriculture. It is estimated that 200–300 million households each farm only a few hectares of land¹ (Cui et al. 2018). This is surprising given the mass migration of farmers off the land into cities during the last three decades, but can be explained, at least in part, by institutional restrictions on formal land transfers that have been in place since 1997² and the insecurity of life in China's cities that makes farmland an important form of social security. However, this restrictive institutional environment is changing to enable agricultural reform across the

country. Restrictions on land transfers have been formally loosened and powerful New Agricultural Operators (NAOs) such as agribusinesses, large family farms and cooperatives³ are beginning to replace small-scale farmers. According to Tang Renjian, deputy director of the central government's Rural Work Leading Group, "new industries and new types of businesses will become engines of rural development and increase the income of farmers" (Xinhua 2017). The State Council is focused on what it calls "supply side structural reform" (Xinhua 2017) to achieve "optimal allocation of agricultural production resources" (Xu et al. 2019). This involves the consolidation of farmland, scaling up of production, increased crop specialisation and vertical integration into supply chains.

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¹ According the Third Agricultural Census (2016) 2010 million agricultural households farm 0.65 Ha of land.

² The Central government made its first clear restrictions to land readjustments in its "Notice Concerning Further Stabilizing and Protecting the Rural Land Contracting Relationship" (1997) No. 16 (Document 16) issued on 27 August 1997 (FAO, n.d.).

³ Cooperatives are defined as "mutual-help economic organizations joined voluntarily and managed in a democratic manner by the producers and operators of the same kind of farm products or by the providers or users of services for the same kind of agricultural production and operation" (CCP, 2006).

This drive to modernise agriculture in China has a long and complex history. Throughout the socialist and market reform eras, tension has existed between fostering agricultural modernisation, urbanisation, and industrialisation, on the one hand, and improving the lot of rural households on the other. In the early years of the Chinese Communist Party (CCP), Mao undertook a radical redistribution of farmland, “to eliminate feudal, exploitative land ownership by landlords and implement peasant land ownership, so as to free the rural labour force, develop agricultural production, and open the way for the industrialization of New China” (cited in Zhou et al 2021: 5). Later, however, he returned to Marxist orthodoxy, collectivising agriculture on the grounds that small-scale farming was inefficient; fragmenting the countryside into small parcels of land that were incompatible with modern agricultural techniques (Zhan 2019; Zhou et al. 2021).

Under Deng Xiaoping’s market reforms, farmland was once again redistributed and re-fragmented and commercial farming allowed to expand under the Household Responsibility System. In 1996, the CCP Central Committee issued official guidelines encouraging agricultural industrialisation and the vertical integration of household farms by ‘dragon head’ agribusinesses (Zhang and Donaldson 2008), with contract farming seen as a ‘middle way’ of boosting efficiency whilst preserving the land rights of smallholder farmers (Zhan 2019).⁴ From the early 2000s, the CCP reallocated vast fiscal resources to the countryside to mitigate the longstanding ‘urban bias’ of its economic development strategy, increase rural standards, and bolster national food security (Ahlers 2014; van der Ploeg and Ye 2016; Zhan 2019). Nonetheless, it has maintained its commitment to agricultural modernisation, defined as the scaling-up, commercialization, professionalisation, and technological upgrading of farming practices in China (Zhang and Donaldson 2008; Ye 2015).

It is with this history in mind that we explore the response of smallholder orange farmers to current agricultural reforms in Hubei Province. We begin by describing the study site and our methods. We then present the central government’s recent agricultural reforms and the long-running debates about agrarian transition in China. The subsequent two sections present our empirical data. First, we analyse the livelihood strategies of the orange growers in our study villages, particularly their engagement with local NAOs. Next, we analyse the impact of rural reforms on the local political

economy, focusing on the changing relationship between villagers, local officials, farmers cooperatives and agribusiness. In doing so, we seek to contribute to the re-invigorated debate about the future of smallholder farming in China. The concluding section integrates our findings with extant literature and offers some reflections on contemporary Chinese agricultural policies.

The study site and methods

Our research was conducted in the Hubei section of the Three Gorges Dam region. Notwithstanding the severe environmental and social consequences of the Three Gorges Dam (see Wilmsen 2011 for discussion), this region has gone through extensive transformation in the last three decades. Under an extensive regional development plan accompanied by intensive state investment, an expressway, bridges, railway and logistics hub were constructed to facilitate the flow of goods, people and services. New special economic zones were also created, and land subsidies and reduced taxes were introduced to attract private investment to the region. To restore and develop rural livelihoods, the state fostered a specialised navel orange industry that would provide small-scale farmers with a decent living (McDonald et al. 2008). Through demonstration farms and training programs, smallholders were encouraged to cultivate higher-value orange varieties and adopt new cultivation techniques (at the expense of other crop types). Dragonhead agribusiness also received 50 million RMB (US\$7.4 million) in start-up funding from a ‘migrant industry development fund’ alongside tax breaks and land and electricity discounts to establish operation in the area. As a result, by the late 2000s, smallholder orange farming was firmly re-established on the slopes above the reservoir.

Against this backdrop, we studied three orange-producing villages in a county in the Three Gorges Dam region. By all accounts, the county had the hallmarks of actively progressing rural reform. Around 200 cooperatives had registered in the county with largest concentration located in the study township. And, in 2013 a cooperative in one of the three study villages (Zhongba village) signed a formal contract with a national-level dragonhead business (Chengzi), one of China’s largest fruit processing companies. The neighbouring study villages (Heba and Gaoba) have several small cooperatives but do not have formal contracts with agribusinesses. The three study villages are otherwise similar in terms of demographics, their reliance on orange production, and landholdings (Table 1).

This research employed a mixed-methods approach, which included a survey of farms, semi-structured interviews, and a review of secondary sources. The survey gathered data about household demographics, livelihood strategies, land transfer activities, and farmers’ interactions with

⁴ Zhan (2019: 3) also reminds us, “the contradiction between large farms and peasant production is certainly not new; it was a recurring phenomenon in Chinese dynastic transitions, during which the concentration of land often led to peasant rebellions, precipitating the fall of old regimes.”

Table 1 Overview of villages at study site (2018)

Village name	Heba	Gaoba	Zhongba
Population size	432 households	746 households	712 households
Sample size	74 households	99 households	93 households
Descriptive statistics			
Average no. of people in household	4.2	4.1	3.9
Average no. of people engaged in farming	2.0	2.0	1.9
Average age of farming person (years)	53.2	53.9	54.4
Highest level of education in HH is a high-school diploma or above	75.6%	63.6%	66.6%
Average land holdings (inc. rented land)	4.9 mu	5.1 mu	6.7 mu
Average land holdings per person (living most of the time)	1.7 mu	1.8 mu	2.6 mu

local NAOs between 2013 and 2018—the five-year period following the government’s 2013 policy reforms. The survey was conducted face-to-face in 2019 by eight post-graduate students working in groups of two, with every second farm in the locations sampled. If a house or facility was empty or the participant refused, the interviewers moved on to the adjacent house/facility. The survey took place during harvest season to maximise the number of people at home. The final sample is composed of 266 respondents spread across the three villages (Table 1).

The authors conducted follow-up, semi-structured interviews with 22 households in the villages. Interviews were also undertaken with the directors of the cooperatives in Zhongba and Gaoba villages (we could not locate a formal cooperative director in Heba), the director of the Chengzi agribusiness (which has a contractual relationship with the largest farmer cooperative in Zhongba village) as well as county, township and village officials. The interviews elicited information about local responses to recent policy changes, implementation barriers and local responses, and the relationships between villagers, local officials, and NAOs. The interviews also helped to contextualise the survey data.

Rural reform and smallholder farming in China

Recognising the complicated history of agricultural policy in China,⁵ in this paper we focus on how recent rural reforms and the central government’s pro-active support of NAOs are reshaping rural livelihoods in the study area. These reforms, which became official national policy in 2013, represent both a continuation and significant realignment of the Party-state’s longstanding commitment to agricultural

modernisation. Importantly for this case study, the 2013 policy announcements coincided with the signing of a sales contract between Chengzi agribusiness and Zhongba village, allowing us to directly observe the response of smallholder farmers to the changes in central government policy.

Since 2018, the central government has rolled out two important sets of policy reforms. The first set of reforms involve changes to China’s land tenure system. The Third Plenary Session of October 2008 stated that farmers would, henceforth, be permitted to subcontract, lease, exchange, and swap their land-use rights and enter joint-equity arrangements (Li 2009). In 2010, the No. 1 Document “Opinions on Scaling Up Integrated Urban–Rural Development” was released to accelerate the transfer of land use rights. This was followed in 2014 by the “Three Rights Separation,” which allowed farmers to transfer their ‘management rights’ (i.e. lease out their land) to other entities. Under the new system, ‘contracting rights’ remain in the hands of rural households and ‘ownership rights’ in the hands of the village collective (Wang and Zhang 2017). Other reforms have been implemented to encourage the development of the rural land market, such as regulations allowing farmland to be used as collateral for loans and a national land titling program in 2018 (Cheng et al. 2019). A wide range of government agencies have been established to facilitate land transfer from smallholders to larger enterprises (Trappel 2015).

A second set of reforms seek to promote the upscaling and modernisation of agricultural production. Since the 1990s, the central government has supported ‘dragonhead’ agribusinesses and farmers cooperatives through a range of fiscal transfers and other policy measures (Huang 2011). The 2013 No.1 Policy Document expanded this strategy, targeting four types of ‘new agricultural operators’— dragonhead enterprises, farmers cooperatives, family farms, and specialised households (Ye 2015). A central aim of these reforms is to promote a new class of ‘professional’ farmers (State Council 2016). In 2015, the agricultural subsidy program was overhauled, channelling additional resources into the

⁵ For more detailed discussions of the evolution of land tenure reforms see Li (2009); Ye (2015); Xue et al. (2021), Zhou et al. (2021).

NAO sector (Zhang and Zeng 2021a; Trappel 2021). Enterprise size is a key criterion for being certified as an NAO and being able to access government grants, subsidies and cheap credit.⁶ By 2017, 129,000 agribusinesses (accounting for a third of total agricultural production), 877,000 (large) family farms, and 1.9 million farmers cooperatives⁷ had been registered (Huang and Liang 2018). In 2021, the central government reaffirmed its commitment to supporting ‘new agricultural operators’ (Trappel 2021).

Rural households have benefited from the raft of policies implemented since the early 2000s aimed at bolstering food security and redressing the longstanding ‘urban bias’ of the Party-states’s national development strategy (Ahlers 2014; van der Ploeg and Ye 2016; Zhan 2019). For example, between 2003 and 2006, all agricultural taxes were eliminated—a historical event given this form of agricultural tax had been collected in China for over 2000 years (Ye 2015). Smallholder farmers also benefited from the introduction of range of new agricultural subsidies, including the direct grain, quality seed, and agricultural machinery subsidies (Zhan 2019). And as part of its Building the New Socialist Countryside (BNSC) initiative, the government invested heavily in the rural welfare system and rural development more broadly (van der Ploeg and Ye 2016; Zhan 2019). The reallocation of fiscal resources has been enormous. Between 2008 and 2017, Zhan (2019) estimates more than 20 trillion yuan (3.1 trillion US dollars) has been channelled into the countryside.

Nonetheless, NAOs have been the biggest beneficiaries of the central government’s largesse (Yan and Chen 2015; Trappel 2021; Zhang and Zeng 2021a). This is justified, in part, with reference to their *daidong* (or ‘bring along’) function – the notion that NAOs will assist small and ‘backward’ farms to up-scale and ‘modernise’ (Trappel 2021). Meanwhile, by creating a market-based mechanism for transferring land, the government hopes to consolidate farmland in the hands of the ‘most efficient’ agricultural producers. It argues the expansion and clarification of property rights will assist rural households to unlock the wealth embedded in their farmland—an argument reminiscent of free-market economists like de Soto (2000). Nonetheless, the overarching policy framework nudges smallholder farmers to either

up-scale and modernise or exit farming altogether (Bush and Martinello 2017; Xue et al. 2021; Zhou et al. 2021). Meanwhile, the government has increased competition for farmland by encouraging urban residents and businesses to relocate and invest in the countryside. The Rural Entrepreneurship Initiative, for example, is estimated to have helped 7 million migrant workers find work in agriculture or rural industry (Xue et al. 2021).

Scholars have raised concerns about the effects of recent rural reforms on smallholder farmers. Some worry that the new ‘three-rights’ land tenure system dilutes important legal protections and exacerbates power imbalances between rural households, local officials and agribusiness, thereby increasing the risk of expropriation through moral suasion, collusion and deception, and outright fraud (Ye 2015; Zhou et al. 2021; Zhang 2021). Others argue even when rural households trade away their land rights ‘voluntarily’, pervasive information asymmetries, high transaction costs, and the immature land markets mean they are unlikely to receive a ‘fair’ market price (Wilmsen 2016; Zhou et al. 2021; Rogers et al. 2021). Others warn liberalisation may exacerbate inequality and impoverishment in both the cities and the countryside, pointing to the important ‘social safety net’ function that farmland plays in China, especially when off-farm sources of income are lost (Wilmsen 2016; Day and Schneider 2018; Zhan 2019). Other studies demonstrate how the central government’s support of NAOs generates perverse political and economic incentives and creates an uneven playing field within China’s agricultural sector (Ahlers 2014; Trappel 2021; Zheng and Zhen 2021a).

The fate of smallholder farming in China: a literature review

Recent rural reforms have re-invigorated the long-running debate about the fate of smallholder farming in China. Yan and Chen (2015: 388), for example, see in recent policy changes “a high-profile signal of the intensifying de-peasantization tendency in the Chinese government’s agrarian policy today... (which) has existed since the beginning of the rural reform.” Whilst accepting this as a general tendency, others caution against over-attributing government policy to a cohesive ‘grand narrative’ (Hayward 2017), pointing to the existence of strong pro-peasant voices inside the Party and the bureaucracy, the limits on central power in China’s multi-level governance system, the increased government support for rural households under the BNSC initiative, and repeated statements from the central government that a vibrant smallholder sector is an important component of

⁶ For example, in 2012, the average landholding of the new category of ‘family farm’ was 200 mu (Gao et al. 2014 cited in Zhang 2015) compared to the national average for a rural household of 9.75 mu in 2016 (Xue et al. 2021). ‘Family farms’ are defined as family-run enterprises engaged in farming that may also be engaged in other service-based activities, such as tourism, while ‘specialised households’ encompass professional farming operations that do not legally qualify as companies.

⁷ Although many of these cooperatives are of questionable economic significance (see Wilmsen et al. 2023).

its long-term development vision⁸ (Sargeson 2012; Ahlers 2014; van der Ploeg and Ye 2016; Si et al. 2019; Zhou 2019, Gu 2022).

The rate of ‘depeasantization’—a twofold process of “there being less farmers and agriculture being less peasant-like” (van der Ploeg 2016: 236)—also remains an open empirical question, so too the relationship between increasing land transfers and the exit of smallholder farmers. National-level studies estimate between 20 and 37 per cent of total farmland has been transferred since tenure reforms began, with this number increasing steadily (Zhan 2019; Rogers et al. 2021; Trappel 2021).⁹ Geographical differences in the rate of land transfers further complicates this picture, with higher rates observed in those areas suitable for broad-acre agriculture compared to western provinces and more mountainous areas of China (Zhan 2019; Rogers et al. 2021). Zhan (2019) reports only 10% of total land transferred went to agribusinesses and points out that 70 per cent of the farmland in China is still farmed by households. Ji et al. (2016) finds average farm size increased by only 5 percent between 2007 and 2013.

There is general agreement; however, that smallholder farming remains a critical component of China’s agricultural sector and that rural households are important sites for social reproduction. For example, while agriculture accounts for only 7.5% of gross domestic product, the countryside still accounts for 44% of total employment (including non-farming jobs) (cited in Zhang and Zeng 2021a). Webber (2008: 310) concludes, “the countryside is still stubbornly dominated by independent commodity producers”. Likewise, Huang et al. (2012: 147–8) state ‘there can be no question that family farming has remained predominant.’ This begs the question: how has smallholder farming remained so pervasive given the heavy-hand of the state and market forces have been pushing in the direction of ‘agricultural modernisation,’ land consolidation, and urbanisation for the past forty years?

Much of the literature grappling with this question is framed using classical Marxist concepts. A large literature on land grabbing, development-induced displacement, and peasant resistance in China builds on the concepts of ‘primitive accumulation’ and ‘accumulation by dispossession’ (Sargeson 2012; Zhan 2019). An important sub-set of this literature explores how rural livelihoods are disrupted by large infrastructure projects, such as the Three Gorges Dam project (see Wilmsen 2018; Webber and McDonald

2004). These studies demonstrate forced displacement and land expropriation are serious problems in rural China. Other studies, however, argue these Marxist concepts fail to capture the broader dynamics of agrarian transition in China, in large part, because most rural residents have exited farming ‘voluntarily’ to take up better paid off-farm jobs, rather than being displaced by the contrivances of local officials and private capital (see Bernstein 2015; Webber 2008, 2012; Sargeson 2012; Ye 2015; Zhan 2019; Zhang and Zeng 2021a). Hart (2002) and Arrighi (2009) argue the notion of ‘accumulation *without* dispossession’ better captures the (mostly) non-coercive nature by which rural residents leave the land in China and the improved living standards enjoyed by many who exit farming (see Gu 2022). Here, the protections afforded rural households by China’s land tenure system also play an important intermediary role (Zhang and Donaldson 2013).

Another classical Marxist concept—semi-proletarianisation—may also explain the persistence of smallholder farming in China (Kautsky 1899). The high and still-increasing level of semi-proletarianisation is reflected in national workforce data. For example, using 2015 data, Sun et al. (2021) found 46% of rural households were ‘wage-employment oriented’, 7% were ‘half-employment-half-farming-orientated’, and 31% were ‘farming-oriented.’ Importantly, ‘farming-oriented’ households derive 97% of their income from farming activities. Other studies find individuals with low educational attainment are less likely to secure off-farm work (Xu et al. 2019; Gu 2022; Sun et al. 2021). These studies demonstrate that the livelihoods of many older and less-educated rural households remain entirely dependent on small-scale farming.

The persistence of smallholder farming can also be explained with reference to other Kautskian insights. For example, some Chinese landscapes and crop types are best suited to small-scale, labour-intensive cultivation techniques (Hayward 2017). This may also explain the low rates of land transfer observed in mountainous regions of China (Rogers et al. 2021, 2022). Kautsky (1899) also argued smallholder farmers often survive through ‘underconsumption’ and ‘excessive labour.’ “Kautsky sees the smallholder as functional to capital,” with agribusiness happy to purchase the ‘under-priced’ output of smallholder farmers (Levien et al. 2018: 859). Subsumption and class differentiation within the Chinese smallholder sector remain topics of ongoing research.¹⁰

Other explanations directly challenge the assumptions about the inherent inefficiency of smallholder farming and

⁸ For example, see the 2018 and 2019 No. 1 Document of the Central Committee of the State Council.

⁹ The task of assessing the real rate of change is also complicated by divergent assessments of the level of total land transfer and the high level of informal transfers in 1990s and 2000s.

¹⁰ For instance, see Zhang & Donaldson 2008; Huang et al. 2012; Yan & Chen 2015; Ye 2015; Schneider 2017; Zhang and Zeng 2021a&b.

the returns from at scale farming embedded in classical Marxism and Modernisation theory.¹¹ van der Ploeg and Ye (2016: 244) argue that the Chinese case reveals “labour-driven intensification can achieve productive results that are comparable, if not superior, to those resulting from technology-driven intensification.” Zhan (2019), for example, points to the remarkable productivity gains achieved by Chinese agricultural sector: “An apparent irony is that grain production had grown consecutively in official statistics for 12 years from 2004 to 2015, when most of the farmland was still cultivated by the members of small farm households, including women and the elderly. In other words, it was the so-called weak and old who contributed to the remarkable increase in grain production.”

In a similar vein, Xue et al. (2021) argue the Chinese government’s scaling-up and land consolidation policies have done little to lift rural incomes or address environmental issues. Others go further, contending smallholder farmers do not conform with the ‘logic of capital’ embedded in classical frameworks (Huang et al 2012; van der Ploeg 2013). Here, the work of another early Marxist writer, Alexander Chayanov (1925), is an important theoretical touchstone. As summarised by Watts (2021): “Chayanov emphasized two things: that the family farm was not a capitalist enterprise and operated on a different logic; and that a system (an economy) constituted of peasant farms ought to be treated as a separate form of economy, a non-capitalist national economy...”.

Working in this tradition, van der Ploeg and Ye (2016) argue farmland is valued by Chinese households not only for its capacity to generate income and rent, but also for its ability to provide food for self-consumption and a ‘safety net’ for the family – that is, as an asset around which *inter-generational* livelihood strategies are planned. The neo-Chayanovian perspective pays particular attention to the role of farming and land ownership in the construction and perpetuation of peasant identities, including those of family members living and working in the cities. These identities, in turn, influence class positions and political affiliations. “Thus, peasants consider themselves to be part of wider

society – but a very specific part: they represent the underprivileged, the ones suffering deprivation, those who are still (at least partly) excluded from the riches and welfare that are concentrated in the cities” (van der Ploeg and Ye, 2016: 17).

The neo-Chayanovian perspective complicates the interpretation of the widespread circular migration and semi-proletarianisation observed in the Chinese countryside. First, it challenges the Marxist/Kautskian notion that the survival of small farms through semi-proletarianisation and self-exploitation is concomitant with their subsumption by agrarian capital (see Huang 2015; Yan and Chen 2015; Dixon 2020). For example, van der Ploeg and Ye (2016) argue peasant farmers often survive through ‘distantiation’; insulating themselves from agribusiness and the vagaries of the market by farming ‘economically’, selling locally, engaging in part-time off-farm work, and minimising their reliance on debt and other external inputs (see also van der Ploeg, 2010; McMichael 2020). This strategy also constitutes a subtle form of peasant resistance (van der Ploeg and Schneider 2022; van der Ploeg et al. 2022a, b). Further complicating this picture, Si et al (2019) find more than 60% of farming households in China engage in high-input, market-oriented production *alongside* low-input (or ‘ecological’) production for self-consumption – something they call ‘one family, two systems.’

An important set of recent studies focus on the unique role the state has played in China’s agrarian transition, pointing to its high capacity to implement rural development programs, build rural infrastructure, and create ‘real’ markets (Zhang 2013; Hayward 2017; Zhan 2019; Zhang and Zeng, 2021a). Marxist and neo-Chayanovian analyses, alike, emphasise the importance of efficient transport networks in facilitating the participation of smallholder farmers in ‘peasant markets’ (van der Ploeg et al. 2022a, b) as well as their subsumption and integration into global commodity markets (McMichael 2020; Zhang and Zeng, 2021b). These accounts demonstrate the fate of smallholder farming in China is determined as much by the priorities of the state as the ‘logic of capital.’ For example, van der Ploeg and Ye (2016: 245) argue, “recent Chinese history shows that an initial ‘urban bias’... can be converted into a policy that supports farming.” In a similar vein, pointing to Japan’s and South Korea’s success in the smallholder sector, Zhan (2019) contends a similar state-supported ‘industrious revolution’ is possible in China.

Recent state-centred studies pay particular attention to the unique role the Chinese government plays in the allocation of capital. This body of work explores how the generous support provided to NAOs and the central government’s increased reliance on “a top-down, campaign-style approach to implement its rural reform policies” (Xue et al. 2021: 281) is reshaping agricultural production and inter-governmental relationships (Zhang 2015; Gong and Zhang

¹¹ A full discussion of shared assumptions of classical Marxism and (neoclassical) Modernisation theory with regards to the inherent inefficiency of small-scale farming, the natural progression of agrarian transition, and the economic drivers of rural–urban migration are beyond the scope of this paper. But as summarised by Levien et al. (2018: 856), these “orthodox, ‘stagist’ assumptions... turned many Marxists into the B-team for modernization theory.” It is also important to note that much of the agricultural policy of Western countries, international development institutions, and China in the post-WWII period was built upon these ‘classical’ assumptions (for example, see Watts 1989; Cornwall and Brock 2005; Wood 2009; Akram-Lohdi and Kay 2010; McMichael 2009; 2012; 2020; Moyo et al. 2013; Sexsmith and McMichael 2015; Spann 2017; van der Ploeg 2018).

2017; Zhang and Zeng 2021a&b; Trappel 2021; Zhou et al. 2021). A key focus, here, is understanding how NAOs and lower-level officials interpret, adapt and subvert the central government's guidelines and policies whilst qualifying for fiscal transfers. Zhang and Zeng (2021a: 680) introduce the concept of 'politically directed accumulation' (PDA) to capture the process by which "local states in China, driven by a political logic of maximizing fiscal resources and improving performance record, select actors who either have accumulated non-agrarian capital or possess political capital to serve as their agents (political selection) and then capitalize their farming enterprises by transferring to them public resources (political capitalization), thrusting them into the ranks of the agrarian capital class."¹²

These recent state-centred analyses are important for several reasons. First, they invert the classical Marxist framing of the state as the handmaiden of the capital class and, in doing so, further problematise neoclassical models of market-driven agrarian transition. Second, they provide nuanced accounts of the limits of state power and, in doing so, create space to consider less confrontational forms of resistance by smallholder farmers to the central government's modernisation agenda, such as foot-dragging, dissimulation and false compliance (Akram-Lodhi 2014), collusion and bargaining with local officials (Zhang and Zeng 2021a; Trappel 2021), and 'distantiation' (van der Ploeg and Ye 2016). Third, they suggest new possibilities and obstacles for the persistence of smallholder farming that are difficult to imagine using the lens of classical theory or when assuming the existence of an all-pervasive authoritarian state (McMichael 2006; van der Ploeg and Douwe 2008; Sargeson 2012). In short, they invite us to take the local political economy of agrarian transition in China seriously.

Findings

Rural livelihoods and NAOs

NAOs play an important role in the modernisation agenda by facilitating technology transfers, land consolidation, and the vertical integration of smallholder farmers. In this section, we analyse the livelihood strategies of the smallholder farmers in our three study villages with a particular focus on their engagement with commodity, labour and land markets and local NAOs.

The survey data reveals orange production is the economic cornerstone of most livelihood strategies in our three

study villages, with 93.2 percent of households reporting that agriculture was their primary source of income. 33.5 percent of households reported off-farm work as a secondary source of income, with 53.8 percent reporting no secondary source at all (Table 2 & 3). Reliance on off-farm work is, therefore, low by Chinese rural standards (see Xu et al. 2018; Sun et al. 2021). Nonetheless, these farmers are earning good incomes (Table 4). In 2018, average income per person was between 18,890 RMB and 21,526 RMB. To put this in context, the national 'middle income' in 2018 was 23,189 RMB per capita (NBS 2019). Average real income also grew 107.4% between 2013 and 2018 -more than double the rate for rural households in central China (Ibid). The villagers remarked in interviews on how lucrative orange production has been. To emphasise the value of orange production one villager said, 'to tell you the truth, in recent years, every household in our village has earned at least 100,000 yuan a year, and they can't earn so much money working outside.'

Nearly all the rural households in the sample (97.7%) reported employing external labour during the year (Table 5). The most common method was to hire other villagers (57.7%) or labourers from outside the village (42.3%), however, significant variations are seen between the three villages. NAOs play a small role in the provision of external labour, with 13.9% of households reporting they access labour via an agribusiness. No households, however, report accessing external labour via farmer cooperatives. Although many households draw on external labour, this is limited mainly to harvest times. Nor does external labour constitute a large cost of production. Average annual expenditure on fertilisers and pesticides is nearly double that for labour, with all these expenditures low relative to household incomes (Table 6). In summary, the smallholder farmers in our sample are best described as independent commodity producers whose livelihood strategies rely to a limited degree on off-farm work and external inputs of casual labor and other factors of production.

The survey gathered a range of data about land leasing activity in the previous five years, including the amount of land transferred, the prices paid or received, and whether the transfers were formal or informal. Across all three villages, only six households (of 266) leased *in* land in the past five years. No households leased *out* land. Of the six households that leased *in* land, the average size was small (2.5 mu), the land was leased from relatives, and only two signed a formal lease agreement. The most common reason for *not* leasing land is that there was no land available to lease (76 percent of households). Meanwhile, the main reason for not leasing land *out* is because farming is more profitable than working off-farm (82 percent of households). According to our interviews with farmers, local officials and NAOs, the biggest impediment to leasing out is that the high price demanded

¹² They also point to the limitations of Marxist concepts such as 'accumulation by dispossession' and 'capitalism from above' and 'below' in capturing key aspects of agrarian transition in China, and argue the 'question of capital' is far from resolved, contra Bernstein (2004 2006).

Table 2 Primary source of household income

Village	Agriculture (%)	Off-farm work	
		Inside village (%)	Outside village (%)
Heba	95.9	1.4	4.1
Gaoba	89.9	2.0	8.1
Zhongba	94.6	3.2	2.2
Total	93.2	1.9	4.9

Another township official said, although the government is under central government instruction to transfer land, the farmers are reluctant as orange land is too valuable, and older people don't want to give up their land.

These results suggest NAOs have not yet been successful in effecting land consolidation in this area. Perhaps, then, they have contributed to the government's modernisation agenda by facilitating vertical integration of smallholder farmers? The survey results, however, reveal only 1.5% of all households sell their produce through an NAO (see Table 7). Surprisingly, no households in Zhongba village reported

Table 3 Second most important source of household income

Village	No secondary source of income (%)	Agriculture (%)	Off-farm work		Remittances (%)	Welfare payments, agricultural subsidies & other (%)
			Inside village (%)	Outside village (%)		
Heba	45.9	6.8	13.5	28.4	4.1	1.4
Gaoba	59.6	10.1	8.1	19.2	2.0	1.0
Zhongba	53.8	4.3	9.7	23.7	5.4	3.3
Total	53.8	7.1	10.2	23.3	3.8	2.0

Table 4 Average household incomes, 2013 and 2018

	Heba	Gaoba	Zhongba	Total
Gross income, 2013 (RMB)	37,784	30,576	32,913	33,400
Gross income, 2018 (RMB, 2013 prices)	67,706	68,534	71,482	69,334
Real income growth (2013–2018)	79.2%	124.1%	117.1%	107.36%
Nominal income per person, 2018	18,890	21,154	21,526	20,654

Table 5 Labour markets

Village	HH uses outside labour sometime in year (%)	Sources of labour					
		Family/friends help for free (%)	Other villagers help for free (%)	Hire other villagers (%)	Hire outside labourers (%)	Agribusiness hires and pays for labourers (%)	The cooperative hires and pays
Heba	95.9	2.8	4.2	64.8	47.9	0.0	–
Gaoba	97.0	2.1	1.0	44.8	52.1	15.6	–
Zhongba	100.0	4.3	7.5	65.6	28.0	12.9	–
Total	97.7	3.1	4.2	57.7	42.3	13.9	–

NB Some households reported more than one type of external labour

by farmers. As the manager of a provincial-level dragonhead agribusiness explained:

The cost of land transfer in the Three Gorges is around 6000 RMB per mu, but I can lease dryland in Huangri at 3000 RMB per mu. Even if it is 4000 RMB per mu we can still make money. However, it must be mechanical, we can't make money employing farmers.

selling to an agribusiness or cooperative, despite this village have a formal relationship with Chengzi. Most villagers (92.2%) sell their produce through middlemen who visit the villages, with 98.1 percent of all households reporting having sales agreement with a middleman or other intermediary. Of these, 96.6% were oral agreements. The main reason cited for having these (mostly informal) sale agreements was

Table 6 Expenditures

Village	Most important HH agricultural expenditure				Average annual expenditure (yuan per mu)	
	Hired labour (%)	Land rent	Machinery (%)	Other (%)	Fertiliser and pesticide	External labour
Heba	5.6	–	15.5	78.9	2489	1423
Gaoba	14.0	–	7.5	78.5	2091	1296
Zhongba	8.6	–	1.1	90.3	2257	1190
Total	9.7	–	7.4	82.9	2260	1294

NB The ‘other’ category captures mostly purchases of fertilisers and pesticides

Table 7 How does the household sell its agricultural produce?

Village	Middleman (%)	Farmers market (or side of the road) (%)	Online by ourselves (%)	Through an agribusiness (%)	Through cooperative (%)	Other (%)
Heba village	88.5	1.3	3.8	3.8	1.3	1.3
Gaoba village	94.2	0.0	4.8	0.0	0.0	1.0
Zhongba village	92.9	0.0	7.1	0.0	0.0	0.0
Total	92.2	0.4	5.3	1.1	0.4	0.7

NB Some households provided more than one response

to secure higher (74%) or more stable prices (27.4%). No households reported entering sales agreements at the behest of agribusinesses or cooperatives. These results suggest the vast majority of villagers sell their produce through trust-based ‘traditional channels’ (see Huang et al. 2008), with a handful (5.3%) selling independently online (see van der Ploeg et al. 2022a, b).

These findings were corroborated by our field interviews. A female farmer in her 40s from Zhongba village explained to us:

Our household sells to a middleman from Jiangxi province that I know through my local agent. We sell different varieties to different middlemen and the middlemen vary from year to year. There are many local agents and I know and trust them. The relationship to them is important.

The interviews with the manager of Chengzi, the Zhongba village leader, and households provided another explanation for why farmers do not sell through the local NAOs, namely, there is a mismatch between the expensive, fresh-for-consumption type of oranges now being produced by the Zhongba villages and the small cheap oranges demanded by a food processing company. Indeed, even for members of the Zhongba cooperative, only 30% of their production was sold to Chengzi (interview with head of cooperative).

We also explored other mechanisms through which local NAOs may be furthering the government’s modernisation agenda. One possible mechanism is through NAOs

intermediating access to information about crop prices, farm inputs, sales channels and the like. The survey data reveals middlemen are the main source of this information (73.4%), especially in Zhongba village (92.7%), followed by friends and relatives (17.8%), with NAOs, once again, playing a minor role (See Table 8). When we asked a 57-year-old male farmer from Heba what varieties of oranges he is growing he said, ‘we are currently switching from Luoqi and Hongqi to Lunwan variety as according to the middleman – the market is changing’. Here, again, we see the important role middleman also play in providing market information and shaping cultivation choices.

Another mechanism for the subsumption of rural households by NAOs is through the provision of credit. The survey data reveals 44.7 percent of households borrowed money in the previous five years. But of those who borrowed money, 73.9 percent reported borrowing money from relatives (i.e. informal channels) as opposed to a financial institutions (39.5%), a farmers cooperative (1.7%) or an agribusiness (no responses). This result also demonstrates the limited degree to which these farmers’ livelihood strategies rely on access to external finance.

The government also pursues its agricultural modernisation agenda through the provision of agricultural technology. The survey gathered data about the technologies used by households (cold storage, weather instruments, orchard netting, irrigation, rainwater collection etc.) and their sources. Most households (89.5%) report accessing technology independently through purchasing from township agricultural

Table 8 Main source of information about crop prices, farm inputs and sales

	Middleman	Friends or relatives	Village officials/ farmer co-op	Agribusiness	Township government	Other
Heba	50.4	14.2	0.9	3.5	0.0	3.5
Gaoba	82.6	16.5	0.9	0.0	0.0	3.7
Zhongba	92.7	24.4	2.4	0.0	1.2	12.2
Total	73.4	17.8	1.6	1.3	0.3	5.9

NB Some households provided more than one response

supply stores and online suppliers. A small percentage of household report accessing technology from the government (7.1%) or a cooperative or agribusiness (3%). A final important mechanism through which the government seeks to promote agricultural modernisation is the provision of training programs. The survey data reveals that 43.6 percent of households received orange-related training in the previous five years. Most of this training was focused on improving farming techniques (84.5%) followed by market-related training (6%). The training was commonly provided by the village committee (55.2%), followed by government agencies (township-level and above, 18.10%), fertiliser and pesticides companies (16.4%), and farmer cooperatives (6.9%). In short, NAOs play a limited role in the provision of technology and training in the study villages; however, the government, particularly the village level, is aiding in the resilience of smallholder farmers through its training initiatives.

Why are smallholders persisting in the Three Gorges?

The previous section suggests local NAOs play a peripheral role in the evolving livelihood strategies of villagers and furthering the government's modernisation agenda (Huang et al. 2012; Zhang 2013). These results are surprising given we selected our three study villages precisely because they specialise in the production of a single commodity, NAOs have a strong local presence (particularly in Zhongba village), and the state has a long history of intervening in the development of the local and regional economy. Recent studies, however, argue the proliferation of NAOs is driven more by the political logic of conspicuous (and mock) compliance than 'market forces' (Zhang 2015; Zhang and Zeng 2021a; Trappel 2021; Xue et al. 2021; Zhou et al. 2021). A key focus of this literature is understanding how lower-level officials and agribusiness owners go about advancing their own career prospects by qualifying for government grants, subsidies, and cheap finance. Our field research uncovered evidence of these dynamics at play in the three study villages.

One area this was evident was in the formation of farmer cooperatives. The major motivation cited by village

leaders and township- and county-level officials for forming new cooperatives was to access government subsidies as well as technological support and training programs. The interviewees also noted many of the cooperatives were run to serve individual, rather than communal, interests. Some interviewees noted that local cooperatives did not meet the central government's own criteria for official recognition. We interviewed one county-level official who was responsible for certifying local cooperatives. He said that in future they would begin 'eliminating' cooperatives that did not meet the government criteria whilst assisting marginal cooperatives to either 'satisfy the standard' or convert into a 'family farm' (i.e. because the selection criteria to qualify for this category of NAO is less stringent). Our interviews revealed government officials increasingly define 'real' cooperatives as being commercially-oriented, contributing to the advancement of the orange industry, and having local leaders with shareholdings in the enterprise.

The Zhongba cooperative epitomised this new type of farmer cooperative. It was established in 2009 by the village Party Secretary, whose father held the same position before him. Interviewees described this man as young, charismatic and having good political connections within the Party. According to a Chengzi executive, these personal characteristics were a key reason why the agribusiness chose to partner with this cooperative in the first place. The leader of an adjacent village told us he had also tried to enter a similar partnership with the agribusiness, but failed because of Zhongba's long history of strong entrepreneurial leadership.

Originally, membership of this cooperative was dominated by local farmers, who paid 1000 RMB to join and enjoyed equal decision-making status. But, according to the village (and cooperative) leader, this structure proved unworkable. Subsequently, the cooperative shifted to a more hierarchical, shareholder-based model. Ten major shareholders invested 270,000 RMB in the restructured entity for a combined 51% stake. Five of the major shareholders are Party members, some of whom are family relations of the village secretary. The village leader, himself, contributed 120,000 RMB for his 25% shareholding. The shareholders now sell their oranges to the agribusiness and share in RMB 80,000 in dividends per year. Under the new

governance structure, the major shareholders decide how the cooperative is run, and many former members have left. The county government approved this new structure and has provided funding to support its orange-industry development activities. This finding aligns with research in other parts of China that observes cooperatives acting as defacto shareholding businesses controlled by local elites (Hu et al. 2017; Liang et al. 2015; Gong and Zhang 2017).

The villagers also commented on the changing character of the local cooperatives. One villager told us, “To set up a cooperative you need to have a good relationship with the township or county government”. Another woman said the leaders of the small cooperative in her village looked after themselves, not the farmers. One farmer complained the local cooperative did not help villagers sell their produce—a core function of farmer cooperatives in China, historically. These comments help explain the low levels of membership observed in three villages (for a more detailed discussion of changing role of cooperatives and family farms in the area, see Wilmsen et al. (2023).

Our interviews uncovered other examples of political selection and credentialism (Zhang and Zeng 2021). In one case, the Zigui county government received 20 million RMB (US\$2.9 million) from the central/provincial government to field test a new drip irrigation system for orange orchards. One farm in the study area was chosen as a demonstration site for this new technology. Under another initiative, the same farm received a 23,000 RMB subsidy (US\$3,387) to purchase a new track-and-cart system designed to speed up the harvesting and transportation of fresh oranges. The owner qualified for this state support because he had recently received accreditation as a ‘family farm’ operator from the county government. He qualified for this designation after acquiring land from a defunct state-run farm in the area. The owner of this ‘family farm’ was the father of one of the township officials we interviewed.

A combination of political selection, credentialism, and conspicuous compliance also explains the ongoing agribusiness-cooperative partnership in Zhongba village (i.e. despite most of the local villagers choosing to sell their oranges elsewhere through middlemen). Dragonhead status is a prestigious designation that attracts government subsidies (Schneider 2017). A company must be invited by the provincial government to apply, and as part of the application process the company must meet certain criteria set by the local government for profit, scale etc. and must show it is working with local farmer cooperatives and smallholder farmers to promote agricultural modernisation (Wuhan government 2017). A good example of this was Chengzi’s decision early to establish a ‘model farm’. This farm was used to demonstrate a new low-density planting method that increased orange output per tree. This cultivation technique was soon adopted by all the villagers in the area. The Chengzi

executive told us the company was also collaborating with scientists from Huazhong University of Science and Technology in Wuhan to improve fruit processing techniques and lower pesticide consumption to meet export standards. These collaborations produced economic and political benefits for Chengzi even though they did not increase the local supply of cheap oranges for its fruit processing operations. Indeed, at the time of our interviews, Chengzi had just received its certification as a national-level dragonhead business.

Land consolidation is another critical element of the central government’s modernisation agenda. Our survey data, however, reveals no households in our sample leased out land in the previous five years. Our field interviews, however, revealed NAOs in the area had acquired additional land through other means (e.g. the aforementioned ‘family farm’). The cooperative and agribusiness in Zhongba also made one particularly interesting – and, ultimately, unsuccessful – attempt at leasing land from smallholder farmers. When this partnership was first established, the cooperative organised the transfer of 1035 mu of land from villagers to the agribusiness. The land transfer contract was drafted by county-level officials in accordance with national guidelines. The original plan was to use this land to experiment with different orange varieties, growing techniques, and agricultural technologies, with local people paid to work on the land. Management rights were assigned to the agribusiness for 20 years. The original agreement involved local landholders being paid 5000 RMB per mu per year for their land. However, as the value of agricultural land in the area rose, the farmers started demanding returns (8000 RMB per mu p.a.) for their land. Furthermore, some of the villagers we interviewed claimed the cooperative failed to pass on all the money they were owed. Eventually, rising leasing costs combined with the difficulty of administering the leases through the cooperative made the original agreement unattractive for Chengzi and, in 2015, it agreed to return the land management rights to the local villagers.

Other Kautskian factors also militate against land transfers and subsumption of smallholder farmers by NAOs. For example, orange orchards require close monitoring and the careful application of inputs to flourish. In mountainous locations like the Three Gorges, microclimates can vary over short distances. Therefore, local knowledge combined with tree-by-tree interventions are required to successfully grow the different varieties of high-value orange varieties (for a more detailed discussion of this issue, see Rogers et al. 2022). All of this makes oranges particularly well-suited to small-scale cultivation by the older farmers who live on-site.

Our field research results therefore suggest the state’s support of NAOs has not led to land transfers or significant reorganisation of smallholder’s production. This raises the question: what does the future hold for the small-scale orange producers in this part of the Three Gorges? Our field

research revealed opposing views on this issue. Local and county government officials viewed land consolidation and the exit of smallholder farmers as inevitable in the long run. However, while they told us they were encouraged to facilitate land transfers, they had no firm, near-term targets. Rather, they are waiting for the current generation of farmers to retire before pressing forward with land transfers. A county-level official suggested we had arrived too early to observe the recent agricultural reforms in practice: *In 5–10 years, land transfer will be necessary in this county. Currently the households are reluctant to transfer land. The new agricultural entities can play a role in future land transfer. Households are not the future of farming and it is likely that rich business people will shift focus to agricultural investment. The separation of [land] rights will allow urban people to invest in the countryside to reduce the inequality between rural and urban places.* A township government official remarked, *it's just a matter of time before land will be transferred to the cooperative.* Smallholder farmers held different views. They see a viable future for smallholder farming in the area. Most hope to pass on their land to the next generation, whilst also recognising that many young people may not want to return from the cities. A middle-aged farmer from Heba said: *I have heard there will be land transfer in the future. My neighbours say that land will go to the cooperatives, but I will continue to stay here. I have no idea about the cooperatives. I would prefer to pass on my land to my son and my second choice would be other relatives. It is important to keep land for my son as it's the only livelihood source if he loses his job. I have strong feelings about my land.*

Interestingly, two village leaders reported migrants were returning to the villages permanently to engage in agriculture. The Gaoba village leader told us:

Last year more than a dozen migrants come back in our village, one even quit his job as a teacher to return. They came back to promote our orange industry, as most of them were highly educated. There are more than 300 e-commerce enterprises in our township.

The Zhongba village leader made a similar observation: “Relatively few people from our village go out. Now the orange price soars, every household comes back to cultivate, there is no-idle-land phenomenon”. In short, the situation we observed in our study villages did not conform to narratives about inefficient and ageing farmers being pressured by local government officials to transfer their land to NAOs and exit farming.

Discussion and conclusion

For the most part, the Chinese Communist Party's rural policies have been framed and justified with reference to classical theories of agrarian change that view the decline of smallholder farmers as not only inevitable but necessary. Yet, decades after collectivisation ended and market reforms began, parts of the countryside have “remained stubbornly dominated by independent commodity producers” (Webber 2008: 310; Zhang 2021). Under initiatives like Building the New Socialist Countryside and now Rural Revitalization, the central government has redoubled its efforts to drive modernisation by channelling state resources to NAOs. By linking the career advancement of individuals to their ability to access project funds, the central government has incentivised lower levels officials and agribusiness operators to comply with its agricultural policies (Zhang 2015; Zhang and Zeng 2021a; Trappel 2021; Xue et al. 2021; Zhou et al. 2021). Recognising the limitations of classical Marxist and neoclassical theoretical frameworks to capture these dynamics, recent research has sought to “open the ‘black box’ of sub-provincial politics” and put forward increasingly state-centric accounts of agrarian transition in China (Ahlers 2014: 24).

Our findings align with recent research showing NAOs are often used as vehicles to access government resources for personal, rather than communal, gain. It also uncovered examples of ‘entrepreneurial’ local officials and ‘politically directed accumulation’ (Zhang and Zeng 2021). These dynamics are epitomised by the agribusiness-cooperative partnership in Zhongba village. Although the partnership produced the trappings of successful ‘agricultural modernization’ – sales agreements, demonstration farms, (failed) land transfers, and the like – its primary objectives were political rather than commercial, especially as the cooperative-agribusiness partnership evolved. Chengzi's primary motivation for entering this partnership was to secure the fiscal and reputational benefits that flow from being recognised as a national-level dragonhead agribusiness, rather than securing a supply of feedstock from local farmers. Likewise, the village Party secretary who established the partnership with Chengzi was motivated by a desire for political advancement and financial self-interest, eventually securing a controlling stake in the cooperative for himself, family members, and political allies. The smallholders in the study villages were aware of these exclusionary dynamics, especially the domination of local cooperatives by local elites. However, they did not report moral suasion, coercion or dispossession. Indeed, in Zhongba village the smallholder farmers were able to negotiate for the return of their land management rights. This failed attempt at land consolidation also reveals the high value that villagers place on their land

in both economic and emotional terms, and their ability to defend their rights under China's new 'three rights' system.

Our livelihood analysis shows the smallholders in these villages are earning good incomes (by rural Chinese standards) by selling their oranges via oral agreements with trusted middlemen. The level of semi-proletarianisation in the three villages is also low by Chinese standards, with only a third of households reporting off-farm work as a secondary source of income (Xu et al. 2019; Sun et al. 2021). Nor did we uncover evidence of widespread subsumption via sales contracts or control over access to technology and external inputs (fertilisers, finance, seasonal labour, and the like). The farmers cannot be considered 'peasants' in the traditional sense, their livelihoods have been completely transformed in the last seventy years under Communist rule as well as by the Three Gorges Dam. Nonetheless, they continue to farm in a 'peasant-like way' that prioritises autonomy and resilience (van der Ploeg 2018; van der Ploeg and Schneider 2022a). Their livelihood strategies appear sustainable, so long as they can hold onto their land and the demand for fresh oranges in China remains high. Moreover, many of the older villagers hope to pass on their orchards to younger family members (see also Zhan 2019).

These results are surprising. We selected these villages precisely because they seemed ideal sites to investigate how livelihood strategies and local political economies are being transformed by the central government's recent rural reforms. Another surprise is the (apparent) absence of overt resistance or conflict with local officials and NAOs. While the villagers disapproved of the self-serving activities of local elites – in particular, their appropriation of the local farmer cooperatives – they are willing to engage with them where they see a direct practical benefit, for example, to access state-subsidised fertilisers or to learn about new cultivation techniques. The smallholders' overall strategy is best described as a combination of selective engagement and 'actively constructed distantiation' (van der Ploeg 2010).

It is important to note, however, that the livelihood strategies of these smallholder farmers are almost entirely the product of state interventions at various geographical scales. At the national level, large investments in transport infrastructure and the creation of 'real markets' underpin their ability to access urban consumers (Zhang 2015; Gong and Zhang 2017; Hayward 2017; Zhan 2019; Zhang and Zeng 2021a). Likewise, the high price they receive for their oranges is a function of the state's success in driving rapid industrialisation and urbanisation, more broadly (Huang & Peng 2007). The orange industry in this region is, itself, a product of state interventions dating back to the 1980s (Wilmsen 2016; 2018). The Three Gorges Dam project caused massive disruptions to rural livelihoods but was also accompanied by a wide range of rural development initiatives and industry support programs. Indeed, these supports

were important in the establishment of the dragonhead business, Chengzi, discussed in this paper. Furthermore, the orange varieties and cultivations now grown in the study villages were, first, introduced to the area through demonstration farms, re-iterating the important role the state plays in agricultural technology transfer and rural development in China, more broadly. In this light, these villages provide a successful example of what Zhan (2019) calls the path of the 'industrious revolution'—a vibrant rural sector built around smallholder farming supported by historic government policies.

The continued presence of smallholders in this part of China is a function of the conditions at play and the nature of the crop. The labour-intensive, climate-sensitive and measured attention of smallholders sees citrus thrive on the steep slopes of the Yangtze River. In the presence of a local government content to perform state government policy for self-interest, but not impose upon successful smallholder activities and a market that penetrates to the household level, smallholder farmers cash in on domestic consumer demand for oranges. We recognise that in other places (China's eastern provinces), and under other conditions (large permanent out-migration, staple crops and plainlands), the state's push for modernisation is moving at pace (Lei et al. 2018). In the next decade, the ambitions of the Party state for rural China may well override the current conditions supporting smallholders in the Three Gorges. As one county government official asserted: *Currently the households are reluctant to transfer land but in 5–10 years land transfer will be necessary in this county. NAOs can play a role in future land transfer and it is likely that rich urban people will shift focus to agricultural investment. Households are not the future of farming.*

Broad conclusions cannot be drawn from the results of a single case study. So, by way of conclusion, we offer broad reflections. First, recent studies that move beyond classical conceptions of the role of the state and take local political economy seriously have been critically important in advancing our understanding of agrarian transition in China, especially in its latest phase. Our case study demonstrates the limits of the central government's power to drive 'agricultural modernization' through NAOs. It also shows, despite the omnipresence of the state in rural life in China, space still exists for smallholder farmers to flourish and modernise on their own terms and, in doing so, quietly frustrate the central government's modernisation agenda. It suggests many possible paths exist between the extremes of inevitable subsumption and open conflict with agents of the state. Future research should, therefore, endeavour to provide more detailed accounts of how smallholder farmers strategically engage with – and distantiate themselves from – NAOs and the state, if only to avoid overly pessimistic prognostications about the sector's future. Second, along

with other recent research, our findings suggest the central government should reconsider those elements of its agricultural modernisation agenda that require officials to ‘pick winners’. A less discriminatory policy framework designed to encourage broad-based rural development would not only help unlock the potential of smallholder farmers but also to limit the perverse political and economic incentives, wasted resources, and unequal outcomes generated by the central government’s current approach of ‘tilting the playing field’ in favour of NAOs (Trappel 2021).

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Consent to participate Informed consent was obtained from all individual participants included in the study.

Consent for publication Informed consent was obtained from all individual participants included in the study for publication of data.

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References

- Ahlers, Anna L. 2014. *Rural policy implementation in contemporary China new socialist countryside*. Routledge.
- Akram-Lodhi, A Haroom. 2014. Politics of the agrarian question. In *Politics of development: A survey*, ed. Heloise Webber, 221–234. Routledge.
- Akram-Lodhi, A Haroom, and Cristóbal Kay. 2010. Surveying the agrarian question (part 2): Current debates and beyond. *The Journal of Peasant Studies* 37: 255–284.
- Arrighi, Giovanni. 2009. *Adam Smith in Beijing: Lineages of the twenty-first century*. Verso books.
- Bernstein, Henry. 2004. ‘Changing before our very eyes’: Agrarian questions and the politics of land in capitalism today. *Journal of Agrarian Change* 4: 190–225.
- Bernstein, Henry. 2006. Is there an agrarian question in the 21st century? *Canadian Journal of Development Studies/revue Canadienne D’études Du Développement* 27: 449–460.
- Bernstein, Henry. 2015. Some Reflections on Agrarian Change in China. *Journal of Agrarian Change* 15: 454–477.
- Bush, Ray, and Giuliano Martiniello. 2017. Food riots and protest: Agrarian modernizations and structural crises. *World Development* 91: 193–207.
- Chayanov, Alexander Vasilevich. 1925. *The Theory of Peasant Economy*. University of Wisconsin University Press.
- Cheng, Wenli, Xu. Yuyun, Nan Zhou, Zaizhong He, and Longyao Zhang. 2019. How did land titling affect China’s rural land rental market? Size, composition and efficiency. *Land Use Policy* 82: 609–619.
- Cornwall, Andrea, and Karen Brock. 2005. What do buzzwords do for development policy? A critical look at ‘participation’, ‘empowerment’ and ‘poverty reduction.’ *Third World Quarterly* 26: 1043–1060.
- Cui, Z., H. Zhang, X. Chen, C. Zhang, W. Ma, C. Huang, W. Zhang, G. Mi, Y. Miao, X. Li, Q. Gao, J. Yang, Z. Wang, Y. Ye, S. Guo, J. Lu, J. Huang, S. Lv, Y. Sun, Y. Liu, X. Peng, J. Ren, S. Li, X. Deng, X. Shi, Q. Zhang, Z. Yang, L. Tang, C. Wei, L. Jia, J. Zhang, M. He, Y. Tong, Q. Tang, X. Zhong, Z. Liu, N. Cao, C. Kou, H. Ying, Y. Yin, X. Jiao, Q. Zhang, M. Fan, R. Jiang, F. Zhang, and Z. Dou. 2018. Pursuing sustainable productivity with millions of smallholder farmers. *Nature* 555: 363–366.
- Day, Alexander F., and Mindi Schneider. 2018. The end of alternatives? Capitalist transformation, rural activism and the politics of possibility in China. *The Journal of Peasant Studies* 45: 1221–1246.
- der Ploeg, Van, and Jan Douwe. 2013. *Peasants and the art of farming: A Chayanovian manifesto*. Fernwood.
- der Ploeg, Van, and Jan Douwe. 2018. From de-to repeasantization: The modernization of agriculture revisited. *Journal of Rural Studies* 61: 236–243.
- der Ploeg, Van, Jan Douwe, and Jingzhong Ye. 2016. *China’s Peasant Agriculture and Rural Society*. Taylor & Francis.
- der Ploeg, Van, Jan Douwe, and Sergio Schneider. 2022. Autonomy as a politico-economic concept: Peasant practices and nested markets. *Journal of Agrarian Change*. 22: 529–546.
- Dixon, Marion W. 2020. The agrarian question revisited: Smallholders and corporate food in Egypt. *Canadian Journal of Development Studies/revue Canadienne D’études Du Développement* 41: 279–295.
- Gong, Weigang, and Qian Forrest Zhang. 2017. Betting on the big: State-brokered land transfers, large-scale agricultural producers, and rural policy implementation. *The China Journal* 77: 1–26.
- Gu, Guolin. 2022. Rethinking dispossession: The livelihood consequences of land expropriation in contemporary rural China. *Journal of Agrarian Change* 22: 703–721.

- Hart, Gillian. 2002. Geography and development: Development/s beyond neoliberalism? Power, culture, political economy. *Progress in Human Geography* 26: 812–822.
- Hayward, Jane. 2017. Beyond the ownership question: Who will till the land? The new debate on China's agricultural production. *Critical Asian Studies* 49: 523–545.
- Hu, Zhanping, Qian Forrest Zhang, and John A. Donaldson. 2017. Farmers' Cooperatives in China: A typology of fraud and failure. *The China Journal* 78: 1–24.
- Huang, Philip CC. 2011. China's new-age small farms and their vertical integration: Agribusiness or co-ops? *Modern China* 37: 107–134.
- Huang, Yu. 2015. Can capitalist farms defeat family farms? The dynamics of capitalist accumulation in shrimp aquaculture in South China. *Journal of Agrarian Change* 15: 392–412.
- Huang, Zuhui, and Qiao Liang. 2018. Agricultural organizations and the role of farmer cooperatives in China since 1978: Past and future. *China Agricultural Economic Review* 10 (1): 00–00.
- Huang, Philip CC., and Yusheng Peng. 2007. The confluence of three historical trends and the prospects for small-scale agriculture in China. *Chinese Social Sciences* 4: 74–88 ((in Chinese)).
- Huang, Philip CC., Gao Yuan, and Yusheng Peng. 2012. Capitalization without proletarianization in China's agricultural development. *Modern China* 38: 139–173.
- Ji, Xianqing, Scott Rozelle, Jikun Huang, Linxiu Zhang, and Tonglong Zhang. 2016. Are China's farms growing? *China & World Economy* 24: 41–62.
- Kautsky, Karl. 1899. *The Agrarian Question (1899), 2 Vols.* Zwan Publications.
- Levien, Michael, Michael Watts, and Hairong Yan. 2018. Agrarian Marxism. *The Journal of Peasant Studies* 45: 853–883.
- Li, Cheng. 2009. Hu Jintao's land reform: Ambition, ambiguity, and anxiety. *China Leadership Monitor* 27: 1–22.
- Li, Minghao, Wendong Zhang, and Dermot Hayes. 2018. "Can China's Rural Land Policy Reforms Solve its Farmland Dilemma?" Agricultural Policy Review website. Accessed March 21, 2023. https://www.card.iastate.edu/ag_policy_review/article/?a=78.
- Liang, Qiao, George Hendrikse, Zuhui Huang, and Xu. Xuchu. 2015. Governance structure of chinese farmer cooperatives: Evidence from Zhejiang Province. *Agribusiness* 31: 198–214.
- McDonald, Brooke, Michael Webber, and Duan Yuefang. 2008. Involuntary resettlement as an opportunity for development: The case of urban resettlers of the Three Gorges Project, China. *Journal of Refugee Studies* 21: 82–102.
- McMichael, Philip. 2006. Peasant prospects in the neoliberal age. *New Political Economy* 11: 407–418.
- McMichael, Philip. 2009. Banking on agriculture: A review of the World Development Report 2008. *Journal of Agrarian Change* 9: 235–246.
- McMichael, Philip. 2012. The land grab and corporate food regime restructuring. *The Journal of Peasant Studies* 39: 681–701.
- McMichael, Philip. 2020. Does China's 'going out' strategy prefigure a new food regime? *The Journal of Peasant Studies* 47: 116–154.
- Moyo, Sam, Praveen Jha, and Paris Yeros. 2013. The classical agrarian question: Myth, reality and relevance today. *Agrarian South: Journal of Political Economy* 2: 93–119.
- National Bureau of Statistics. 2019. China Statistical Yearbook, National Bureau of Statistics, N/A. <http://www.stats.gov.cn/tjsj/ndsj/2019/indexeh.htm>. Accessed October 5, 2020.
- Rogers, Sarah, Brooke Wilmsen, Xiao Han, Zuo Ju-Han, Wang, Yuefang Duan, Jun He, Jie Li, Wanlong Lin, and Christine Wong. 2021. Scaling up agriculture? The dynamics of land transfer in inland China. *World Development* 146: 1–10.
- Rogers, Sarah, Xiao Han, and Brooke Wilmsen. 2022. Apples and oranges: Political crops with and against the state in rural China. *Journal of Political Ecology* 29 (1): 496–512.
- Sargeson, Sally. 2012. Villains, victims and aspiring proprietors: Framing 'land-losing villagers' in China's strategies of accumulation. *Journal of Contemporary China* 21: 757–777.
- Schneider, Mindi. 2017. Dragon head enterprises and the state of agribusiness in China. *Journal of Agrarian Change* 17: 3–21.
- Sexsmith, Kathleen, and Philip McMichael. 2015. Formulating the SDGs: Reproducing or reimagining state-centered development? *Globalizations* 12: 581–596.
- Si, Zhenzhong, Yanyan Li, Ping Fang, and Li. Zhou. 2019. "One family, two systems": Food safety crisis as a catalyst for agrarian changes in rural China. *Journal of Rural Studies* 69: 87–96.
- Soto, De., and Hernando. 2000. *The mystery of capital: Why capitalism triumphs in the West and fails everywhere else.* Basic books.
- Spann, Michael. 2017. Politics of poverty: The post-2015 sustainable development goals and the business of agriculture. *Globalizations* 14: 360–378.
- State Council (2016). 国务院关于印发全国农业现代化规划(2016—2020年)的通知 (State Council notice on publication of the National Agricultural Modernization Plan 2016–2020). (Accessed 11/12/19).
- Sun, Rui, Jianing Mi, Shu Cao, and Tianyi Zhang. 2021. Trends and determinants of income-oriented livelihood transitions in rural China. *Social Indicators Research* 155: 601–624.
- Trappel, René. 2015. *China's agrarian transition: Peasants, property, and politics.* Lexington Books.
- Trappel, René. 2021. From peasant to elite: Reshaping agriculture in Gansu Province. *China Perspectives* 2021: 9–18.
- van der Ploeg, Jan Douwe. 2008. The New Peasantaries, struggles for autonomy in an era of empire and globalization. *EarthsCan*.
- van der Ploeg, Douwe. 2010. The peasantries of the twenty-first century: The commoditisation debate revisited. *The Journal of Peasant Studies* 37: 1–30.
- van der Ploeg, Jan, Jingzhong Ye Douwe, and Sergio Schneider. 2022b. Reading markets politically: On the transformativity and relevance of peasant markets. *The Journal of Peasant Studies*. <https://doi.org/10.1080/03066150.2021.2020258>.
- Wang, Qianxi, and Xiaoling Zhang. 2017. Three rights separation: China's proposed rural land rights reform and four types of local trials. *Land Use Policy* 63: 111–121.
- Watts, Michael J. 1989. The agrarian question in Africa: Debating the crisis. *Progress in Human Geography* 13: 1–41.
- Watts, Michael. 2021. The agrarian question. In *Handbook of Critical Agrarian Studies*, ed. A. Haroon Akram-Lodhi, Kristina Dietz, Bettina Engels, and Ben M. McKay. Edward Elgar Publishing.
- Webber, Michael. 2008. Primitive accumulation in modern China. *Dialectical Anthropology* 32: 299–320.
- Webber, Michael. 2012. The dynamics of primitive accumulation: With application to rural China. *Environment and Planning A* 44: 560–579.
- Webber, Michael, and Brooke McDonald. 2004. Involuntary resettlement, production and income: Evidence from Xiaolangdi, PRC. *World Development* 32: 673–690.
- Wilmsen, Brooke. 2016. Expanding capitalism in rural China through land acquisition and land reforms. *Journal of Contemporary China* 25: 701–717.
- Wilmsen, Brooke. 2018. Damming China's rivers to expand its cities: The urban livelihoods of rural people displaced by the Three Gorges Dam. *Urban Geography* 39: 345–366.
- Wilmsen, Brooke, Webber Michael, and Duan Yuefang. 2011. Development for whom? Rural to urban resettlement at the Three Gorges Dam. *China. Asian Studies Review* 35 (1): 21–42.
- Wilmsen, B., S. Rogers, Y. Duan, and J.H.Z. Wang. 2023. Farmer Cooperatives and the Limits of Agricultural Reform in Rural Hubei. *The China Journal*. <https://doi.org/10.1086/722258>.

- Wood, Ellen Meiksins. 2009. Peasants and the market imperative: the origins of capitalism. In *Peasants and Globalization*, ed. A. Haroon Akram-Lodhi and Cristóbal Kay. Routledge.
- Wuhan Government. 2017. Notice of the Provincial Leading Group Office of Agricultural Industrialization Management on Launching the Monitoring and Accreditation of Provincial Key Leading Enterprises. <http://nw.wuhan.gov.cn/newsDetails.htm?id=105571>. Accessed 9th December 2020.
- Xinhua. 2017. China to deepen reform in agricultural sector. http://www.chinadaily.com.cn/china/2017-02/05/content_28108022.htm. Accessed 21st May 2020
- Xu, Dingde, Xin Deng, Shili Guo, and Shaoquan Liu. 2019. Sensitivity of livelihood strategy to livelihood capital: An empirical investigation using nationally representative survey data from rural China. *Social Indicators Research* 144: 113–131.
- Xue, Yongji, KuoRay Mao, Nefratiri Weeks, and Jingyi Xiao. 2021. Rural reform in contemporary China: Development, efficiency, and fairness. *Journal of Contemporary China* 30: 266–282.
- Yan, Hairon, and Yiyuan Chen. 2015. Agrarian capitalization without capitalism? Capitalist dynamics from above and below in China. *Journal of Agrarian Change* 15: 366–391.
- Ye, Jingzhong. 2015. Land transfer and the pursuit of agricultural modernization in China. *Journal of Agrarian Change* 15: 314–337.
- Zhan, Shaohua. 2019. *The land question in China: Agrarian capitalism, industrious revolution, and East Asian development*. Routledge.
- Zhang, Qian Forrest. 2013. Comparing local models of agrarian transition in China. *Rural China* 10: 5.
- Zhang, Qian Forrest. 2015. Class differentiation in rural China: Dynamics of accumulation, commodification and state intervention. *Journal of Agrarian Change* 15: 338–365.
- Zhang, Qian Forrest. 2021. Agrarian change in China: Historical origins and competing perspectives. In *Handbook of Critical Agrarian Studies*, ed. A. Haroon Akram-Lodhi, Kristina Dietz, Bettina Engels, and Ben M. McKay. Edward Elgar Publishing.
- Zhang, Qian Forrest, and John A. Donaldson. 2008. The rise of agrarian capitalism with Chinese characteristics: Agricultural modernization, agribusiness and collective land rights. *The China Journal* 60: 25–47.
- Zhang, Qian Forrest, and John A. Donaldson. 2013. China's agrarian reform and the privatization of land: A contrarian view. *Journal of Contemporary China* 22: 255–272.
- Zhang, Qian Forrest, and Hongping Zeng. 2021. Politically directed accumulation in rural China: The making of the agrarian capitalist class and the new agrarian question of capital. *Journal of Agrarian Change* 21: 677–701.
- Zhou, Chao, Yunjuan Liang, and Anthony Fuller. 2021. Tracing agricultural land transfer in China: Some legal and policy issues. *Land* 10: 58.

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