Transaction Costs and Peasants' Choice of Institutions: Did the Right to Exit Really Solve the Free Rider Problem in Chinese Collective Agriculture?¹

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A recent attempt to explain China's agricultural crisis of 1959–1961 argues that collective agriculture failed because the low-cost substitute for costly monitoring, the exit penalty, available during 1955–1958, was taken away. Exit right is arguably an effective mechanism for disciplining effort because members need only to examine changes in publicly observable output to ascertain the degree of shirking in the team. This new theory of decollectivization is, however, undermined by the evidence that, first, monitoring was an essential feature of Chinese agriculture during the period in question, and, second, the alleged exit right was not respected. J. Comp. Econom., June 1993, 17(2), pp. 485–503. Hong Kong Polytechnic, Hung Hom, Kowloon, Hong Kong, China. © 1993 Academic Press, Inc.

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I. INTRODUCTION

Two decades after it had been adopted in 1955 as an organizational device for agricultural production, team farming in China was abandoned in the early 1980s.² According to critics of collective farms, they failed to provide

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² Only 1% of the production teams in China now claim to farm collectively.
effective work incentives to farmers, who, having been denied the right to farm independently, were made to work as members of a collective. Collective agriculture was seen as suffering from problems of labor supervision within the institutional context of a team, which prevented the adoption of payment systems that would sufficiently differentiate and reward farmers’ actual contributions to total output, such as the use of piece rates. In the Chinese case, the difficulties of monitoring led to the adoption of a time-based payment system, with a very narrow spread of earnings. While that system was simple to administer, it provided only a tenuous link between effort and reward. This weakness of incentives led to extensive free riding behavior, which was cured only by the eventual replacement of the collectives by family farms (e.g., Lee, 1984; Lin, 1988; Nolan, 1983, 1988).

The foregoing analysis has intuitive appeal. Indeed, the argument that monitoring workers in agriculture is difficult, be they the members of a cooperative, or simply wage laborers, is now widely used to explain the prevalence of family based farm institution in a large part of the developing world (see Binswanger and Rosenzweig, 1986; Bradley and Clark, 1972; Nolan, 1983). Among other implications, the one that institutions play a critical role in economic development is the most obvious.

At a more fundamental level, however, it is important to examine the incentive properties of alternative reward systems under different property rights regimes if we are to appreciate more fully the subtle, differential impact of these varying regimes on incentives and, more generally, on economic development. For instance, there may exist property rights arrangements within the collective institutional framework that might alter the fate of collective agriculture. The costly monitoring thesis, as presented above, suggests the contrary, but a recent attempt by Lin (1990) to reinterpret the agricultural crisis of 1959–1961 in China challenges this conventional view.

Although Lin’s thesis also assumes the existence of high monitoring costs, he argues that the failure of collective agriculture is not inevitable. Collective agriculture can be, and, indeed, allegedly had been, a viable form of economic organization, provided that certain property rights arrangements are respected. The reason why collective agriculture in China failed, Lin argues, is because the right of exit, available to the peasants during the initial stage of collectivization, was taken away as part of the communalization movement in 1958.

Lin argues that because of the same monitoring difficulties that are often responsible for the adoption of a time-based payment system, cooperative farming can only be supported when an exit penalty is available that would both lead to the provision of high effort and to make monitoring redundant. He further argues that if peasants are self-interested, such a provision of effort is only possible when individual farmers are given the right to withdraw from cooperative farming and revert to private farming, as is said to
have been the case before 1958. The right of withdrawal gives diligent workers a credible threat against shirkers. If the publicly observable output is below that which could be expected from a fully diligent workforce, diligent workers could revert to private farming. That would deprive the shirkers of both the diligent workers’ contribution to output and the alleged economies of scale associated with the larger-scale production of the collective. The result is an effective mechanism for the prevention of shirking. This mechanism was in place until 1958, accounting for the success of the collectives in that period, but, when removed, leading to their failure.

While Lin’s thesis is provocative and novel, it is inconsistent with two pieces of historical evidence, which therefore raises doubts about the theory’s explanatory power. The first is that if peasants relied on the mutual monitoring of output before 1958, as is implied by the right of exit hypothesis, there would be little need for monitoring activity in that period. By the same token, monitoring activity should have increased and more elaborate incentive schemes should have been introduced after the removal of the peasants’ right to exit. In fact, the reverse was the case. Before 1959 the payment system was mainly piece rate related and explicitly linked to effort. After 1959, this high-powered incentive scheme collapsed when the supposed right to exit was removed. For the long period that was to come, 1965–1978, Chinese agriculture adopted the low-powered time rate payment system that promised only a tenuous link between effort and reward. Second, contrary to the low exit costs hypothesis, various measures were found to have been employed by cadres to discourage those peasants wishing to leave the collective, hence making exit costly. This evidence undermines the implication

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3 Evidence used here is drawn largely on Chinese sources, which include articles and official documents that were previously not available, and a historical newspaper archive of an agricultural region, Shandong, in China. In addition, in order to evaluate Lin’s hypothesis fairly, I have also drawn heavily on facts reported in the official document entitled A Compendium of Important Documents on Agricultural Cooperatization, 1981, on which his own analysis is based.

4 The existence of various effort monitoring schemes before 1958 does not necessarily contradict Lin’s thesis, if we interpret his ideas in a more liberal fashion. That is, if we suppose that what Lin has in mind is that, at the margin, shirking would not be completely ruled out even with the availability of exit penalty, then it is natural for both the diligent members of the collective and the cadres to use various monitoring schemes to depress shirking within this margin, however small that may be. This is the view of an anonymous referee. Interestingly, a second referee of this paper argues that Lin (1990, p. 1241) “does commit himself to the position that the trigger strategy succeeds because it is an alternative to costly monitoring.” The present author takes this latter position.

5 High-powered in the sense that income is closely related to the value created. See Williamson (1985, Chap. 6).

6 We leave out consideration of the years 1959–1964, which was the period of the Great Leap Forward and the recovery from that episode’s consequences for agriculture.
that peasants were allowed to choose their own institution, a factor allegedly accounting for the brief success of collective agriculture.

II. THE ORGANIZATION OF COLLECTIVE CHINESE AGRICULTURE, 1956–1958

Between 1956 and 1958, Chinese agriculture used the production responsibility system (PRS). The principal objectives of this system can be broken down as follows: at the systemic level it sought to reduce the overall governance costs of collective organization. At a more micro level, and through the adoption of what was essentially a piece rate contract system, known as the work norm management system (WNMS), the PRS sought to link work effort and material rewards in order to provide strong work incentives to individual members of the collective.

There are indeed good reasons to believe that the organizational configurations of collective agriculture during the 1956–1958 period were much more sophisticated than those implied in Lin’s game-theoretic model, one in which monitoring was considered more or less redundant. To begin with, the collective had become so large and complex that to manage it well would require significant organizational innovations, which, given the hasty pace of the movement in mid-1956 during the so-called high tide of socialism, were not readily available. Further undermining the viability of collective agriculture was the mistaken belief that collectivism meant working together; as a result, there was virtually no devolution of management and production responsibilities to smaller groups and households; in short, there was no division of labor concerning day-to-day agricultural work. A typical work day, according to some Chinese agricultural historians, began when all

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7 After the land reform, China’s agriculture first went through the stage of mutual aid, temporary and seasonal to begin with, then permanent, followed by the formation of elementary cooperatives. From the summer of 1955, these cooperatives, and in many cases the mutual aid teams and private farmers, were amalgamated into advanced cooperatives, or collectives.

8 The fact that collective work effort was certifiably a severe problem in 1956 prior to the introduction of WNMS and decentralized management, undermines Lin’s thesis that the availability of exit penalty was sufficient to bring about both a provision of high effort by individual members of the collective and an elimination of monitoring. As one will recall, the alleged right of exit was taken away in 1958, not 1956. I owe this observation to an anonymous referee.

In 1955, an elementary cooperative consisted on average of 26.7 households. A year later, and when it first came into being, an advanced cooperative had 268.5 households. Even after measures were taken to scale down the latter’s size, a collective still on average consisted of 158.7 households in 1957 (Wei Daonan and Wang Dai, 1989, “The Socialist Reform of Our Country’s Agriculture,” pp. 131–132). The difficulties experienced by cadres during the first year of collectivization has been pointed out by, among others, Shue (1980, p. 306). For Chinese sources, see Deng Yun (1989, p. 123) and Li Yunhe (1989, pp. 283–284).
members of a collective assembled in the morning at the ringing of the bell, and they carried out every single task together irrespective of what the task was; “whether it was ploughing, transplanting, or weeding, it was all like fighting a tiger” (Guo Huamin, 1989, p. 136; also see Wei Daonan and Wang Dai, 1989, p. 123). The complete lack of division of labor in an institutional environment in which the number of peasant workers had dramatically increased suggests that the problem of effort observability, or free riding, was severe.9

More generally, unlike an elementary cooperative or a mutual aid team, in which most work was carried out primarily on an individual basis on the land of a peasant household, virtually all the work in an advanced cooperative had to be organized and performed on a collective basis. In other words, whatever preexisting arrangements there already were for governing the limited amount of joint work in the noncollective institutions were far from adequate in coping with the new exigency.10 For the new institution to work, Chinese agriculture had to come up with a more sophisticated system of work organization that expressly recognized the importance of reducing the costs of governance and, at a more micro level, the importance of individual material incentives. It is indeed our thesis that organizational innovations, described below, had been the outcome of the institutional change in question.

First of all, in order to align work effort with material rewards at the individual level, a system known as the work norm management system was adopted. Under this system, rewards were determined principally by the

9 Although, as some critics of collective farms have charged, compared with industry, the degree of division of labor in agriculture is limited (see, e.g., Nolan, 1983), the difference should be conceived as one of degree rather than kind.

In Shanxi province, peasants openly professed that they “would not plough deeper than their fellow workers, would pull out only those weeds that are noticeable, could not care less if the plant survived the weeding, . . . and so forth, so long as the leaders are blind” (Giao Huamin, 1989, pp. 133–134).

10 Some elementary cooperatives had eventually developed a contracting system similar in nature to the one adopted in the collective, with subunits producing a predetermined amount of output using a fixed amount of land and labor and responsible for an allocated budget of production costs. Since 85% of the peasant households had not gone through the stage of elementary cooperative before collectivization, a more appropriate reference point would be the mutual aid team, in which a worker was assigned a particular rate on the basis of his individual strength and ability and received a pay based on this initial rating plus evaluation of his actual performance by peers. This method of evaluation was developed within an institutional context in which not only the number of workers was small, but also the variety of tasks performed on a joint basis. Naturally, it became less suitable as the size and complexity of the organization grew, as in the case of the elementary cooperative. See Shue (1980, pp. 300–301) for a detailed account.
amount of work done; there were quality and time requirements, however. All agricultural tasks were priced on the basis of work intensity, skills required, the degree of unpleasantness involved, and their relative importance in the overall production process. For the purpose of quality control, technical norms were established for each farm task, setting an effort standard in relation to a host of nonlabor inputs such as land, draft animals, and farm implements.\textsuperscript{11} After work norms were established, reward standards denominated in work points were set for each grade of work. A laborer performed the tasks assigned to him by the collective, and in fulfilling them, accumulated work points over the crop cycle. His income was obtained by multiplying the number of work points acquired by the value of the work point, which was in turn computed by dividing the net revenues of the accounting unit, the collective, by the total number of work points.

Effective monitoring of the quality of farm work was critical to the success of the WNMS because, under piece rates, workers will not shirk effort but will reduce the quality of work insofar as that allowed by imperfect monitoring (Roumasset and Uy, 1980). Paying workers on the farm according to piece rates does not reflect their true marginal contributions, because agriculture lacks the kind of standardization and therefore mechanical specialization that industry has, which renders quality control a task typically more daunting than that in manufacturing production (see, e.g., Bradley and Clark, 1972). Such a problem is further exacerbated as workers in agriculture worked simultaneously in the context of a team. For collective agriculture to succeed, an efficient governance structure must be devised to keep the costs of monitoring low.\textsuperscript{12} More specifically, for the WNMS to work, production responsibilities must be devolved to a level that would substantially reduce the burden of hierarchical monitoring. Indeed, there is evidence that suggests that the Chinese were able to do this.

\textsuperscript{11} Work norms were predicated on both the estimated quantity and the estimated quality of work of an average individual worker and on the specific time in which the task was supposed to be completed. Thus, for someone who was assigned to push a cart of wheat to a designated point, the set quantity was made equivalent to the standard output of 9.6 mu, the average yield for one mu of wheat was 100 kilograms, for a distance of less than 0.5 kilometers one way. The quality of work was also specified: “no dropped wheat along the way.” Upon the satisfactory completion of the task, the worker received 13 work points, which was the highest grade one could obtain in this cooperative. This particular task belonged to what the Chinese called first category work; these tasks were supposedly difficult to perform, ones that required a great deal of physical strength as well as long hours. Moreover, they had to be done when the weather was either very hot or very cold, after the summer and the winter harvests, adding to the tortuous nature of the job (February 16, 1956, Dazhong Ribao).

\textsuperscript{12} This is where we differ from Lin, who argues that all that is required to prevent shirking from occurring in a cooperative is to give workers the exit right.
The low degree of specialization and division of labor in labor-intensive agriculture suggests that there are limited size benefits from operating a large agricultural organization, since the costs of monitoring will likely increase as the size and complexity of organization increases. In addition, the spatial diversity of agricultural production will further increase such costs. To ensure that day-to-day production was manageable, the very first thing a collective, consisting of 158.7 households on average in 1957 (Gao Huamin, 1989, p. 132), did was to decentralize production decisions and managerial responsibilities to smaller units known as brigades. The brigade was given the rights to organize production and to allocate labor as it saw fit, subject to certain cost–output ratios stipulated by the collective. As a means of collective incentives, a brigade was awarded a bonus if it overfulfilled the target, and, by the same token, it was penalized if it failed to meet the target. For labor-intensive agriculture, the size of a brigade may still be too unwieldy in terms of day-to-day organization of work. To avoid managerial diseconomies of scale, the brigade therefore further subdivided the work to the smaller work groups known as teams, initially on a seasonal basis, but eventually, as the system developed contractual arrangements, increasingly in a more permanent fashion. In addition, management was made easier as the brigade assigned each team of workers to be attached to specific plots of land, a measure that also tended to encourage long-term care of soil fertility.

To further reduce monitoring costs, the team determined whether a particular farm task was more suitably undertaken by an individual household or by a group of workers, the main consideration being whether there were economies of scale or factor complementarities to be derived from team work. In the cotton growing areas of Shandong, for instance, households undertook the tasks of sorting seedlings, transplanting, pruning the cotton twigs, weeding, disposing the stubble, and so on, on their own, as there were little if any economies of scale to be derived from group farming in these areas of production. On the other hand, pressing seasonal requirements may warrant certain tasks to be done jointly by a group of workers. Ploughing,

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13 The brigade was now the immediate subordinating organization under the collective. See Shue (1980).

14 A crop cycle was divided into 24 seasons based on climatic considerations, each of them lasting for approximately 10 to 15 days (xiaoduan baogong, or seasonal contracting).

15 Some Chinese agricultural economists, Deng Zihui especially, have argued that this devolution of managerial responsibilities from the brigade to the team, attached to delimited plots of land, helped to save brigade cadres from allocating laborers on a daily basis, allegedly a source of inefficiency as it typically took a long time for peasant workers to gather in the field in the morning to be assigned work. See Gao Huamin (1989) and Wei Daonian and Wang Dai (1989).
harrowing, and harvesting fall into this category. However, even for tasks jointly carried out by workers, it was still feasible to observe an individual worker’s effort, as each work group was spatially confined to a delimited area within which there were only a small number of workers, who were thus able to monitor each other on a mutual basis. In practice, therefore, farm managers only need to inspect the joint output produced by the group.

Just as the team was encouraged to assume collective responsibility for the plots of land assigned to it by the brigade, the same can be said of the individual households as they, too, were assigned a specific plot of land to look after on a regular and individual basis by the team. In particular, a male head of household aged between 18 and 50 was assigned the specific responsibility of managing a plot of land allocated to the household by the team in return for a lump sum of work points upon meeting the planned output target set by the team. A head of household’s duties were very specific; he had to report to the cadres on changes in natural conditions and the state of the growing crops and be responsible for the prevention of pilferage and sabotage of communal goods and facilities.

16 Examples include group planting of millet, the pushing of a heavy cart of organic manure, the scraping of mud from the bottom of the pond, and so forth. See Kung (1992) for a more detailed analysis of these cases. In all the above instances, the close physical proximity of distance between team members who worked simultaneously ruled out the possibility of shirking, as it was simply not easy for one to do so without fearing that the other would discover his reduced effort at low cost, and as such, he would be deterred from shirking for fear that the other person would retaliate. The conclusion just derived differs from that of Alchian and Demsetz (1972), who argue that a specialized, third-party monitor is required, for example, in the case where two men lift heavy cargo into trucks, in order to ascertain individuals’ separate contributions to joint output. The combination of joint compensation for the workers in the team with a team size small enough to make mutual monitoring technically feasible meant that this approach could be effective.

17 The underlying rationale for having team members involved in the work to mutually monitor each other was to ensure that the quality standard established in the WNMS was closely adhered to, but to avoid close, hierarchical supervision by simply inspecting the end-state of their output (see Holmstrom, 1982).

18 The devolution to individual households of those farm tasks suitable to be undertaken by them had allegedly helped to resolve the problem of mutual assessment of one’s quality of work on a daily basis, which was not only time consuming, but also tended to invite conflicts among the peasants (Wei Daonian and Wang Dai, 1989, p. 124).

19 The arrangement of giving a household head responsibility for a piece of land raises questions about whether production is still collective. The fact that the responsible person received only a fixed number of work points, that the cooperative remained as an accounting unit, and that there were work squads, resembling mutual-aid teams, suggests that the case was somewhere between individual and collective production. I owe this point to Louis Putterman.

20 His other duties included the undertaking of some minor field maintenance work in his spare time and the monitoring of the squad of workers who were assigned to work on his plot during peak seasons, at which time he would work with the squad of workers together on
The foregoing analysis of the organization of Chinese collective agriculture during the 1956–1958 period directly contradicts Lin’s assertion, in his game-theoretic analysis, that monitoring in a collective was redundant, as peasants then could freely exercise their right to leave the collective as a strategic means of disciplining. To be sure, the governance costs of collective agriculture had been reduced as a result of the collective adopting the production responsibility system, but monitoring was not redundant. Indeed, it was clearly a central feature of the WNMS. It may thus be argued, as Deng Zihui once conjectured, that the three successful years of agricultural growth, 1956–1958, were the result of successful institutional developments that substantially reduced the governance costs of collective agricultural organization, rather than because peasants had the right to withdraw.\textsuperscript{21}

### III. THE RIGHT TO WITHDRAW: APPARENT OR REAL?

The key question that underlies Lin’s hypothesis is whether peasants could actually exercise the stated right of withdrawal and at what costs. Mere awareness of the right is not sufficient: peasants must be concerned with the many issues in their decisions about the alternative modes of farm institution; for example, whether the collective would willingly return the land, draft animals, farm implements, etc. to those who left, or whether those leaving would be allocated the necessary inputs and credits and allowed to market the produce on terms and conditions comparable to the cooperative farms, given the fact that the state already controlled markets for both inputs and output. In the view of this author, the answers to these questions depend to a considerable extent on whether the collectivization process was voluntarily conducted.

Consistent with the existing Western views on collectivization (see, among others, Selden, 1982; Shue, 1980; Walker, 1968), the latest available evidence in Chinese suggests that the collectivization movement of 1956 was far from voluntary, at least in the case of the better-off middle and upper peasants. Deng Zihui’s remarks are instructive:

I find it hard to accept the claim that he (referring to the middle and/or upper peasant) voluntarily joined the cooperative (meaning the collective). His productivity is so high that, even with all the potential advantages of a cooperative per capita output in the latter instance, he may not surpass his individual endeavor within the first three or four

\textsuperscript{21} Deng Zihui, “The Socialist Reform of Chinese Agriculture,” People’s Daily [Renmin Ribao], October 18, 1957. Deng was a senior official whose cautions and gradualist approach toward the development of collective agriculture had been discarded by Mao as retrogressive and right wing. (See also footnote 23.)
years. To have him join the cooperative and be allowed only an equal share of the total output would not be sufficiently motivating to make him work. (Bo Yibo, 1991, p. 353)

Indeed, it has been found in Anhui that incomes of upper-middle peasants dropped from 111.8 yuan in 1953, or 117 yuan in 1948, to 105.2 yuan in 1956. The middle peasants had experienced a similar fate. Compared to their earnings in 1948, their incomes in 1956 declined by 26.55 yuan, from 78.25 to 51.7, a decline in money income terms of over 30% (Wang et al., 1989, pp. 161–162; also see Chen and Ma, 1985, p. 178). Unless these peasants had unrealistic expectations about the effects of collectivization, it is not possible to argue that they joined the collective voluntarily while anticipating a substantial drop in their income. The latest available evidence now suggests that the upper and middle peasants in Anhui relentlessly refused to join the collective in the winter of 1956 (Wang et al., 1989).

A major factor as to why collectivization proceeded at such a fast pace was Mao’s growing exasperation, as he found it difficult to find a formula for distributing the net output in a way to make collective farming attractive to both land-rich and land-poor peasants. As a result of the collapse of more

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22 The results just documented were in line with what was anticipated at that time, as Deng Zihui’s remarks clearly showed. One should bear in mind that, by joining a collective, peasants with above average stocks of farm capital took a capital loss, as they would be paid only on the basis of work points irrespective of their original capital contribution. Unless the static economies of scale were so enormous that they could be realized almost immediately, which was apparently not the case, it is most likely that the income of these peasants would fall as a result of having given up their returns from land. In addition, incomes of previously well-to-do peasants may also have been adversely affected by the policy of income and resource leveling carried out among the teams. In Henan province, for example, up to 48.5% of peasants’ complaints were said to be caused by this egalitarian practice of the collective (Compendium, 1981, p. 660). Similarly, the deprivation of peasants’ collective rights in choosing the overall production plan and the output mix had also allegedly affected peasants’ welfare negatively by a magnitude of up to a 22% reduction in output and accordingly a decline in the labor day value, which was effectively the peasants’ wage rate (Compendium, 1981, pp. 694–695; see also Lardy, 1983).

23 At the end of 1955, the percentage of rural households already in collectives was a mere 4%, up from a negligible 0.03% six months before. By January 1956, the figure jumped drastically to 30.7%, and by June, 63.3% of all rural households were in the collectives. Collectivization was largely completed by the end of the year, with 87.8% of all peasant households belonging to some 750,000 collectives. The incredibly fast pace of collectivization is evidenced from what had been achieved only a year previous, in 1955, when Mao criticized Deng Zihui, his major opponent in terms of rural economic policy, as having committed an leftist error in dismantling the cooperatives and likened him to the derogatory example of a “woman with bounded feet” who, “while moved in a steady fashion, yet made no progress.” At that time, 35% of all rural households were still independent farmers and the other 50% belonged to mutual aid teams, with half of them in seasonal or temporary ones. There were only 7500 collectives in total. The hastiness of the movement can be further indicated by the fact that, by the time 540,000 collectives had already been established, 70% had never gone through the stage of elementary cooperative, while 30%
than 20,000 cooperatives in 1955 due to poor preparation, on May 17, 1955 Mao abandoned the principle of gradualism that he had originally advocated and demanded that the number of cooperatives must reach one million within one year, up from 650,000, including the elementary cooperatives.\textsuperscript{24} Subsequent deliberations had led him to further revise the target upward to 1.3 million, doubling the existing number.

The point here is that the exceedingly fast pace of collectivization must have produced immense pressures on cadres at all levels to comply with the orders issued from the center, to the extent that coercion must have been used to force those unwilling peasants to comply with the mandate. Given that cadres’ performance was evaluated primarily on the basis of the rate at which collectivization proceeded and the stability of the collectives once formed, the allegation that they were being impatient is not hard to understand (see, e.g., Walker, 1968).\textsuperscript{25} It is therefore not surprising that cadres were charged with having been indiscriminate in admitting peasants into the collective, particularly the upper and middle peasants who turned out to be a destabilizing social force (\textit{A Compendium of Important Documents on Agricultural Cooperization} (hereafter, \textit{Compendium}), 1981, p. 695). In other words, had the cadres been more patient and selective over the choice of membership, which, admittedly, was difficult given the state’s overriding objective of stepping up the pace of collectivization, they should not have admitted the troublemakers whose voice was the loudest and who formed the majority among those who eventually withdrew.\textsuperscript{26} This suggests that there were strong incentives on the part of the actual property rights enforcers to break all the state codes in furthering their own interests and accordingly, those of the state.

The Western view that collectivization was never a voluntary process, not even in 1956, is now further confirmed by new Chinese evidence.\textsuperscript{27} A variety of measures, some more violent than the others, were employed by cadres in

did not even have any experience of mutual aid farming (Liu Wenpu, 1989, p. 174). In one of the two villages studied by Chen Xiwen and Ma Suyuan (1985), peasants were all independent farmers prior to collectivization. The entire village had only one temporary mutual aid team, consisting of 6 households (p. 177).

\textsuperscript{24} This took place mainly in three provinces; namely, Zhejiang, 15,000; Shandong, 5000; and Hebei, 7000.

\textsuperscript{25} The typical attitude of cadres at that time may be best reflected by a cadre’s slogan: “By the end of 1957 all households must join the collective; those who withdraw break the law!” (February 12, 1957, \textit{Dazhong Ribao}). See also Perkins (1966, pp. 67–68).

\textsuperscript{26} According to the \textit{Compendium}, the middle peasants were the most determined to withdraw and constituted the majority, up to 70% in some instances, of those who had actually withdrawn (p. 688).

\textsuperscript{27} One must bear in mind that, while illuminating, such evidence is not conclusive enough for the purpose of ascertaining the magnitude of the problem in question. We must bear in mind this caveat while proceeding with the analysis.
their attempts to step up the pace of collectivization. For example, there were instances in which peasants’ oxen and stored grain were forcefully drafted and their crop harvested by the cadres (Chen Xiwen and Ma Suyuan, 1985, p. 178). In other instances, it was found that land payments that accrued to individual households in an elementary cooperative were deliberately set at very low levels, whereas agricultural tax for privately owned land was fixed at excessively high levels, e.g., 10–15% over the normal rate paid by the collective, as in Anhui province (see, also, footnote 37) in order to discourage peasants from staying either in the elementary cooperative or as independent producers (Deng Zihui in Bo Yibo, 1991, p. 353). As an alternative, peasants’ land was swapped in the name of facilitating the development of cooperative agriculture as it was considered necessary to consolidate several plots of land for realizing the economies of scale of team farming, a national mandate with which peasants had no choice but to comply, however unwilling they may have been.28 Many middle peasants joined the collective to save their lives, as they saw the rich peasants being ruthlessly persecuted by cadres seeking demonstration effects (Deng Zihui in Bo Yibo, 1991, p. 53; also see below).

Cadres’ attitudes, reinforced by Mao’s unrealistic vision of the utopian village economy, were also evident at a later stage when some peasants wished to leave the collective. Fearing this, cadres simply did not inform the peasants of their legal rights, and when peasants refused to yield, confrontations resulted. For instance, peasants who wished to leave a collective were summoned to a succession of tortuous meetings to be educated on the superiority of cooperatization. By and large, the impression from the press reports of the time is that as soon as cadres learned that households were contemplating withdrawal, they would immediately resort to moral suasion, using a combination of threats and lures to persuade the peasants that they were wrong.29 This may explain why quit rates were low.30

28 "The co-op, for example, might complain that the insects from the private farmer’s land were going to damage its crop and would suggest a swap of some pieces of land, offering something inferior in exchange for the independent peasants’ own land. Or else the co-op might insist that the farmer would have to pay the co-op a certain amount in compensation for damage done by ‘his’ insects” (Shue, 1980, p. 309, emphasis added). In addition, “[i]ndependent peasants were often told that they would not be allowed to borrow co-op oxen or equipment, and when co-ops were planning new irrigation works independent peasants were frequently forced to allow their own land to be utilized as the co-op saw fit” (Shue, 1980, p. 309).

29 See the important article “To Treat the Independent Farmers Correctly” (December 23, 1957, Dazhong Ribao).

30 The national figure was 1% (Compendium, 1981, p. 655). In one case, for example, 90% of those who initially wanted to leave the collective reportedly changed their minds after “having been educated by the cadres on the superiority of collective organization” (April 22, 1957, Dazhong Ribao).
Should peasants continue to insist on leaving, measures of a more draconian sort were adopted by the cadres. In the less extreme cases, as in Fengyang county, Anhui province, households who intended to leave were reportedly not given coupons for purchasing edible oil, grain, and cloth (Wang et al., 1989, p. 163). In Zhejiang province, peasants’ wages in the form of workpoints had reportedly been deducted (Compendium, 1981, p. 695). That must be set against the context where the scope of markets for both inputs, such as chemical fertilizers (Zeng Ling, 1956), and output (Perkins, 1966) were becoming increasingly restricted. Some cadres were apparently less subtle. For example, peasants were tied up with ropes, their clothes taken off in the winter, and they were made to kneel in public for hours, or made to perform such humiliating acts so that they would no longer contemplate reverting to private farming; their draft animals were dragged from the household’s farm back to the collective by force. In one collective in Henan province, for example, as reported in the document, 96 peasants were beaten by the cadres, resulting in one death; one other person was so intimidated that he committed suicide.

Although far from being conclusive, the evidence on cadres’ use of force to prevent peasants from withdrawing from the collective is nevertheless alarmingly instructive and raises serious doubt about the validity of the exit right hypothesis. The least that can be said is that exit was not an easy process well adjudicated and enforced by the local cadres in accordance with the law laid down by the state. The possibility that farmers were still prohibited from leaving the cooperative even after the dispute had been dealt with at the county government level, in light of the reasons given above, is therefore not surprising. According to the report (February 12, 1957, Dazhong Ribao) 11 households held a private meeting and decided to leave their cooperative, taking their oxen with them. The meeting was later regarded by the cadres as unlawful and 39 cases were brought against the peasants. It was also demanded that their oxen be returned to the cooperative. The peasants refused to yield, and the matter was sent to adjudication by rural officials of the higher echelons, first at the collective level and then at the county. No reports are available on the final judgement, but it is doubtful that the peasants were allowed to return to private farming on terms acceptable to them or that they would not be discriminated against if they did resume independent farming. The violation of the principles of voluntarism and mutual benefits was so pervasive that, as an attempt to dampen cadres’ zeal in handling such a matter, an editorial in People’s Daily, the Chinese communist party’s official newspaper, pleaded with them to “treat the independent farmers correctly” (December 23, 1957).

Another factor undermining the exit right hypothesis is the ambiguous manner in which the law was drafted, which left matters pertaining to withdrawal largely to the discretions of the cadres, whose aims were to maximize
the number of collective establishments and to stabilize them, once established. To be sure, peasants were indeed given the official right to leave the collective; more specifically, they were allowed to bring with them, upon leaving the collective, their original contributions to the collective in the form of land, draft animals, farm implements, and other investments (Article 15, *Compendium*, Vol. 1, pp. 483). An important proviso in the same article, however, had made the property rights arrangements regarding exit ambiguous.

This proviso stated that, had substantial investments been made by the collective on a person’s land, the collective had the right to retain the land, but, as compensation, it should offer farmholdings of comparable value. Since it was the cadres who ultimately decided on these matters, it is obvious that they could make exit prohibitively costly. This practice was not uncommon. In one report, for example, instead of obtaining the same plots of land that they originally owned, the households who quit were only given an “equal share of arable land in the village” (June 22, 1957, *Dazhong Ribao*). It is doubtful that this equal share was equivalent to the value of these households’ original landholdings, which is perhaps why the report was reticent on the issue.

In addition, the argument that peasants could voluntarily exercise their right to withdraw was also undermined by the fact that the structure of property rights had changed upon collectivization. In particular, land was collectivized without compensation, as members of the collectives were arguably able to share the benefits accruing from collectivization. While draft animals and large farm implements were sold to become collective property, they were either grossly undervalued or collectives did not have the necessary means to pay the peasants, due in part to the hasty creation of the collectives (Selden, 1982, p. 72). In spite of peasants’ dissatisfaction, they had literally relinquished their rights to major capital assets such as land, draft animals, farm implements, and the like.\(^{31}\) This raises serious doubts with respect to the claim that peasants could still credibly exercise their rights to withdraw from cooperative farming, since such threats would be credible only when private property rights were respected, as was the case in the elementary cooperatives and mutual aid teams.\(^{32}\) Lacking such property rights, and in

\(^{31}\) The lack of the right to appropriate returns from communally owned resources such as draft animals explains why oxen were worked to death, as would be likely in a situation of open access. Citing from the People’s Daily, Shue (1980) reports: “Co-op members are trying to earn as many workpoints as possible, and so they work the animals to death and spare themselves. They think, ‘Earning a few more workpoints, that’s my affair; if the livestock die from exhaustion, that’s the co-op’s problem. The death of one or two animals wouldn’t affect me personally.’” (pp. 309–310).

\(^{32}\) To be sure, exit right did exist historically, but only before 1955, prior to the formation of the collectives. The first time peasants withdrew from cooperatives was in the Winter of 1952
the face of local cadres’ preference for cooperative organization, the alleged exit right could hardly be exercised in a low-cost manner.\(^{33}\)

It is inconceivable that peasants could buy back the draft animals and other farm assets, not to mention the land, from the collectives when no markets existed for such factor inputs and, in particular, when these factor inputs had now become collectively owned.\(^{34}\) Prices, if any, were unilaterally determined by the cadres, who, in order to prevent peasants from leaving the collective en masse, set the prices unrealistically high. In fact, it was not necessary for cadres to resort to such extreme measures in making peasants’ exit costly. Just as they could frown upon the unwilling peasants and make it expensive for them to remain independent farmers in the process of collectivization, they could adopt similar measures to make life difficult for those

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and Spring of 1953, both in old liberation areas such as North China and in newly liberated areas like Sichuan. Leftist tendencies were allegedly already pervasive at that time and large cooperatives were established without peasants’ consent. At the extreme, peasants’ private property was allegedly transferred into common ownership without proper compensation, or, to a lesser extent, land and draft animals were undercompensated for their use in the cooperative. In correcting these tendencies, 36% of the cooperatives in North China reverted to mutual aid teams. Of the remaining, 10% of rural households withdrew and became private farmers again, with the rest of the cooperatives reduced in size. The second time peasants took flight from the cooperatives occurred in 1955, in the provinces of Zhejiang, Shandong, and Hebei. As noted earlier, more than 20,000 cooperatives had been dismantled (see Liu Wenpu, 1989, pp. 171–172). By the time Mao decreed that the development of advanced cooperatives had to be speeded up, it is hard to believe that peasants joined the collectives on a voluntary basis, and, even more incredible is that claim that peasants were allowed to leave the collective should they wish to do so. In addition to Mao’s impatience concerning the speed of cooperatives formation, he was also convinced that the rural economy had become increasingly stratified after the land reform. Mao believed that the only effective way to stem such polarizing tendencies from developing was to abolish private property rights, especially land rights. As he argued: “The mutual aid teams cannot prevent [poor] peasants from selling their land [which presumably is a major source of impoverishment]. Only the cooperative—the large cooperative [presumably with private property rights removed]—can do that” (Selected Works of Mao Zedong, Vol. 5, p. 117, cited in Gao Hongfan, 1989, p. 188.)

Shue’s (1980, pp. 171–172) excellent account of the mutual aid teams does suggest that the threat of middle peasants to withdraw from team farming was real and palpable because of their better endowment of resources. This explains why they were entitled to a larger share of the team’s income distributed as land dividends. That was indeed a major reason why the Chinese wanted to proceed with collectivization and the consequent abolition of land rents paid to private individuals, a condition that requires the abolition of private property rights.

\(^{33}\) This may explain why, in the successful cases where peasants managed to withdraw, violent acts such as beating up the cadres were reportedly involved (see the Compendium).

\(^{34}\) As one anonymous referee has rightly pointed out, it is not clear in what sense former owners of land still retained rights to reclaim it under the situation outlined here. Although we would like to argue in a more precise fashion of the likely consequences of farmers’ loss of ownership rights in land, the lack of data makes such a task impossible. In a less conclusive way, therefore, we simply raise doubts about the ease of exit under the circumstance in which property rights in land were not clearly defined, given cadres’ preference function.
who wanted to leave the collective. As Shue (1980) has rightly pointed out, threats did not need to be explicit. With the diminishing scope of the markets for both inputs and output (Perkins, 1966; Zeng Ling, 1956), private farmers could easily be driven out of business simply by applying negative discriminatory measures against them. This was probably what most cadres did to discourage peasants wishing to leave the collective; a practice that was not widely reported because of its uncontroversial nature.

IV. CONCLUSIONS

The claim that collective agriculture could work, and had indeed worked, albeit only briefly, is certainly a provocative and heroic one. In line with the spirit of the thesis of costly monitoring, this new theory of decollectivization agrees with the received wisdom that supervising workers in a team in labor-

35 In his reply (Lin, 1993), and in his private communications to this author, Lin agrees with the claim that exit costs were indeed substantial for those peasants who wished to leave the collective. Moreover, he even concides that, in order for a large agricultural cooperative to be successful, “it may be necessary to have a policy that imposes exit costs. . . .” Such a view comes very close to the one held by Putterman and Skillman (1992), who, contrary to intuition, conjecture that the presence of exit costs facilitates rather than undermines cooperation, because the alternative, independent farming in this case, was made much less desirable an option precisely as a result of costly exit. Although according to the interpretation just sketched, the evidence presented here may therefore seem consistent with Lin’s original hypothesis, we maintain that our contention is fundamentally inconsistent with the spirit of Lin’s (1990) original position, one that basically suggested that freedom of contract per se or freedom from coercion was the key accounting for the success of collective agriculture before 1958.

36 “But by this time what choice did they have in the face of pressures from cadres and other co-op members? If they had tried to continue independent farming, where would they have marketed their crops, bought their cotton cloth, or obtained a loan in an emergency? The co-op members, if they remained united, now had strong means available to them to freeze out recalcitrants. Many peasants who dropped out of co-ops or initially refused to join ended up coming back and asking to be allowed in” Shue (1980, p. 315).

37 For example, beginning with collectivization, commercial fertilizer was supplied to the collectives solely according to plan. This implies, among other things, that it was becoming increasingly difficult for independent farmers to obtain their necessary supply from the market. As a matter of fact, from a Communist standpoint, collective agriculture was supported in part by the concern that all farmers, as cooperative members, could all have access to this factor input, which was in scarce supply, whereas previously it was mainly the upper and middle peasants who were able to consume it (Zeng Ling, 1956, pp. 11-12).

After its brief adoption in 1961 as a measure to restore production incentives impaired during the agricultural crisis of 1959-1961, family farming was ridiculed for, among other things, undermining the collective spirit. It was proposed, therefore, that differential tax rates should be applied to teams and households that failed to conform to the general practice of team farming. In Anhui, for example, production teams adopting the so-called household responsibility system were required to pay an additional tax of 10-30% over the normal rate paid by other collectives. And in the case of independent households, an additional tax of 10-50% was imposed (Wang et al., 1989, p. 275).
intensive agriculture is costly. It departs fundamentally from the established idea in the suggestion that it is possible for collective agriculture to produce positive economic results if members of the collective are given rights to enter and exit. In short, provided that the principle of voluntarism can be adhered to, which is said to be precisely the case during the 1956–1958 period, collective agriculture could be, and was, a viable form of organization, a belief that finds empirical support in the trend of rising factor productivity.

Our analysis of the history of collectivization, however, questions the validity of such a logical possibility. To begin with, in order to cope with the enormous size and complexity of a collective, a sophisticated system of management and organization had to be devised to reduce the overall governance costs of collective agriculture. While the burden of monitoring agricultural workers in a collective had been substantially reduced by devolving production responsibilities to smaller units, peasant households included, effective monitoring was nevertheless critical to the success of the renumeration system based primarily on piece rate contracts. In short, monitoring was far from being a redundant exercise in a collective, contrary to what is implied in the new theory of decollectivization.

Furthermore, although peasants were given the legal right to withdraw from and to join the collective, it was prohibitively costly, on the basis of available evidence, to exercise the former as local cadres saw their performance to be intimately linked to the rate at which collectives were formed and to their stability once established. They therefore used a variety of measures, many illegal, to prevent peasants from leaving the collective, just as they coerced those peasants who were unwilling to join in the first place. With Mao’s open support to step up the pace of collectivization in the summer of 1955, collectivization was more or less completed within 18 months, not 18 years as it was originally intended. If it was not due to the coercive measures adopted by cadres in forcing the well-to-do peasants to join the collective, to which the latter did yield, it was not possible that these unwilling ones would have been persuaded of the immediate benefits of collective farming. There is no question that, in this instance, the principle of mutual benefits was being violated. It is therefore quite one thing to suggest that peasants were given the legal right to withdraw from collective farming, but quite another matter when we witness, through the historical lens, that they were actually deterred from doing so because the prevailing political climate had made it clear to the administrators which particular type of organization the leadership favored. To understand China’s political economy, it is important to separate rhetoric from reality.

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