

Land Policy, Farm Management and Agrarian Reform in China under Socialism

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1. Introduction

The paper¹ has several objectives: (1) To explain the economics of collectivization centering on land policy and on the development framework within which agriculture operated; this explanation is at variance with several common views offered in explaining Soviet-style collectivization of agriculture; (2) to analyze the particular operational difficulties faced by China in agriculture; (3) to analyze critically post-Mao institutional and price reforms.

2. The Issue of Economies of Scale

Several aspects of the scale argument can be considered:

1. *Economies of scale in farming.*

Even when mechanized, machine service contract farming is possible to serve small family farm units, while observing the "indivisibility" of mechanical equipment. Specialization, the other source of economies of scale, is best illustrated in an assembly-line factory context. If, for example, a cross-section photograph is taken of a car assembly plant, one can envision a car undergoing the entire lengthy production process, from step A to step Z, emerging as a completed car at the end of the tableau.

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It is as if all steps were taking place simultaneously, as indeed they are, but on different cars at different stages of production. The photograph indicates economies of scale arising from the use of specialized labor and machines.

In agriculture, a crop emerges over the growth cycle, paced by nature, requiring different types of labor and other inputs at different stages. At any given stage, only one type of labor and machine is required. In this sense, it is the opposite of the factory system, making economies of scale difficult to realize. It is as if a car is hand-made by a single worker who performs different tasks and puts "generalized" tools to as many different uses as possible, and who utilizes what specialized tools he has only infrequently. There is not much scope for economies of scale through specialization as long as the same mode of production is retained, as it is the case in agriculture.

2. *Economies of scale in processing, marketing, and other related activities.*

What is required here is "Farmer's Association," of the type popularized in Taiwan, not collectivization or cooperativization in farming.

3. *Economies of scale in labor mobilization for "social" construction.*

The argument against this conventional wisdom is simple. Corvée (or labor duty/labor tax, as used in the Western World historically) can be used to mobilize labor, especially in the slack season, for infrastructural construction without resorting to formal collectivization. This would have been particularly simple, given China's traditional "pao-chia" system of rural organization through which the central government exercised control over the vast Chinese countryside.

3. **State Farm versus Collective Farm**

Even if one grants the economies of scale argument, there remains to explain "why collectivization" when state farming should have been the clear choice to capture scale economies. In China, large-scale state farms were rare even before Deng's return to family farming. They were by and

large special-purpose farms operated particularly by the military in border regions. Yet, under socialism where means of production belong to all people, "state farm" was ideologically superior to "collective farm". The paper's argument relates agricultural production processes and their location- and crop-specificity to the issue of monitoring cost and, therefore, of incentive, in ensuring technical and economic efficiency.

4. The Economics of Collectivization

The theory presented in this paper is based on the imperative for the state to "nationalize" the land rent. Two imperatives are at work: (1) To transfer implicitly the land rent to the state. Under collectivization, such rent would have remained with the collective unit (hence, its member households in the form of enhanced value of the "work point") unless a transfer is effected by the state, either explicitly in the form of a land tax or implicitly through a joint imposition of quota and purchase price by the state. Collectivization permits the latter choice which is a more subtle (hence, preferable) form of extraction, given its implicit character. Nationalization of the land rent is thus consistent with the principle of people's ownership of all means of production. (2) To impose maximum extraction on agriculture in order to finance and to otherwise give resource support to forced-draft industrialization as required by the Party's imperatives.

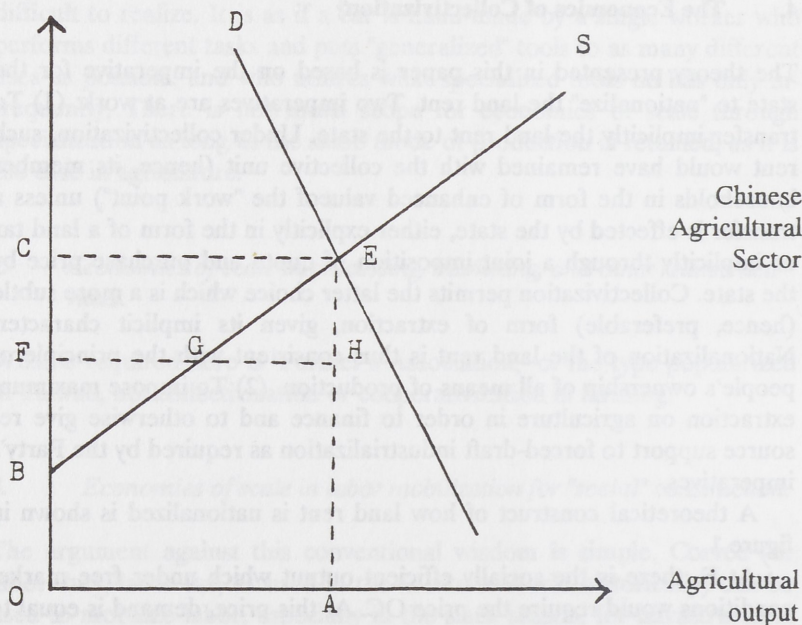
A theoretical construct of how land rent is nationalized is shown in figure 1.

At E, there is the socially efficient output which under free market conditions would require the price OC. At this price, demand is equal to supply. And Chinese farmers would have enjoyed a rent (or producers' surplus) equal to BCE. This is the surplus realized by producers after meeting all production expenses of a current nature (i.e., variable costs), including wages (both explicit and implicit). In the Chinese socialist setting, that wage may be seen as being subsistence.

If the CCP leadership desires to capture the rent (as a return to society), it would set the state purchase price of OF and require the farms (now consolidated into collective farms) to produce together a total output of OA as before collectivization. Total state payment would be OAHF, just enough to cover the variable production expenses OBEA. (F is midway between B and C, hence, triangles GFB and GHE are equal.) Rent BCE is implicitly transferred to the state.

Figure 1:

State purchase price



D = demand curve reflecting social marginal benefit

S = supply curve reflecting social marginal cost

Operationally, it becomes the task of each collective farm director (an agent of the state, not an elected manager acting on behalf of the members) to gauge the marginal cost curve of the farm and require an annual output twice the amount that a privately-run farm would have produced under free market conditions, at the state-announced purchase price, (as determined by marginal cost = price).

5. Policy Dilemma in Chinese Agriculture

The interaction of China's meager initial conditions and the requirements of its development model produced intractable policy dilemmas. The analysis and an account of the operational difficulties are drawn from our earlier works. Empirical evidence is presented portraying the consequences of the tensions brought about by conflicts (more sharp in China than in the Soviet Union, where the development model originated) between the household and the planner in terms of time preference, and between scarcity and ideology (in the felicitous terms of the late Alexander Eckstein). The principal consequences are: falling productivity in agriculture and costly sources of output growth in agriculture, stagnant value of the work point implying something close to bare subsistence level of living with virtually no improvement throughout the Maoist years, increasingly unfavorable intersectoral flows of resources against priority industry, deteriorating diet even for the urban population.

The low and constant value of the work point under Chinese collectivization is a particular telling bit of evidence in support of the paper's theory of collectivization. The Chinese policy dilemma and its consequences are discussed in the two following sections.

6. China's Two Legacies

As a result of its early liberation from feudalism some 2,000 years ago, China had long enjoyed early leads in economic development (not the least of which in agriculture), in institutions conducive to development (such as family farming as opposed to the feudal manorial system, civil service, national examination system, abolition of hereditary titles in promotion of vertical mobility), in market development unhampered by feudal barriers to movements of goods, people, and ideas, in pre-modern technology, in the development of a workable monetary and transportation system, and in literacy, numeracy, and public administration aided by its early development of a printing technology. Owing to its Malthusian population behavior in the pre-modern era, however, China's considerable early leads ultimately forced the country into a "low (income) level equilibrium trap," characterized by highly-fragmented, one hectare subsistence-size farms, a low level of agricultural surplus that might later be mobilized by a purposeful modern state to support the development of a modern sector, and near-exhaustion of the stock of

pre-modern technologies. The latter derives from the exploitation by China's efficient family farms as attested to by the strikingly high crop yields attained in China on the eve of the era of "modern economic growth" (in Simon Kuznets' terms).

In contrast, Europe and Japan did not abolish feudalism until much later. Feudal restraints held back development, thus, serving (1) to keep population growth in check (during the crucial 500-year period preceding the dawning of the English Industrial Revolution, Chinese population, starting from a higher density base, more than quadrupled while European population barely doubled), (2) to accumulate a huge backlog of unexploited pre-modern technologies in agriculture, and (3) to preserve a large agricultural surplus, through its skewed distribution of income and wealth - a surplus later used just ahead of the modern era for patronage of art, literature, science, navigation, adventure, exploration. The formation of nationstates allowed capture of the agricultural surplus for purposeful development and led to a sudden release of the pent-up growth potentials. The resulting surges in per capita incomes and the perception of these gains as permanent altered the demographic behavior of the sort discussed in modern household economics. The economic and demographic processes became mutually reinforcing, paving the way for Kuznets' "modern economic growth."

To complete the story: The gradual ascendancy of the Chinese Imperial system ultimately led to Confucian orthodoxy and intolerance of the new and the diverse. The Imperial examination system came to focus on Confucian classics only. With it, the emphasis in knowledge-seeking shifted from "what is" to "what ought to be." Education lost its substance and integrity. Yet, the power of its attraction continued to grow. In principle, any farm boy in China, however humble his background, could one day become the Prime Minister of the vast Empire if he commanded a superior mastery of the classics over all others. Little wonder, mathematics, spinning and weaving technology, and many other areas in which China used to excel (as catalogued by Joseph Needham) began to wither. (There are observers who claim to discern the same mandarin-autocrat worldview and mode of thinking in China's leaders of today).

It can be conjectured that Karl Marx would have been terribly embarrassed if he had been around when the Bolshevik Revolution succeeded in 1917 in Russia, or when the Chinese revolution came to fruition in 1949. Neither was a mature capitalist country where revolution by the proletariat was supposed to happen. It should come as no surprise that it took the Soviets nearly 10 years to come up with a plan that gave

the party leaders acceptable articulations of their values in displacement of those of the people. In this context, the Communist Party regards itself as the sole repository of truths. The values of its leaders are aptly summarized in a metaphor attributed to A. Bergson: To the Party leadership, bread is an intermediate product; steel is the final good. Bergson's reference was to the Stalinist strategy of economic development, a strategy embraced by Beijing's leaders as they assumed power in 1949.

A thoughtful reading of Marx – together with the unlikely settings (in 1917 Russia and 1949 China) for the ascendancy of his revolution, Communist party pronouncements, and revealed party economic priorities – would plausibly support the following list of shared value-goal imperatives for the party leadership of the PRC and the USSR at the inception of their respective First Five Year Plans.

1. Value imperative: to elevate the "material base" of the economy and to "legitimize" the revolution.
2. Value imperative: to demonstrate system superiority in a modern power context.
3. Goal imperative: to negotiate the transitional Socialist phase with a view to reaching the Communist millenium as speedily as possible.
4. Goal imperative: in recognition of the hostile Capitalist environment requiring an essentially self-reliant path of development.
5. Time imperative: requiring maximum effort and highest priority be given to the development tasks consistent with the articulation of the above imperatives.

The power-oriented value and goal imperatives, together with the clear sense of urgency attached to their attainment, dictated a development strategy best described as the "maximum-speed selective growth under austerity" and required a "command economic system" to effect the required total resource mobilization. While selectivity is associated with the modern heavy industrial sector whose absolute size is the preponderant determinant of national power in geopolitical terms, the command system eschews markets and prices in important ways, preferring to allocate critical resources administratively.

Unlike the Soviet Union, China found its maximum industrialization constrained by agriculture owing to its meager initial conditions as argued earlier. With agriculture as the binding constraint, the planner attempts to develop the sector by first emphasizing mobilization of indigenous resources of low or no opportunity cost, exploiting traditional

production possibilities and eventually exhausting them. The development program takes on complexities not present earlier for the planner's attention. Basically conflicting dual policy requirements (output growth and maximum extraction) are imposed on agriculture. The clash in time preference between the household and planner becomes more immediate. Bureaucracy and command structures grow accordingly. Even more so than before, direct quantitative controls are preferred as in rationing basic consumer goods (a Chinese practice since 1955).

In an attempt to deal with these problems, or "contradictions" in Marxian lexicon, efforts are made to find non-material substitutes for incentive in order to raise output without incurring increased consumption (viewed as a cost by the planner). Owing to China's unfavorable initial conditions, the country's industrialization has been agriculture-constrained as is clear from earlier empirical studies, and from Peking's recent own reckoning. China's preoccupation under Mao with "radical experiment" - a predilection responsible for Peking's policy cycles - is thus quite understandable. So was Mao's singular concern with the problems of government and party bureaucracies, as symbolized by his concept of "permanent revolution" to keep the governing apparatus "renewed". At the opposite end from radical courses of action, Peking has shown a willingness to compromise high principles of socialism and nationalism. In the singular case of Hong Kong and Macao (where Peking virtually insisted that Britain and Portugal retain, for the time being, the territories as colonies) the bending of these principles is very severe indeed.

The overriding importance attached to technology-transfers and the multi-billion dollar foreign exchange earnings netted annually by Peking through trade, remittances, and its banking and commercial operations in the two Western colonies, attests at once to the pre-eminence of growth-related values vis-a-bis the competing ideological and nationalistic considerations. The latter, like consumption, will assert themselves one day. Within the relevant time horizon, they too are best treated as constraints, rather than as arguments in the objective function.

Theoretically, the Hong Kong and Macao related policies serve to raise the transformation curve through more efficient conversion of China's agricultural surplus into capital goods and technology for industry than can be achieved without the markets and services of these colonies. There are limits to such policies as is clear from Peking's decision to recover the territories in 1997-1999. Similarly, there is a threshold which particular CCP leaders will not want to cross in reinstating capitalist practices.

The virtue of the command system lies in its recognized efficacy in mobilizing resources for the attainment of some single-minded social objective. Efficiency and finesse in using the resources thus mobilized are not among its strong points. When total mobilization is required as during World War II for the belligerent powers, the command system coupled with rationing and price control can achieve more complete and more sharply focused allocation of critical resources while maintaining equity in sacrifice and price stability during the emergency. The clash between the household and the planner (in time preference) is minimized if the imperatives of the proceedings are understood and shared by the people. Popular perception of leadership performance and the time frame of the proceedings are critical. When these aspects begin to be seen in a negative light, the cost and effectiveness of the system begin to suffer.

While the command system would seem to commend itself well under the value-goal imperatives of the Communist Party leadership, it is placed at risk by the protracted nature of the required proceedings of nation-building in accordance with the Stalinist blueprint. As the economy grew in size and sophistication, and the consumption standard is raised in deference to the periodic duration-required concessions to material incentive considerations, the cost of the system in efficiency loss and in administrative cost tends to rise exponentially. The latter in turn reinforces the negative perceptions of the people, in a feedback loop.

These problems have been compounded in China (and, to begin with, the Soviet Union) by the further requirement of the Marxist legacy that the means of production be nationalized. In principle, of course, the command system need not be accompanied by state ownership of enterprises. The United States, the foremost capitalist, fought and won World War II with the help of a command system (with the War Production Board as the command center) without nationalizing a single war contractor.

The extensive literature on socialism makes it clear that even without the compounding effect of the command system, market or liberal socialism for consumer welfare maximization is beset with operational difficulties in three key areas: (1) administrative determination of distortion-free scarcity prices for all inputs and outputs; (2) provision of an efficient incentive structure to secure the same level of performance from workers and state enterprise managers as achieved in private enterprise market economies; (3) provision of incentives for Schumpeterian innovations for which micro-economic risk-taking entrepreneurship is essential. The

linking of the command imperative with socialism gave rise to a command socialist system as ordained by the Stalinist development strategy. It brought about problems far more intractable than those under market socialism for two reasons: by eschewing prices and markets and by setting up severe clashes between the household and the planner. To the latter, one can add the further insight that the more unfavorable the initial conditions, the more severe is the clash.

For perspective, however, it is important to remember that the basic afflictions of the system are found in the area of mass-produced, mass-distributed goods (and inputs) in meeting the varied demand of myriads of consumers (and producers such as farmers) in terms of time, place, and assortment. In another area, of special importance to the Stalinist strategy, consisting of such sectors as machine-making, defense, and space technology, the systemic handicaps of the Soviets and Chinese, however, lose much substance. The process by which innovations in the form of new space craft, new launch systems, or new weapons systems start from concept, specifications, blueprinting, R & D, testing, and production, are basically not all that different between the economic systems. And it is the growth performance of this sector (broadly defined as the modern heavy industrial sector) that matters to Chinese and Soviet leaders.

In these power-oriented terms, it is obvious that the Soviets have done exceedingly well. They have become a superpower in a short time span of under two generations and despite heavy wartime losses and destruction. It is, however, also clear that overall performance measures such as per capita income and growth rate are quite irrelevant in the same power context. Switzerland may have a higher per capita income than the U.S. but it is not a superpower. China started out some 30 years later and with a set of initial conditions characterized by less than half the per capita food availability of the Soviet Union. Yet, one can fairly describe the country as having attained great power status, the low-keyed self-characterization by its leaders as a backward Third World economy notwithstanding. Leaving aside its "power" sector, one can reasonably characterize the Soviet economy as Third World. Notwithstanding its per capita income of \$ 350-400 (as reckoned for 1989 by China and internationally - a figure incidentally that was erroneously guesstimated by the World Bank and the CIA for the country more than 10 years ago when Deng was just setting out on his reformist course), China's power status derives from such rough statistics as annual output of steel of 65 mmt, crude oil 150 mmt (export of 30 mmt), grain 420 mmt (only marginally

dependent on import), a capability to produce a full array of armament of improving quality with fast expanding exports, a nuclear and missile launching capability that clearly marks it as a great power, and now a commercial satellite launching capability.

It is in these terms that the so-called hardline conservative octogenarians in China are inclined to view the worth of a command socialist system that they espouse in unflinching opposition to the reformist schemes. They see the schemes as having laid waste to the state investment plan and undermined the "commanding heights," while bringing in its wake other assorted chaos as mounting budget deficits, erosion of central control over revenues (an outcome of decentralization), inflation, corruption, return of unacceptable class differences between the rich and the dispossessed. The conservatives could have well added that the rich (who were to be glorified in the wide-open reform days) were getting rich often not so much by hard work and sound business investment as through rent-seeking whose opportunities mushroomed as a result of the opening-up.

The Stalinist development model is a "catch-up" model. Its validity is gone once the party leaders declare the catching-up task (once headily described as equalling the U.S. and burying capitalism) accomplished. This juncture seems to have arrived in the Soviet Union as Gorbachev busied himself with the difficult transition from command socialism to market socialism, to be preceded by, in an order seemingly opposite to China's, legal and political reforms. In China, the interplay between the meager initial conditions and the imperatives of the development strategy have made a retreat from command socialism inevitable, as the Maoist approach had basically exhausted further growth possibilities. For insight into this argument, a brief survey of the Chinese growth record follows, focusing appropriately on the key agricultural sector.

7. Growth Record under Mao, 1952-1977

The period of 1952-77 is taken up (drawing on our earlier studies) to reveal agricultural trends under the policy influence of Mao, who died on September 9, 1976. Starting with an output of 164 mmt in 1952, total grain output (including soybeans) in China reached 283 mmt in 1977 - an increase of 73 percent or 2.3 percent a year, compared with an average population growth rate of 2.1 percent. This may be viewed as a creditable

record, leaving aside the question of material and human costs occasioned by experimentation with radical programs.

In *value terms* (all in constant 1952 prices), gross value of agricultural output (GVAO) rose from 40.05 to 79.87 billion yuan, an increase of 99 percent during 1952-77, or 2.9 percent per year. The higher GVAO growth rate is in part statistical because the GVAO concept allows multiple counting of output, and because multiple counting increases more than proportionally with output as a sector undergoes growth and modernization. In other words, gross output rises more rapidly than net output. Moreover, it turned out that the realized GVAO growth required even greater increases in total real resource cost. Thus, the aggregate input index increased by 129 percent between 1952 and 1977. In production function terminology, the aggregate input index is also a theoretical index of output in the absence of any "technical change" (and under certain assumptions about the markets and technical properties of the function). The index of actual output, as we saw earlier, rose by only 99 percent; technically, China witnessed downward shifts in its agricultural production function. Setting the output index against the aggregate input index to form the total factor productivity index, we see a decline of 13 percent in Chinese agricultural productivity in that period, or 0.6 percent per year during 1952-1977.

In *productivity terms*, the Chinese historical record under Mao was not impressive. Nor was the sector's capacity to generate value added reassuring. To this we will turn in the next paragraph. Here we note that the large-scale stepping up of resource use in securing output growth was based primarily on inputs purchased from outside agriculture: power equipment and machinery and modern current inputs, such as fuel and electric power, seeds, chemicals for disease and insect control, and most particularly, chemical fertilizers. Chinese agriculture managed, more or less, to deliver end product in quantities large enough, and grow fast enough, to meet the elementary needs of the country's expanding population, not through finesse but through massive injections of resources mainly from the outside. The Maoist record stands in sharp contrast against the notable productivity gains enjoyed by agriculture in neighboring economies: Japan, South Korea, and Taiwan.

Value added by agriculture (VABA) rose from 36.83 billion yuan in 1952 to 55.07 billion in 1977 - in increase of only 42 percent (as compared with 99 percent in GVAO), or by an annual rate of 1.7 percent. VABA is gross of depreciation charges on farm machinery and transport, equipment, and service buildings. In net terms, the pace of increase in sector

contribution to the Chinese national product would be slower still. The modest rate of increase has meant a stagnant or slightly declining per-worker value added (about 220 yuan in 1952-53 and 215 yuan in 1976-77, in 1952 prices). In 1952, Chinese agriculture was almost completely self-contained. Inputs purchased from outside (including cake fertilizers) amounted to just under 1 billion yuan, or 2.5 percent of gross output (net of self-supplied feed and seed for consistency). By 1977, purchased inputs reached an estimated 21.11 billion yuan, or 27.7 percent of output. Against a relatively constant marketing ratio of, say, 25 percent of gross output, the explosive increase in industry's contribution to agricultural output is highly significant. It signifies adverse changes in intersectoral resource flows.

In 1952, agriculture would appear to be a large net contributor to industrialization as the Party's development strategy required, under the existing (1952) terms of trade. By 1977, holding the terms of trade constant, industry basically paid for what it got from agriculture. Notwithstanding Mao's relentless control over agriculture and the development model's requirement of the sector, industry was no longer able to grow on the backs of the peasant, as a result of agriculture's dismal productivity record.²

Since 1952 was a pre-collectivization year, the year 1957 might be a more satisfactory starting point for comparisons against 1977. The value of purchased inputs in 1957 came to 2.3 billion yuan, or 4.9 percent of output. The latter figure is to be compared against the 1977 percentage of 27.7 percent.

This hardly alters the adverse development in intersectoral resource flows under collectivization as sketched earlier. In fact, the 1957-77 comparison brings out more sharply the decline in value added per agricultural worker - a matter requiring government correction in prices paid by farmers and prices received by farmers if under the initial terms of trade farmers were enjoying no more than a subsistence level of living. The decline is from an estimated 254 yuan in 1957 to 210 in 1977, a substantial drop of 17.3 percent. In 1979, the year which saw a major price reform in favor of agriculture, value added per worker at 218 yuan was only marginally better than in 1977.

In one of our earlier studies, the value of output and inputs was recalculated in current prices for 1957 and 1979 (price adjustment reflected)

2 Findings of "adverse" resource flows against industry is consistent with Shigeru Ishikawa's conclusion for China under reform.

to see how the resulting value added or net income per worker would compare against the constant price calculations discussed earlier. Net of the agricultural tax (which when expressed as a proportion changed from 10 percent on gross output for 1957 to 5 percent for 1979 was in itself a supplementary adjustment reinforcing relative price reform) and with the 1979 values deflated by a rural retail price index, we ended up with a per worker net *real* income of 233 yuan for 1957 and 273 yuan for 1979, an increase of 40 yuan or 17 percent over a span of 22 years (0.75 percent per year). This is to be compared against Perkins and Yusuf's calculation from official statistics of an increase of 10 percent between 1952-78 in 1978 constant prices.³

8. A Critical Assessment of Post-Mao Reforms

With the 1979 price reform closing at least part of the "price scissors" and the gradual return to family farming under the household responsibility systems, Chinese agricultural output (as officially reported) expanded vigorously in the reform period of 1979-85 at an average rate of 9 percent per year. According to Johnson's estimates, about half of the output growth (1978-84) was due to productivity increase (in sharp contrast to the decline under Mao) and the other half to increased use of inputs.⁴ The rate is unprecedented, although it is significantly exaggerated; (1) by the multiple counting embedded in the aggregate with the degree of overstatement rising over time, and (2) by GVAO's inclusion of the non-agricultural output of the most rapidly growing (at 30 percent a year during 1980-85) sector of the rural economy, the "village industries sector," which in 1985 accounted for 24.8 percent of GVAO, or 91 billion yuan out of a total of 387 billion in 1980 prices. On the other hand, grain and other crop output grew at a more modest 5 percent a year during 1979-85.

All of this is very reassuring of Deng's policy-making and serves to reconfirm his and the economist's long-held premise that the Chinese peasant is an "economic man" despite Mao's attempt to reconstruct him into the "Communist man". It also confirms the efficacy of the family farm, long recognized elsewhere by agricultural development economists. Family farming provides flexibility and incentives in seizing economic

3 Perkins and Yusuf (1984), p. 118.

4 D. Gale Johnson, 1988.

opportunities. It obviates the need for monitoring labor effort on the part of family workers who are all unpaid residual claimants of the family income and wealth pool. In contrast, monitoring is too costly to be carried out effectively on the old collective farms.

A sober analysis brings to light several factors which are critical to an assessment of the future prospects. To an important degree, the realized growth represents the sort of spurt that one would expect from the freeing of a long repressed sector. It is basically a *one-time-only* type of growth although the recovery growth may be spread out over several years. In China's case, this has been sustained by continued massive injections of modern current inputs, especially chemical fertilizers which showed a 63.5 percent rise in consumption in 1985 from an already high base fertilization rate in 1979, or an average annual increase of 9 percent. Nonetheless, the output growth since 1979 represented a "cheap" growth in resource terms. To generate future growth even at much lower and sustainable rates, modern inputs will have to carry the load and costly investment lies ahead - all the more so because of Peking's neglect of agricultural investment during the reform period.

This is not to say that reform has been of low-cost in budgetary terms of Peking. Prices of meat and many other subsidiary foods were freed in the spring of 1985. This, however, was accompanied by cash grants to urban households to help offset the large price increases of some 50 percent that resulted. Basic urban foods remained highly subsidized. Transport, medical care, pensions, and energy continue to be subsidized in the cities. Grain subsidies reached 12.2 billion yuan in 1981⁵ and were no doubt higher in 1984-85 because procurement levels were higher and many peasants managed to have more of their output purchased at higher "negotiated" prices. The 1981 grain subsidies amounted to 11 percent of total state revenues in that year. Total subsidies (on food, energy, transport, housing) are placed at a staggering 25 percent of all government spendings.

According to Lardy's estimates cited in D. Gale Johnson's recent study, urban subsidies rose significantly under Deng's reform such that by 1982 their imputed value per urban worker actually exceeded the average wage. Within the urban sector, subsidies do not go to those engaged in private activities. In more explicit forms, workers in state enterprises received 300 yuan per capita in 1982 for annual subsidies. Subsidies to peasants were 10 yuan.

It is one of the ironies that in an economic system that claimed to be egalitarian, numerous and large subsidies have gone not to the least well off but to the best off. The continued "urban-industrial, large-scale state enterprise" bias of China's development plan is clear, Deng's disclaimer aside.

It may be conjectured that China's preoccupation with the cities leaves little room in the state budget to look after the needs in the countryside where reform, unlike in the cities, has really paid off. When reforms were first announced, state investment in agriculture was to rise from 11 percent to more than 18 percent of total state investment. Budgetary allocations to agriculture (including forestry, water conservation, and meteorological services), however, declined from a high of 16.8 billion yuan in 1979 to 11.3 billion in 1982 and 9.4 billion in 1985, or 6 percent of total state investment.

Meanwhile, Deng's rural reforms have, indeed, gone far, and not without undersirable side-effects. Chen Yun, the veteran planner under Mao, has been the loudest and more persistent critic. As an old-line party faithful, he has a long list of complaints. Clearly, there is a threshold beyond which the system becomes more Capitalist than Socialist. And Chen feels most strongly that Deng's appeal to markets and the profit motive may already be going too far; that the party is rapidly losing discipline and its image as well as its command over China's destiny and its own sense of purpose; that the party faithful and others who have served the people through the long lean years are being cast aside like so many rags; that the key link grain is being neglected; that the Party is losing control over what Lenin called "the commanding heights;" that the classless society is once again burdened with contending classes, the rich vs. the poor, the elite vs. the mass, privileged state enterprises vs. private-cooperative enterprises, the city vs. the countryside. And one wonders how many political leaders still cling to Chen Yi's haunting metaphor that "it is better for several Chinese to share one pair of pants than for their country to be without the atom bomb."

Meanwhile, successful reform in the cities requires thorough-going political and legal reforms. Deng laid the groundwork for basic political reform at the special party conference in September 1985, when 64 aging Central Committee members resigned, including 10 Politburo members. The prospective reforms upset Chen Yun, so do inflation, influence-peddling by the senior cadres, and widespread profiteering. Scarce materials and train and other tickets became commodities sold under the counter for huge profits. Some central departments were caught as cor-

ruption spread. As the *Far Eastern Economic Review* aptly put it, borrowing from a Chinese metaphor: "Fish begins to stink at the head."

As graft and corruption become more institutionalized, the road to further urban reforms will not be easy, nor should it be if Chen has his way. That urban reform does not have the urban counterpart to the family farm to fall back on makes the task inherently more difficult. State-owned factories cannot be cut up into so many family enterprises without doing fundamental violence to socialism, and without destroying the enterprise entities. They are not divisible in the same way that production teams are divisible into family units.

In agriculture, reform has proceeded so far as to allow land over which one has only the right of use to be rented to another family. There are once again large farming units under the name of "specialized" farms. That is all to the good for improved workings of the factor markets. But that raises distributive and equity questions from which Socialism, in particular, can ill afford to turn away. Meanwhile, there is apparently no substantive, systematic national land tax (not needed under collectivization) both to siphon off a land rent that under Socialism is best regarded as "a return to all people", and to give the state means with which to undertake needed investment in agriculture. There are scattered references to rents being specified in the team-household contracts, but these are evidently local provisions.

The investment needs are many. Whereas under the bad old days of collective farming there may be quite a lot of hunger in the poorer regions - to a large extent the result of a policy of binding people to their villages - there is evidence of substantial improvement in the general environment in which the rural people lived. Declining infant mortality, longer life expectancy, increased school attendance rates attest to improvement in various forms of "collective consumption" provided by the state through its collective arm. Ironically, Deng's reform is undermining provision of these services. As Johnson put it, with the abolition of the communes also went the principal source of financing for medical and hospital facilities, schools, centers for the caring of the old and young, maintenance of irrigation and flood control facilities, and the provision for processing and marketing facilities.⁶

There is evidence that the vacuum has not been filled by the township and other local entities (mainly loose cooperatives for small-scale rural industries). With migration to cities (sanctioned by household registra-

6 Johnson (1988), pp. 19-20.

tion) still all but forbidden, the failure of the state to maintain the existing rural infrastructure (or to make provisions for local replacement of the old communes) and to improve the generally inadequate system will raise serious questions about agriculture's ability to create more jobs for the (trapped) growing labor force. Chinese roads are probably the weakest link. Total highway road mileage measured only 750,000 km, or about one-tenth the road density in the U.S. Only a fourth of the Chinese highways are classified as "first class" (probably meaning asphalted) or "near first class."⁷ Road access is probably the single most important factor determining the development prospects of the individual villages and their ability to provide employment in the future.

9. Conclusion

Fiscal decentralization by Peking has meant a substantial loss of control over tax revenues by the center while provincial and local authorities failed to pick up the corresponding expenditures, both current and capital. The mounting problem is ever so clear from the fact that (1), whereas within-state-budget investment used to account for 90% or more of all Chinese investment, the proportion is now more like 25%; and (2), whereas localities may have been investing heavily, such investments tend to by-pass the "commanding heights" and be profit-oriented. Given the low state prices for the basic goods and services, profits clearly lie elsewhere. It is not surprising that bottlenecks have been tightening in such key commodity and service areas as coal, electricity, petroleum, and transportation, resulting in below-capacity operations (sometimes by as much as 50%) of Chinese industries. At the same time we see enormous expansions in hotels and guest houses (locality or enterprise-owned, sometimes by the military, in either sole ownership or joint venture with foreign investors), rural industries, residential housing, and commercial enterprises.

Underinvestment in agriculture fits the pattern. But the story is a little different. This takes us back to the principal theme of this paper. The 1979 price reform raised state purchase price on delivery quota by 20% and the price on above-quota delivery by a further 50%. Meanwhile, marketing reform permitted quota reductions and more output to be sold at successively higher prices: bonus price (above-quota bonus),

7 Far Eastern Economic Review (1986), p. 129.

negotiated price, and free-market price. Before 1982, grain marketing was a state monopoly; even surplus grains after the quota were centrally controlled. With gradual liberalization since 1982, the composition of marketed grains and other farm output subject to state purchase plan began to change in favor of higher-priced categories. This was tantamount to average price increases over time, or further price reform. Compulsory deliveries were effectively replaced by a contract system in 1985, when China was "threatened" with a surplus production problem, leading to a flurry of exports. The policy stance at that time, especially regarding grains (hastily written off as the key link), seemed to fail to recognize that the productivity surge up to 1984-85 was largely a one-time gain and that harder times were ahead, requiring investment and increased use of inputs for continued output growth⁸.

Turning back to Figure 1, increases in state purchase price (or average farm-gate price received by farmers through various marketing channels) amounted to a "de-nationalization" of rent (which broadly includes both land rent and quasi-rents on land improvement and farm machinery and equipment), in successive steps with each price increase. Price and marketing reforms were presumably undertaken by Peking to provide producer incentive for more output⁹. Unless welfare considerations for the peasants also played a role, there was no reason to increase purchase price on the basic quotas (or on the original output in the context of Figure 1). The 50% bonus price on the above-quota delivery (or on the new output in Figure 1) would have produced just as much incentive for expanded output. And the original rent would have remained with the state. Before the family farming (via the household responsibility system) was reintroduced (beginning experimentally in 1981), it can be argued that the center's intent was to decentralize the investment and social consumption functions down to the collective level by returning the funds (i.e., rent) supporting such activities to the collective units. But the subsequent return of farmland to the household (even if in use-right only) by abolishing the collectives and without imposing a rent, amounted to a "de-nationalization" of rent in a full sense, while individual peasant households received a windfall gain.

8 For further details on price and market reform, see Quisumbing and Tang (1990), pp. 150-53.

9 If the induced effort obtained, a rightward shift in the supply curve would have taken place to reinforce the upward movement along the supply curve.

For reasons of externalities and private utility-maximization calculus, it is to be expected that the households invested in housing, rural industries, profitable sideline activities - rather than in grain-producing capacity (where price and marketing are not fully reformed), and in local infrastructure and social services. The latter are properly government concerns. But with underdeveloped government (central and local) fiscal capabilities, schools, clinics, roads, irrigation facilities, power supply, environment, etc. have all fallen by the wayside. Where the collectives at various levels used to discharge these functions to some extent, there are now gaps. Thus, the suggestion that China needs to replace lost revenues, due to rent de-nationalization, by either a land tax or income tax on farm households, is rather obvious.

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Bibliographische und informationswissenschaftliche Probleme des chinesisch-sprachigen Ostasien

Vom 22. bis 24. November 1990 fand in der Gesellschaft für Mathematik und Datenverarbeitung mbH (GMD) in Darmstadt mit finanzieller Unterstützung durch die Volkswagen-Stiftung eine Veranstaltung zu obigem Thema statt. In drei thematischen Blöcken sollte eine möglichst umfassende, perspektivische Bestandsaufnahme der Situation erfolgen. Es wurde grundlegend die allgemeine Problematik der Informationsressourcen und ihrer Verfügbarkeit für die Forschung, die außerordentlich problematische Lage beim Zugang zu sozio-ökonomischen Grunddaten und deren Einschätzung als Forschungsbasis für die auf Ostasien bezogenen Wissenschaften diskutiert. Einen weiteren Schwerpunkt des Symposiums bildete ein Überblick zum Stand der Grundlagenforschung im Bereich der Sprachbarrieren und der kulturell gewachsenen Verständnisprobleme. Diese Problemfelder wurden in mehreren Vorträgen methodisch dargestellt. Folgende Zielvorstellungen waren für das Symposium vorgegeben:

1. Informationsressourcen wurden nicht statisch-deskriptiv dargestellt, sondern das Schwergewicht sollte auf möglichen Transferwegen und Beschaffungsmethodiken liegen. Dieser Situation war unter dem übergreifenden Titel "Zu den allgemeinen Problemen des Informationstransfers" der erste thematische Block der Beiträge gewidmet.
2. Der zweite Themenbereich war dem Problemfeld der Sammlung und Bewertung von Daten gewidmet. Besonders für die Wirtschafts- und Sozialwissenschaften bilden diese Bereiche eine Voraussetzung für jegliche Forschungsarbeit. Vor allem wurde kritisch sondiert, wie die Verlässlichkeit und Aussagekraft solcher Daten einzuschätzen sind. Entsprechende Überlegungen wurden in zwei Vorträgen zusammengefaßt, die unter dem Titel 'Zu wirtschafts- und sozialwissenschaftlichen Grunddaten' gehalten wurden.
3. Das Verständnis für und die Verständigung mit außereuropäischen Kulturen ist ein Problemkreis, der im Rahmen globaler Austauschbarkeit von Informationen zunehmend an Bedeutung gewinnt. Hier muß die Grundlagenforschung wesentliche Beiträge leisten. Eine Auswahl von Berichten aus diesem Forschungsfeld sollte Hinweise zu laufenden Arbeiten geben und mögliche Forschungsdesiderate aufzeigen. Der dritte und abschließende Themenblock befaßte sich somit mit 'Sprachproblemen und Sprachbarrieren und ihrer Überwindung durch Grundlagenforschung'.

Zusammenfassend hat sich ein Situationsbild ergeben, das geprägt ist von Problemlagen im Bereich Datenerhebung und ihrer Verifizierung/Falsifizierung sowie der materiellen Zugänglichkeit von Texten, Dokumenten und anderen gedruckten und ungedruckten Materialien. Der Komplex *neibu* spielt eine große Rolle, insbesondere in Planungsbereichen und in großen Teilen auch in Forschungsbereichen an Hochschulen, Akademien und in der Industrie. Kooperationen scheitern bzw. sind oft unerwünscht, weil jede "Einheit" (*danwei*) ein Höchstmaß an Autarkie anstrebt. Die politische Entwicklung seit Juni 1989 steht einer Informationsweitergabe an westliche Forscher im Wege. Eine Front wird errichtet, um das zentrale KPCH-Regime zu erhalten, eine Abschottung im Datenfluß ist die zwangsläufige Folge. Daß dadurch auch der Transfer demographischer, sozialpolitisch-ökonomischer Daten leidet, ist in vielen Fällen sicher.

Was bleibt zu tun? Es muß ein System von Kriterien für Datenerhebungen geschaffen werden, das auch die wichtigen Kategorien "Plausibilität, Fortschreibung, Gewährsperson" enthält. Natürlich wird besonders die letzte Kategorie kritisch zu sehen sein, da durch Namensnennung Personen direkt in Gefahr geraten können (Preisgabe von Daten und Schilderung von Situationen). Im Bereich der großen Hochschulen ist z.B. ein früher Tod von Hochschullehrern bekannt; ca. 30% aus diesem Personenkreis sterben bereits mit ca. 60 Jahren. Da dies eine Folge von Unterdrückung, Zwangsversetzung und zu später Rehabilitation als Folge der Kulturrevolution sein kann, werden diese Zahlen nicht öffentlich bekanntgegeben. Desgleichen ist die "Planerfüllungs-Mentalität" für Datenverfälschungen anzusehen. Funktionäre auf dem Lande meldeten in die Provinzialbüros stets mehr Ernteerträge als tatsächlich vorlagen. Dementsprechend wurden auch die Abgaberraten in die Städte erhöht, so daß schließlich die Landbevölkerung schlechter mit Grundnahrungsmitteln (Reis, Fleisch, Getreide, Soja) versorgt war als die Stadtbewohner. Diese mehr illustrativen Bemerkungen zeigen deutlich, daß insbesondere für soziale, wirtschaftliche und politische Daten ein verbindlicher Erhebungsrahmen entwickelt werden muß. Hier ergibt sich eine Chance zur interdisziplinären Chinaforschung. In Auswahl werden drei Vorträge nachstehend abgedruckt. Das gesamte Material können Interessenten erhalten durch:

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