

*Decollectivization of Agriculture and the Planned Economy**

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Theory: I take a resource dependence perspective on the reform of collectivized agriculture.

Hypothesis: Collective farms resist breakup if they are dependent on resources distributed through the command economy. The state's role in the distribution of resources is explained by its relationship to the peasantry before collectivization.

Methods: I use comparative case histories of Russian and Chinese agriculture.

Results: Large-scale decollectivization of agriculture will not occur in Russia as long as collective farms remain dependent on redistribution through the state apparatus. The role of collectivization in the state-building process explains why the Soviet collective farm was tied strongly to the state, while the Chinese collective farm was not.

I. Introduction

Liberal reformers in the Russian Republic, and their allies in the international development bureaucracy, believe that to transform Russian agriculture they need do little more than assist in the breakup of the collective farms. These reformers believe that to make decollectivization work, nothing more need be done than divide land, livestock, and farm equipment fairly among the collective farm members. Freed from the arbitrary dictates of collective farm managers, each now-private farmer sloughs off his mask as a resentful collectivized peasant. Now he tills the land, with all the effort he can muster, as a productive yeoman.

Russian reformers find theoretical support for this vision in transactions-cost economics, the dominant paradigm among Western economists

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for understanding the political economy of property rights.¹ Transactions-cost economics suggests that the principal obstacles decollectivization faces come from the costs of dividing property and assigning title. The official model of agricultural reform promulgated by the Russian Government in July 1994, the "Nizhny Novgorod model," accordingly assumes that collective farms will be productively reorganized from within, if the administrative costs of their breakup are borne from without by local and federal government.

I will argue instead that decollectivization of agriculture will not be successfully carried out as long as the agricultural sector remains strongly coupled to the planned economy, that is, dependent on the state planning apparatus for goods and moneys. From such a resource dependence perspective I will explain why decollectivization of agriculture occurred rapidly even under Party rule in China.² I will then explain why in Russia the collective farm remains the dominant form of agricultural organization, despite its failures both fiscal and productive, and the efforts of reformers under both Gorbachev and Yeltsin.

Reformers justly revile collectivized agriculture because of its inefficient use of labor, land, machinery, and fertilizer in production of crops and livestock.³ I will argue, however, that the crucial issue for the survival of the collective farm is not its (in)efficiency as a producer of agricultural goods, but its effectiveness in gathering resources for its members and managers.⁴ As Gennady Lisichkin wrote in the Winter of 1991:

Our best farms depend on their directors and the strings they pull. If they are done away with, these farms' prosperity will end.⁵

I will explore both sides of Lisichkin's statement: first, the Soviet and post-Soviet collective farm's prosperity, and thus its returns to workers and managers, depends on its effectiveness in the politicized system of distribution

¹ The transactions-costs paradigm developed out of the work of Ronald Coase, especially Coase (1960). On its influence in the study of the structure of organizations within the discipline of economics see Barzel and Kochin (1992).

² On the resource dependence perspective in general see Pfeffer and Salancik (1978).

³ See e.g. Fei (1989); Hedlund (1984); Humphrey (1983); Johnson (1987, 1990); Millar (1990); Nove (1967); Pryor (1992).

⁴ I adopt the distinction between efficiency and effectiveness from Pfeffer and Salancik (1978, 11–2). By *efficiency* I mean the ratio of the output the farm produces to the resources it uses. By *effectiveness* I mean the extent to which the farm meets the resource demands of the groups who share in its control: managers, members, as well as the bureaucrats who ration credits and material inputs among farms.

⁵ Gennady Lisichkin, "People who work for peanuts have nothing to lose," *Moscow News*, March 3, 1991.

of resources usually called a “planned economy.” Second, farm directors and local and regional officials wield power over the peasantry by virtue of their access to that system.

The Chinese collective farm, I shall show, was always decoupled from the planned economy, whereas the Soviet collective farm has been strongly coupled from the collectivization campaigns of the 1920s to the present. I shall explain the Chinese and Soviet collective farms’ different relationships to the command economy as consequences of the two regimes’ different organizational roles in the land redistributions that preceded collectivization.

In China the party apparatus itself had organized the village for land reform, but in the Soviet Union the “Black Repartition” had been carried out by the peasant commune (*mir*) with only moral support from the Bolsheviks. The regimes’ respective roles in land reform determined their posture with respect to the village when they attempted to collectivize. Since the Chinese Communist Party had created the village as an organization to carry out land reform, it acquired partial administrative control of peasant production. As I shall argue in section III, Chinese cadres could thus carry out the center’s collectivization policy through political mobilization of the peasants themselves.

Land reform in Russia, however, was carried out by the *mir*, which had existed even under serfdom and was thus organizationally independent of Soviet power.⁶ Soviet institutions of local control were effective only in extraction and procurement. As a result, collectivization met widespread violent resistance because the regime was attempting to expropriate an autonomously organized peasantry.

Thus far I have only succeeded in deepening the mystery, for the collective farm in China, which was rapidly dissolved on orders from Beijing, apparently had stronger political roots in the peasantry. I shall show, however, that the differing roles of the regimes in land reform were relevant primarily for their effect on the relation between the collective farm and the wider economy.

Since the Soviet state was organized against the village rather than from within the village, Soviet officials controlled agricultural production through planned redistribution of resource flows to and from the farm. Because Chinese cadres had mobilized the peasants from within the village, they could control production without resorting to massive reallocations of resources. In China, locally rooted cadres carried out state directives

⁶ The Russian word *mir* is generally translated as “commune,” but I will leave it untranslated to avoid confusion with the organ of government and production in the PRC referred to in English by the same name.

through mobilization of the peasantry in organizations the cadres themselves controlled. In section IV I will sketch the different roles of agriculture in the command economies of the Soviet Union and China. I shall describe the economic impact of the system of political reallocation usually called central planning on the collective farm. I shall also examine the political meaning of the plan as the center's tool for subordinating the collective to the state.

Chinese economic policy after 1965 stressed local self-sufficiency in grain and small-scale industrial production. Because of this policy of economic cellularity, resource flows to and from agricultural collectives were modest when compared with the gains in production available from decollectivization. The Chinese party-state's control over the farm depended exclusively on the internal control of the farm as an organization, rather than on the external control of resource flows. As a result, decoupling of the farm from the plan did not undermine the rural basis of the Chinese regime.

Radical decentralization left Chinese local officials with little stake in a politically regulated agricultural economy. Cadres complied with the post-Mao decollectivization campaign because radical economic campaigns left them few resources to allocate and thus meager rewards for maintaining collectivization. Since under collectivization output prices were uniformly held down by the state, Chinese peasants had little stake in collectivization either. Individual villagers prospered from decollectivization because they could internalize much of the grain from it. Peasants would not find the fruits of their initiative expropriated by higher procurement quotas and lower prices.

In much of the former Soviet Union, however, the party-state apparatus survives to redistribute resources even as reformers seek to carry out partial decollectivization. Farmers and farm managers clamor for production subsidies to ease them through the upheaval of decollectivization. Yet as long as such subsidies continue to be granted through organizations of state-controlled redistribution, they will discourage farmers and managers from carrying out reform.

Table 1 may aid the reader in following my argument.

Both the resource dependence perspective I will adopt and the transactions-cost perspective I will reject explain the failure of Russian agricultural reform as a failure to provide farm members with economic incentives for reform.⁷ Two noneconomic explanations commonly found in the literature

⁷ Other common explanations for the Russian failure to reform agriculture can be fit under the resource dependence perspective I adopt, such as the absence of machinery of a capacity suitable to private farming by a single household. Compared with the Catholic adoption of many alternative explanations at once (as in Pryor 1991) my account may appear conceptually impoverished. Yet to evaluate theories with multiple causes we need a great

for the failure of Russian agricultural reform are the cultural and the demographic explanations.

The demographic explanation claims that private farming is unpopular in Russia because the rural population is too old to act entrepreneurially. Yet if the aged character of the Russian rural population hinders decollectivization, as the demographic explanation claims, we would expect a significant difference between the age distributions of private farmers and that of collective farm members. Yet in one large sample, heads of households farming privately average 39 years of age, while heads of households farming collectively average 40 (Brooks and Lerman 1994, 37).

The cultural explanation claims that more than 60 years of collectivized agriculture socialized Russians to disparage private farming because it is less egalitarian than collective farming (e.g., Wegren 1994b). Decollectivization was popular among Chinese peasants, the cultural explanation claims, because less than three decades under collectivization were insufficient to destroy the memory of the techniques and benefits of private agriculture (Pryor 1991, 282–3).

Partisans of the demographic or cultural explanations of the failure of Russian agricultural reform must claim that Russian collective farm members have sufficient economic incentives to favor decollectivization. I shall argue instead that farmers actually have decisive incentives to remain in collectives, since the Russian state still redistributes resources among collective farms. Farm members therefore refuse to decollectivize unless they receive countervailing subsidies.

II. Land Reform and Party Legitimacy

In both China and Russia revolutionary chaos deprived landlords and rich peasants of the resources of violence needed to maintain their positions within the village. To complete the redivision of the land, the village then had to be organized to divide the expropriated property. In China the peasants had not organized themselves for production on the village level before the revolution, so the Chinese Communist Party (CCP) used land reform to organize the peasants.

In Czarist Russia, by contrast, the village had been organized as a *mir* to control the allocation of land. A household received its land from the *mir* in a multitude of narrow strips scattered among the fields, and the *mir* reallocated the strips to accord with changes in family size. Some labor was collective, but each household received the harvest from its own strips.

quantity of accurate data on collective and postcollective agriculture from numerous cases. I hope that my argument, which relies on the qualitative comparison of Russia and China alone, will help to direct theoretically informed collection of this data.

Table 1. An Outline of the Argument

The Mystery: Well-Rooted Brigades versus Alien Kolkhozy	The Mystery Resolved: The Collective Farm and the Planned Economy
<p>A. Prerevolutionary situation China: Weak state without local organizations of production. Russia: Weak state with strong local organizations of production.</p>	<p>B ⇒ D D. Mode of rural control China: Internal control of peasant organization. Russia: External control of resource flows. D ⇒ E</p>
<p>A ⇒ B B. Levels of state penetration during land reform China: High. Party organizes village as unit of production. Russia: Low. Party remains foreign to village. B ⇒ C</p>	<p>E. Village strongly coupled to planned economy. China: No. Russia: Yes. E ⇒ F</p>
<p>C. Difficulty of Collectivization China: Low. Bodies responsive to party policy control land. Russia: High. Collectivization means destruction of preexisting economic institutions.</p>	<p>F. Bureaucrats have a stake in planned reallocation China: No. Russia: Yes. F ⇒ G G. Price system used to cross-subsidize farms China: No. Russia: Yes. G ⇒ H</p>
	<p>H. Will Peasants benefit from decollectivization? China: Yes. Peasant household internalizes efficiency gains in absence of redistributive plan.</p>
	<p>Russia: No. Gains from decollectivization dissipated in system of cross-subsidies. F + H ⇒ K</p>
	<p>K. Constituency for decollectivization: China: Peasants, who are benefited by decollectivization. Russia: None. Bureaucrats opposed reform that includes decoupling. Peasants indifferent to reform without decoupling.</p>

In Russia, the *mir* carried out the redivision of the land without Soviet direction (Skocpol 1979, 156). Beginning in February 1917, a wave of violence and expropriation swept the Russian countryside. The new resistance began with rent strikes, and by July of 1917 had progressed in some areas to the sacking of estates (Keep 1976, 199). By the October Revolution peasant-controlled land committees had seized most of the large estates. Once expropriated, these new lands were divided by the *mir*, and this role in the redistribution of land strengthened the *mir*'s hold over the individual household. Soviet organizations thus confronted villages that had strengthened themselves in carrying out the "Black Repartition."

Soviet power before collectivization, as represented by the legally recognized government and party organs, was confined to resource extraction, and was entirely mediated by the *mir*. The official bottom-level organs of Soviet power in the countryside, the rural soviets, were almost completely ineffective. The rural soviet had no independent budget or resource base, and no role in agricultural production (Male 1971, 137). The *mir* itself decided all important questions regarding production without effective supervision by the rural soviet. The rural soviet, and the rural party cell that was supposed to direct it, functioned on the margins of the *mir*, conveying the regime's extractive demands to the *mir*, whether as taxes or as procurement quotas (Male 1971, 118–20).

In contrast, Chinese Community Party cadres co-opted the peasant into their mobilization of the village, by distributing the fruits of land reform to peasants according to the peasants' participation in cadre-led organizations. Chinese cadres divided the village between peasants with "good class backgrounds" who could look to the new regime for aid and support, and peasants from "bad class backgrounds" who would serve as the bottom caste. Having chosen some with whom to ally, cadres organized these villagers into "Peasants' Associations" or "Poor Peasants' Leagues" (Hinton 1966, 132–3, 276; Shue 1980, 23). These associations assessed peasant holdings, expropriated the landlords and the wealthier peasants, and redistributed the proceeds among their members.

Using outside cadres to build an organization within the village to redistribute to its newly found allies, the CCP built the state within the village. For example, the CCP, unlike the Soviet Communist Party, recruited substantial numbers of actual working peasants as party members.⁸ The CCP could use its organizational capital within the village to maintain control by managing the village primarily from within, even while shutting off peasants from external resources. Lacking a strong party machinery within

⁸ For Soviet figures see Male (1971, 132–3); Fainsod (1958, 44–7, 288). For China see Hinton (1966, 168–78); Chan, Madsen, and Unger (1992, 19–20).

the village, Soviet rule over the peasantry, by contrast, depended on control of the flow of resources to and from the farm.

III. The Context of Collectivization

Despite the various economic and ideological justifications for collectivization proffered by their propagandists and apologists, the Chinese and Soviet regimes sought to collectivize principally in order to organize the peasantry into groups convenient for the extraction of revenue. Through collectivization these regimes aimed to extract resources from the agricultural sector to finance industrialization.⁹ I shall first give a general theoretical account of the origins of collectivization policy, and then discuss the Soviet and Chinese cases separately.

Both the People's Republic of China (PRC) and the Union of Soviet Socialist Republics (USSR) resorted to collectivization only after earlier efforts at extraction produced procurement crises. The two regimes each tried taxation through the manipulation of prices before embarking on collectivization. In both countries the state eventually increased the prices of manufactured goods peasants wanted in terms of the agricultural goods they had to sell, so as to yield very high effective rates of indirect taxation. Peasants responded by reducing the amount of produce marketed in raw form and by increasing their own consumption or by saving in kind.¹⁰ Peasants switched crops, withheld grain from the market, or fed it to their animals to maximize their "after-tax" return.

When peasants decide how to allocate resources between consumption and investment, high rates of effective taxation eventually reduce state procurements. The state first attempted to meet the procurements crisis (resulting from excessively rapacious indirect taxation) with sharp increases in direct taxation, seizing the peasants' reserves instead of purchasing them. Such a policy reduced agricultural production sharply at the next harvest, as peasants refused to sow if they could not reap.

⁹ On extraction of resources from agriculture in the Soviet Union see Millar (1990 chaps. 2–5). In China see Lardy (1983, 1985); Friedman, Pickowicz, and Selden (1991, 154, 172–4). Note that if net investment in agriculture was high, resources appropriated by forced sales to the state could be squandered through misinvestment, as I discuss in section IV below.

¹⁰ This effect was first described by Lev Trotsky in a speech to the Twelfth Congress of the Soviet Communist Party in March 1923, where he argued that any further increase in the disparity between agricultural procurement prices and prices for industrial goods would lead the peasant to "withdraw from the market," to cut production and increase his own consumption of agricultural goods (Carr 1954, 20–2). Trotsky was speaking of the price gap caused by market forces, but this economic analysis applies in spades to price gaps produced when the state forces great increases in the real relative prices of industrial goods.

Only by expropriating the peasantry completely through collectivization could the state achieve both high levels of investment in agriculture and high levels of extraction. Otherwise, every concession to individual responsibility in production allowed the peasant to divert resources to immediate consumption.

Soviet Procurement Policy and the Need to Collectivize

To extract resources from the peasantry to meet the needs of the Civil War, Lenin first experimented with outright confiscation, glorified with the name of "War Communism." The Soviets attempted to organize their economy by confiscation literally at gunpoint; peasants, in response, stopped sowing because they did not expect to be allowed to keep their crop. By the Autumn of 1920 sowings were down to one-quarter of their prerevolutionary level (Carr 1952, 170). In 1921 the regime conceded defeat, and in the New Economic Policy (NEP), legalized trade and abandoned wholesale confiscation of the harvest for moderate direct taxation.

At Lenin's death in 1924 factions in the Party renewed the debate over the proper path to industrialization. The Bolsheviks generally agreed that to extract an increased surplus from the countryside for industrial development required the state to encourage technological progress and simultaneously hold down peasant consumption. The Party's eventual goal was industrialized agriculture in state and collective farms, but in the mid-1920s none of the major leaders of the Communist Party favored forced collectivization.¹¹

In the short run the program of first Trotsky and the Left, and later Stalin's faction, was to exact resources from the peasantry through a skewed price structure. State procurement agencies would reduce the purchasing power of agricultural goods in industrial goods, including both agricultural inputs and consumption goods. The state would thus get monopoly rents as the exclusive legal intermediary of rural-urban exchange. Having excluded the Left from power after 1924, Stalin carried out their policy; after 1925, the average state procurement price for the four major grains (wheat, barley, rye, and oats) fell to about half the free market price per ton (Karcz 1979). Real procurement prices for agricultural outputs were even lower than nominal levels because of the shortage of industrial goods.

Because real procurement prices were so low, peasants marketed less. Instead, peasants held grain as long as possible after the harvest, often feeding it to their livestock (for which state prices were much higher). Where possible peasants also switched from grain to other crops such as oilseeds

¹¹ Even the First Five-Year Plan, promulgated in Spring 1929, did not call for mass collectivization (Lewin 1968, 357).

(Karcz 1979; Lewin 1968, 183). The policy of resource extraction via indirect taxation had by 1927 created a grain procurement crisis.

Instead of raising prices to increase peasant sales, the Soviets responded with “extraordinary measures,” confiscation of the harvest at gunpoint. Although state terrorism was nominally directed only against the wealthier peasant, in fact, any peasant who held grain, even grain needed for his family’s consumption and the next planting, could be expropriated (Lewin 1968, 222–3).

The state’s return to the policies of War Communism produced massive peasant resistance and dramatically reduced sowings. For 1927–28, “despite the regime’s vigorous offensive, and its use of violence, the amount of its grain reserves was smaller than in the previous year” (Lewin 1968, 242–3). For 1928–29 the state applied greater pressure, but procurements were 20% lower still (Lewin 1968, 395). Instead of reducing the level of state exactions, as Lenin had in launching the NEP, Stalin formally abandoned the NEP and, in the Autumn of 1929, embarked on collectivization. Only by managing agricultural production could the Soviet state prevent peasants from disinvesting both animal power and human labor in response to confiscatory levels of direct and indirect taxation.

State Procurement and Collectivization in China

The Chinese regime had already gained an important role in the productive organization of the village because it had organized the distribution of the “fruits” of land reform (see section II above). The CCP thus had an effective organizational expression within the village from which it could work politically, and not violently, to reorganize production into increasingly collective forms.

The socialization of production began with the formation of mutual aid teams, which cadres organized in each village when its land reform was completed. Cadres organized their allies, peasants with poor and middle class labels, into mutual aid teams of five or six families to pool tools and draft power. Each team had a designated leader, and was supposed to use careful accounting and advance planning. Cadres thus aimed to transform peasant attitudes toward cooperative production, and to create units that could later be mobilized for further collectivization (Shue 1980, 148).

China’s procurement policies, adopted beginning in 1953 following the Soviet models, aimed to monopolize both the sale of the harvest and the supply of industrial inputs to agriculture in order to collect rents for industrialization (Oi 1989, 43; Lardy 1983, 16). The regime began the “Unified Purchase Program” in 1953–54, and created Supply and Marketing Cooperatives (SMC) to carry out its program locally. An SMC generally preferred to contract with Mutual Aid Teams, not with individuals or house-

holds, to encourage team formation and thus further collectivization of production (Shue 1980, 229).

The CCP repeated the Soviet policy of holding down procurement prices and thus discouraging production for market, since every SMC procured grain below market prices; moreover, in the first harvest of the Unified Buying and Selling program, procurement cadres lacked accurate consumption information. They thus seized grain from peasants beyond what the peasants themselves could afford to give. Under these conditions the peasants lowered their production, both of grain and of industrial crops.¹² The regime responded by sending out work teams to fix production quotas, in order to take more conscious control of what had formerly been peasants' production decisions. This campaign to fix sowing levels, as one Chinese editorial of the period admits, "helped pave the way for cooperativization" (Vogel 1969, 142).

In the collectivization campaign of 1955–56 that followed, cadres organized most households immediately into Advanced Production Cooperatives (APC). An APC averaged about 100–300 families, and pooled all major means of production. APC members were paid shares of the collective income based solely on labor contributed to collective work.¹³ In January of 1956 about 31% of all peasant households were members of APC's, by May of 1956 62% had joined, and by the end of 1957 96% (Schran 1969, 29). Through collectivization cadres got the control over resources required to carry out party-state decisions about investment and consumption.

After the breathless campaign to create cooperatives, the Party, rejecting Mao temporarily, immediately confronted their inefficiencies as units of production, and responded by ordering a period of retrenchment and piecemeal reform. Rural markets were reopened in the fall of 1956, and cadres were strongly criticized for previous "commandism" in the establishment of officially voluntary cooperatives. Many cooperatives were disbanded, so that "responsibility for various crops on certain fields for given periods of time was assigned to individual households."¹⁴

¹² See Vogel (1969, 139–40); Friedman et al. (1991, 154).

¹³ The Chinese cooperative was analogous to the classical Soviet kolkhoz in that the collective income of its members came from the distribution of the collective surplus, if any. The APC later evolved into the brigade, which similarly organized production in an entire village or a group of villages. The Elementary Production Cooperative, which organized a neighborhood within a village, evolved into the team.

¹⁴ See Vogel (1969, 204). The responsibility system, instituted as national policy only after Mao's death, was prefigured during the period of retrenchment after the first massive collectivization drive. It would spring up again in the aftermath of the Great Leap Forward (Zweig 1983).

Beginning in the Fall of 1957, however, the CCP, under Mao's control again, prepared a new and far greater wave of socialization of agriculture, the utopian Great Leap Forward. Mao and his followers within the party saw the commune, massive, mobilizing and deindividualizing, as superior to the cooperative (Shanin 1990).

The commune involved several devastating innovations. First, the commune apparatus centralized power over the labor, provision, and control of tens of thousands of members. Second, private plots were completely abolished. Third, meals were no longer cooked by each peasant wife in each hut; instead, peasants ate in mess halls, and were eligible for meals without regard for how much work they had put in.

The third innovation proved to have the most devastating effect; for with little or no link between labor and provision, peasants, as one villager describes, chose "rationally" to eat, but not to work:

The period was called the "Eat-It-All-Up Period" because people were eating five and six times daily—but there was no harvest that year. Everything had been given to the collective. Nothing was left in the houses. [After everything had been consumed] people were so hungry they had difficulty sleeping. . . . Some people became ill, and some of the elderly died. Our village became quiet, as if the people were dead (Chan, Madsen, and Unger 1992, 25).

The massive size of the commune made effective monitoring impossible, and thus destroyed any incentive for labor. Commune authorities, disconnected by layers of cadres from actual knowledge of production, radically misallocated investment to gigantic and absurd projects.

During the lengthy process of reconstruction that followed the Great Leap Forward, the private plot was restored as a supplement to the collective fields. Simultaneously the unit of accounting and daily management of production diminished in size from the commune down to the brigade, and then from the brigade down to the team.

IV. Agriculture in the Planned Economy

Both the Soviet and Chinese party-states, I argued in section III, imposed collectivization to maximize net extraction of resources for industrial development. Collective agriculture was efficient at extracting resources from the peasantry because it alienated the control of resources from the family unit of farm production. Though the state gained power in "the struggle over the harvest" by expropriating the peasantry, the state was not necessarily able to use this power to extract more resources from agriculture. Total expropriation allowed the state to hold down peasant con-

sumption, but expropriation also damaged production by destroying the information and incentives required for efficient allocation of resources.

Farm managers were subject to political dictates, and lacked ownership incentives with respect to the operation of the collective farm. As a result, planners allocated investment in agriculture politically and failed to take accurate account of differences in marginal returns. If investment in agriculture from external sectors was large, net extraction from the agricultural sector as a whole could vanish or become negative.¹⁵

Investment in agriculture was misallocated for reasons general to a command economy. Without capital markets, planners and officials could not adequately judge demands for investment by enterprise managers (Alvarez 1990, 27–8). Every manager and official strove to hide his production capacity and overestimate the investment required to achieve that capacity, while underestimating the true cost of projects in order to get them funded.

In the Soviet Union agriculture was a sinkhole for *external* investment: factor productivity in Soviet agriculture (the marginal return on increases in inputs) declined in the 1970s, and was negative in the early 1980s (Johnson 1987, 2). In China agriculture proved a sinkhole for *internal* investment. Because of population growth and restrictions on urbanization, about one-third of the available rural labor pool in China is unneeded in agriculture (Fei 1989, 117). Yet instead of allowing collectives to use surplus labor for more productive nonagricultural activities, the state dragooned peasants to terrace hills and carve out massive irrigation projects, both of which frequently proved ecologically and economically disastrous.¹⁶

Even under collectivization both the Soviet and Chinese regimes taxed farms indirectly by manipulating prices, using the state monopoly of trade between the city and the collective farm. Because the state set production prices for agricultural goods so low, the state continued to rely on forced deliveries from the collective farm. In setting delivery quotas, central planners made production decisions and allocated resources among farms without the information on marginal returns that would have been available to truly autonomous and thus profit-maximizing collectives (Humphrey 1983, 93–101).

Without pervasive interference from above on the farm manager's decisions, collective agriculture could have worked better. As one kolkhoznik put it to Alec Nove, "Large landowners had their brainwaves, but at least they paid for their failures out of their own pocket" (Nove 1967, 63). Reforms that subjected the collective farm to greater market discipline instead of political bargaining, especially rationalization of prices, could conse-

¹⁵ See Millar (1990, chaps. 3–5), Lardy (1983, chap. 3).

¹⁶ See e.g. Siu (1989, 232–5); Zweig (1989, 158–9, 184).

quently have greatly improved the productivity of agriculture without de-collectivization.¹⁷

Soviet Centralized Command Economy versus Maoist Guerilla Economy

Because planners deliberately distorted prices to meet political objectives, only political priorities could determine the extent and the manner of the farm's integration into the larger economy. In China, Maoist agrarian radicals sought to break up the countryside into autarkic brigades, so that each unit could survive economically if cut off by invasion from centrally dispensed resources.¹⁸ In the Soviet Union, on the other hand, planners made every farm dependent on the entire command economy by tying it to a system of centralized redistribution. This redistribution was so thorough that fodder and seed had to be shipped back from central warehouses to the farms (Hedlund 1984, 183–5).

Lacking an effective and legitimated organization within the village, the Soviets secured their rule in the countryside by monopolizing and strengthening all links between agriculture and industry in the party-state apparatus. State control over inputs and procurements substituted for state terrorism, or for moral legitimacy.

When in 1965 the Brezhnev regime turned its attention to agricultural development, it sought to raise agricultural production in part by increasing peasant consumption (Coffman 1984, 57). Yet the regime did not opt to increase rural living standards by decreasing the level of *gross* extraction from the peasantry; instead, the regime decreased the level of *net* extraction.

¹⁷ Peasant contribution to collective labor appears to be a “free-rider problem.” Yet except in the case of the Chinese communes of the Great Leap Forward, the undersupply of labor to the collective does not appear to have been the decisive reason for the inefficiency of collectivized agriculture. Louis Putterman argues, based on an examination of Chinese brigades, that price incentives communicated via the cash wage for collective labor motivated peasants to supply larger shares of their labor to the collective, albeit with some loss due to the lack of monitoring (1990). Putterman’s account supports my contention that collectivized agriculture was hampered principally by the failures of the planned economy in resource allocation to and from the farm, and by bureaucratic interference in resource allocation *within* the farm. James Wen (1984) gives an estimate of the importance of resource allocation policy compared with organizational policy, finding that about half of all growth in agricultural output in China from 1979 to 1987 could be attributed to reform of agricultural organization and half to price increases for agricultural procurements (1989, 98). The contribution of price increases gives a lower bound for the magnitude of resource-flow effects, since Wen did not distinguish between the effects of decollectivization and the effects of agricultural diversification and nonagricultural “sidelines.”

¹⁸ The origins of this policy lie in Mao’s denigration of the economics of comparative advantage (Lardy 1983; 49–50), but its full implementation came in the wake of military confrontation with the Soviet Union after 1969 (Zweig 1989).

In the kolkhoz sector, state procurement agencies subsidized farm members' wages by paying each farm a different procurement price and extending credit to unprofitable farms. Planners thus succeeded in guaranteeing a minimum wage to each kolkhoz member, irrespective of his or her kolkhoz's actual production.¹⁹

Weaker kolkhozy in effect received higher state procurement prices because the differential bonuses paid on procurement quotas subsidized them at the expense of the state, and at the expense of more efficient farms. The kolkhoz minimum wage fixed labor costs independent of production, and the system of differential prices fixed a maximum wage for the kolkhoznik that differed little from the minimum (Cook 1990; Johnson 1990, 10–2). Because weaker kolkhozy also benefitted from easy credit, kolkhoz debts mounted to ever increasing heights, far beyond the ability of many to repay. Yet kolkhozy did not go bankrupt—farms ran on the “soft-budget constraint,” as planners threw them good money after bad without pause. As kolkhoz finances came to depend less and less on actual production, collective farms sank deeper and deeper into debt.

The very policy intended to legitimate the kolkhoz to its members, the kolkhoz minimum wage, proved the fatal blow to its efficiency in resource extraction. Yet the kolkhoz minimum wage had one striking political advantage over merely lowering the level of gross extraction from the peasantry. Because the minimum wage policy increased the size of total resource flows in the agricultural sector because it reallocated resources among farms, the policy maintained the power of local officials as it increased peasant consumption.

Soviet officials held power over the collective farms because of their ability to redistribute by setting procurement prices and quotas, levying taxes, and offering or denying rationed inputs.²⁰ Officials thus maximized their power by maximizing the size of resource flows subject to their discretion; the direction of the actual net flow of goods was much less important to them. Planners continued to order large gross extractions from the collective farms even as the net extraction of resources from the agricultural sector as a whole became increasingly negative.²¹

¹⁹ The first version of a wage guarantee appeared under Khrushchev, when the state mandated pension fund levels for retired kolkhoz members (Osofsky 1974, 4–5). As has been widely noted, the kolkhoz minimum wage policy effectively abolished the fundamental distinction between kolkhozy and sovkhozy.

²⁰ See e.g. Nove (1967); Humphrey (1983, chaps. 2.3, 7.2).

²¹ It is unclear whether even under Stalin collectivization succeeded in extracting resources for industrialization from the agricultural sector as a whole. Whatever was denied to the peasant for his consumption may have been returned to agriculture in the form of investment even as early as the mid-1930s (Millar 1990, 70–2).

Whereas the Soviet state repeatedly tried to carry out reform of agriculture through manipulation of external resource flows, the Chinese party-state had built itself within the village, so it could rule through allocation of resources within the farm. Chinese officials at the center could try to manage the agricultural sector by issuing directives that altered the internal organization of collective farms.

Beginning in the late 1960s Maoist “agrarian radicals” attempted to cellularize the economy, to reduce interregional trade and make every unit as self-sufficient as possible by encouraging local self-sufficiency in grain and industrial goods (Naughton 1991; Zweig 1989, 49). Radicals launched “grain-first” campaigns in China from 1965 to 1976 to force more inputs into grain culture by banning so-called agriculture sidelines (Lardy 1983, 49; Fei 1989). Fish ponds were drained, orchards uprooted, even buildings overthrown, for radicals made the key indicator of a local official’s proper political attitude the amount of grain his unit cultivated.

This reversion to autarky through “grain-first” campaigns and support for rural self-production of industrial inputs to agriculture created a decentralized command economy, not a massed division but a collection of fortresses. By encouraging local self-sufficiency the radicals created a socialized economy that aimed at making irrelevant the redistribution of resources between agricultural enterprises.

V. Peasants, Bureaucrats, and Decollectivization

Collective agriculture faced a permanent crisis because it embodied a permanent contradiction. More efficient production required that someone have personal responsibility for the allocation of agricultural inputs, but if peasants held this responsibility, they could remove resources from party-state control. The same scheme of expropriation that produced efficiencies in extraction from peasant consumption thus also produced inefficiencies in production and investment allocation.

The Soviets ruled in the countryside by making the farm dependent on politically allocated external resources. Beginning under Brezhnev the distribution of external resources was used to subsidize rural consumption, even while managing farms firmly from above. In China, by contrast, ideological controls on production within the collectivized team and brigade hampered the rural economy without increasing state revenues or improving the position of local rural officials. From 1964 to 1976, Maoist radicals sought to break up the rural economy into autarkic cells, with investment financed as locally as possible. State power in China did not suffer from the destruction of the collective organizations of production, because Maoist

campaigns prevented the creation of a large-scale machinery of redistribution among villages.²²

Conversely, decollectivization has proven difficult in the former Soviet Union because the party-state ruled the countryside by extracting all resources from the collective and recycling them through official channels. Even after the collapse of the Soviet Union at the end of 1991, institutions of rural governance and the power of local bureaucrats continue to depend on the political allocation of resources among enterprises. Reformers are thus blocked by the entire state machinery.

Decollectivizing reform efforts under Soviet rule began in the early 1980s, with a system called the "collective contract." Under the collective contract, contract teams were formed within the kolkhoz. The collective contract specified the inputs the kolkhoz was to provide the team, and the cash price the kolkhoz was to pay for the team's production (Gagnon 1987).

The collective contract system failed mainly because it did not provide sufficient rewards beyond the minimum guaranteed through the redistributive price system. Only 20% of earnings were linked to the success of the team (Brooks 1990, 102). With the failure of the collective contract and its abandonment as state policy in mid-1988, agrarian reform efforts in the Soviet Union virtually halted. Further lease programs were proposed, but none were widely implemented (Brooks 1990, 89).

The cross-subsidization of weaker farms by stronger farms gave Soviet farm members little reason to opt for decollectivizing reforms within a system of planned distribution. Farms that adopted decollectivizing reforms would forfeit much of the gain as the planners raised those farms' delivery quotas, lowered their prices, and reduced their access to subsidized credit.

Russian farmers remain beneficiaries of state redistribution even after the death of the plan (Van Atta 1990; 1993, 36; 1994, 167-72). If agricultural reform means moderate decollectivization together with retention of state redistribution, Russian farmers have little to gain from it, since they would lose the payoff of such reform to the system of redistribution. Moderate reform, decollectivization without decoupling the farm from the state-directed economy, has no relevant constituency. Farm members would benefit little, and local officials would forfeit all of their power over production.

Despite official promises, decollectivization has yet to be carried out on a large scale in Russia (Van Atta 1994, 172-8; Wegren 1994c). While the state has formally transferred title in land to the collective farms, little

²² The state did, however, redistribute resources from the rural to the urban population by holding down grain procurement prices and subsidizing retail grain purchases (see e.g. Oi 1989, 29-32).

actual reorganization of production has taken place. Eighty-three percent of former collective and state farms in Russia have formally retained collective organization of production (Wegren 1994a, 175). In 1994 private farmers worked only 6% of arable land, and these private farmers accounted for between 4 and 10% of total agricultural production.²³ State procurement continues, and agriculture remains dependent on state-redistributed resources through heavily subsidized credits and direct grants (Wegren 1993).

In China, decollectivization of agriculture was immediately successful because the state increased the flow of resources to the now privately farming households both by increasing procurement prices and by allowing more agricultural specialization and rural-urban trade (Fei 1989, 233). No such quick solution is available, however, in the former Soviet Union. Planners had already raised prices under collective agriculture to support the kolkhoz minimum wage. Because the Soviet collective farm was strongly coupled to the larger economy, moreover, the gains from trade and specialization have already largely been realized.

In Russia precollectivization claims are generally forgotten or ignored, so Russia's collective farms have no low-cost principle for the redistribution of land.²⁴ This obstacle posed by the transactions-cost of land privatization is the focus of the Nizhny Novgorod model, while I have argued that it is Russian farmers' dependence on politically redistributed resources that prevents successful decollectivization.

In the Nizhny Novgorod model, named after a pilot project in Nizhny Novgorod Oblast sponsored by the International Finance Corporation, collective farms are divided and their land and property are auctioned to syndicates of their present and retired members. Members receive farmland entitlements on a per capita basis, and property entitlements according to their length of employment and wage history.²⁵

²³ "Private farming becoming increasingly popular," *BBC Summary of World Broadcasts*, 6 March 1995, part 1 (SU/2244/C); Alexander Rahr, "Private Farmers Wary of State Duma," *Radio Free Europe/Radio Liberty Daily Bulletin*, February 8, 1994. These figures exclude households growing only small quantities of food on private plots.

²⁴ In the Baltic states of Lithuania, Latvia, and Estonia, land could be cheaply distributed to its pre-Soviet holders because the claims of these holders, dating from 1940, remained in living memory. The transactions-costs perspective thus correctly predicts that farms will be broken up more easily where the costs of property-rights redistribution are lower. Yet while agricultural reform in the Baltics has been rapidly accomplished, reform there has largely not been successful at improving agricultural productivity or profitability. Gross agricultural production in all three Baltic countries has fallen substantially every year since 1989, and faster than in Russia, where agriculture remains largely unreformed (Economic Commission for Europe 1994, 63).

²⁵ International Finance Corporation (1994, 6-7, 70-1, 72-7).

The Chernomyrdin Government has "recommended" that the Nizhny Novgorod model of auction privatization be applied throughout Russia, and sought to "disseminate" knowledge of it (Chernomyrdin 1994a, 1994b). But the Russian government has yet to budget for the substantial administrative costs of such a reform on a national scale.²⁶ Most important, the five collective farms that participated in the Nizhny Novgorod model were granted substantial credits (Wegren 1994c, 26). Thus the model will not serve as a test of the success of private farms cut off from state-controlled resources.

Backers of the Nizhny Novgorod model claim that assignment of property rights is the great "transaction cost" preventing decollectivization. Yet even when this breakup cost is overcome, when private farms have already been formed, they do not usually succeed. As of the fourth quarter of 1993, for every 100 private farms created, 52 stopped operating (Wegren 1994c, 16).

From the resource dependence perspective the different fates of agricultural reform in China and Russia cease to be mysterious. By forcibly decentralizing, the Chinese had "saved" their rural sector from the temptation of soft budgeting, as no support was available for incomes in ailing farms. The Chinese party-state had gained internal control of the village through its internal reorganization of agriculture during land reform. The regime's power over the farm did not, therefore, depend on its control of resource flows to and from the farm.

Maoist agrarian radicalism had applied the state's power over production, paradoxically, to lay the ground for rapid decollectivization by breaking up the rural economy into autarkic cells. At the eve of reform the bureaucracy had no stake in maintaining the volume of resource flows. Members of a given farm internalized the efficiency gains from decollectivization, instead of seeing the state redistribute these gains to weaker farms.

In the Soviet Union, by contrast, the absence of the market underlay what power the regime had. The party-state initially relied upon the political allocation of vital agricultural inputs and of procurement quotas, because it had no internal administrative control of the already organized *mir*. This system of allocation became the Soviets' principal tool for control of the collectives.

For individual members of Soviet collective farms, Gorbachev-era decollectivizing reforms introduced uncompensated risks. State redistribution

²⁶ In Nizhny Novgorod Oblast the organizational expenses of the breakup of the five chosen farms was borne largely by the International Finance Corporation and the strongly market-oriented Oblast government (Wegren 1994c).

shielded farm members from the effects of their own inefficiencies, and conversely, spread the potential benefits of any enterprise's improvement among its alleged competitors.

Having beaten and starved the peasants into submission, the Soviet regime beginning with Khrushchev sought to buy legitimacy from the peasants in exchange for guaranteed wages and subsidized inefficiencies. The planners continued to extract almost all of the harvest from the collective. Yet they returned a larger fund of wages to the farm members, albeit in a fashion that severely damaged labor incentives by making the farm's success independent of its members' collective efforts. The planned economy made farm members wards of a system too wasteful to sustain, but a system inherently incapable of reform from within.

Until the collective farm can be decoupled from the plan, decollectivization promises nothing to anyone. Farmers do not see higher incomes even if they became more efficient producers, while local officials have no reason to disrupt an intact system of organizational rewards and deny themselves the power over resource flows.

While the Russian Government claims a commitment to decollectivization, current policy, since the fall of the Gaidar government at the end of 1992, is to continue grants and low interest loans to collective farms.²⁷ In 1994 the collective farms received 94% of state credit and 98% of state investment in agriculture.²⁸ Thus Russia's farm policy so far, despite the stated intentions of Yeltsin and his more reform-minded ministers, maintains the system of political redistribution that makes decollectivization unattractive to peasants and officials.

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²⁷ See Ellman (1993); Alexander Gordeyev, "Agriculture Chief Calls for Subsidies," *Moscow Times*, 8 January 1995; Julie Tolkacheva, "Agrarians Step Up Pressure for Funds," *Moscow Times*, 15 January 1995; Thomas Sigel, "State Duma Delays Crucial Budget Approval," *Open Media Research Institute Daily Digest* Part I, 23 February 1995.

²⁸ "Private farming becoming increasingly popular," *BBC Summary of World Broadcasts* March 6, 1995 Part 1 (SU/2244/C).

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