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PRICES, MARKETS AND THE CHINESE PEASANT

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In marked contrast to the first half of the twentieth century when there is no evidence of sustained per capita growth in China, since the Communist Party rose to power in 1949 per capita output has accelerated rapidly. Excluding the period of rapid recovery from war and civil war setbacks, which was largely complete by the end of 1952, per capita output (measured in constant prices) tripled between 1952 and the late 1970s. Although aggregate output accelerated, agricultural performance was only marginally better than it had been in the six centuries before the Communist Party came to power.¹ Farm output rose by less than one-half of one percent per year per capita up to the late 1970s. Industrial output, by contrast, grew in excess of eleven percent annually, nine percent in per capita terms.² This paper sketches out an explanation of the unusual disparity in the sectoral rates of growth up to the late 1970s and ventures a preliminary judgment on whether the change in economic policy regime instituted since 1978 can be expected to alter the historic patterns of growth.

Agriculture in Historical Perspective

In his remarkable study, Agricultural Development in China 1368-1968, Dwight Perkins explains how Chinese agriculture supported, at what appears to be a constant level of per capita output, a population that grew from 65-80 million at the beginning of the Ming Dynasty in 1368 to 540 million by the middle of the twentieth century. His careful empirical research suggests that only about half of that population increase was supported by simply expanding sown area within an otherwise unchanging agriculture.

Although agriculture was still traditional by the usual criteria that farmers' knowledge about factors they used had not changed in generations and net per capita savings was quite low,³ Chinese agriculture had become increasingly complex and sophisticated.

Increased sophistication of Chinese agriculture was evident primarily in the evolution of cropping and marketing patterns rather than changes in mechanical technology.⁴ The most well-known cropping pattern changes were stimulated by the introduction of early ripening rice varieties from central Indo-China during the Sung Dynasty (960-1126).⁵ Initially planted in limited areas in the southeast, within two centuries these varieties were grown widely in Chekiang, southern Kiangsu, and Kiangsi and by the Ming Dynasty they had diffused to large parts of the southwest and to central China, especially the present-day provinces of Hupeh and Hunan. Diffusion of early ripening varieties contributed to increased grain output for two reasons. First, their shorter growing season allowed the spread of multiple cropping from south to central China. Second, because their water requirements were less than those of the traditional rice varieties, early ripening varieties allowed the spread of rice cultivation to higher lands where water supplies were previously insufficient to support rice cultivation.

The introduction of new food crops such as corn, peanuts, Irish potatoes as well as tobacco, cotton, and other non-food crops also contributed to agricultural growth and changes in patterns of regional settlement. Peanuts, for example, could be grown in poorer quality soils so became particularly important crops in sandy areas of the lower Yellow River and in poorer mountainous districts. In brief, the cultivation

of new crops was not distributed randomly across the Chinese agrarian landscape. Rather innovative Chinese peasants tended to adopt the cultivation of these crops in regions of comparative advantage.

That process of increasing specialization, which contributed importantly to growing productivity per unit of land, was dependent on increased marketing, not only locally but interregionally as well. During the transitional period from mid-T'ang to Sung the subsistence basis of the rural economy was replaced by an increasingly complex marketing system. Over an ever-broadening area some periodic market sites developed into marketing towns, linking intra-rural marketing with interregional markets.⁶ The development of inter-regional markets in rice and other staple commodities began as early as the T'ang Dynasty (618-906) and accelerated in the twelfth and thirteenth centuries as increased cultivation of sugarcane and other cash crops on the southeast coast was facilitated by rice and other staples shipped from surplus regions in the Yangtse Delta, the Canton Delta, and the central Kan River Valley.⁷ Even prior to the Ming it appears that the great southward migration of population had led to population densities on the southeast coast far in excess of what could have been supported on the basis of rice cultivation alone. The population density was sustained on the basis of cash crops that were traded for rice from surplus grain regions.

Although the regions of surplus cereal production shifted over time, interregional trade increased. By the first half of the 17th century the lower Yangtse region itself had become a grain-deficit region because of increased allocation of land to the production of

noncereal crops and a rising rate of urbanization. The lower Yangtse had come to depend on rice supplied from Kiangsi, Anhui, and especially present-day Hunan and Hupei where rice production had increased substantially because of the introduction of early ripening varieties, discussed above.⁸

In the late seventeenth century Hunan and Hupeh had become the bread basket of the Chinese empire. Their rice surpluses flowed down the Yangtse River to supply cereal-deficit regions in the lower Yangtse. Part of that supply moved north to the Ch'ing capital at Peking via the Grand Canal. Hunan also shipped somewhat smaller quantities to the southeast coastal provinces of Fukien and Kwangtung and to western regions such as Shensi and possibly to Kweichow in the southwest. Chuan and Kraus estimate that at mid-Ch'ing Hunan-Hupeh exports totalled from 500,000 to 750,000 metric tons.⁹

Another major example of interregional trade was the grain-cotton trade between north and central China. By the seventeenth and eighteenth centuries textile production in the lower Yangtse was dependent on raw cotton produced in Shantung, Honan and present-day Hopei.¹⁰ These regions in north China, in turn, depended for part of their food consumption on cereals originating in the middle Yangtse region that flowed down river and then were shipped north via the Grand Canal or coastal routes from the lower Yangtse. Thus a triangular trade based on relatively inexpensive water transport emerged, facilitating productivity growth. The expansion of specialized production based on comparative advantage and interregional trade in agricultural products was stimulated further by railroad development after 1895, particularly in north and

northeast China where water transport was limited.

Thus while production technology changed little between the fourteenth and early twentieth centuries, Chinese peasants responded positively to new opportunities that arose from the availability of improved seed varieties, new crops, improved transport systems, and rising urban demand. In most respects peasant behavior appears consistent with the view advanced by T. W. Schultz and others that peasants respond efficiently to new production and marketing opportunities.¹¹ For reasons that are not well understood, however, the increased physical productivity of Chinese farming and absorption of new crops did not lead to a growth of incomes, "on the contrary, growth was all demographic."¹² Thus by the mid-twentieth century arable land per agricultural worker was only six-tenths of a hectare, substantially less than the levels in other developing countries in East Asia, Southeast Asia and South Asia,^{and} /of course, much less than at the onset of modern economic growth in Japan or Western Europe.^{12^a}

Development Policy Since 1949

While population growth increased and arable land actually shrank after 1949, the thesis of this paper is that persistent undervaluation of agriculture by the Chinese Communist Party contributed significantly to the relatively slow growth of agriculture after 1949. Undervaluation of agriculture is reflected in policies that, on balance, have reduced peasant income earning opportunities, inhibited efficient resource allocation within agriculture, and depressed agricultural investment.

Price and Marketing Arrangements

Undervaluation of agriculture initially was reflected in the system of producer levies introduced in the fall of 1953. Prior to that time the state sought to satisfy the growing demands for agricultural raw material by state manufacturing establishments by purchasing commodities on rural periodic markets. State influence on the production decisions of peasants was indirect and depended on peasant responsiveness to changes in relative prices. Meeting demands for agricultural raw materials and increasingly for urban consumption, however, was increasingly expensive since the terms of trade between the state and peasantry were turning in favor of the peasantry. Because of the increased demand on state resources as the First Five Year Plan was getting under way, a system of compulsory levies at fixed prices was introduced in the fall of 1953.

In theory the average price received by peasants in a system combining forced deliveries to the government at low prices and an unrestricted market for the remainder of peasant surpluses need not be less than the price that would be received on a single free market with no government intervention.¹³ The average price received under a system with quota deliveries is simply the weighted average of the price received for sales to the state and the price on the open market for the residual of peasant marketings. In the short run, if the government separates the urban market for grain into high and low income consumers and supplies the grain purchased at below market prices to low income urbanites, while the urban rich compete for the reduced supply on an

open market, the average price received by producers will be higher than under a free market with no government intervention. This result depends only on the (absolute) price elasticity of demand of the urban rich being less than that of the urban poor.¹⁴ This rationale has been advanced in favor of the Indian system of producer levies. Its attraction is the ability to use the price mechanism to transfer income from the urban rich to urban poor, and perhaps even to the peasantry, without imposing a negative incentive effect on producers.

In practice, the conditions necessary for this happy outcome have never been fulfilled in China.¹⁵ Most critical, the Chinese coupon rationing system for cereals and edible vegetable oils as early as 1955 was extended to encompass the entire urban population and the amounts supplied were sufficiently generous that the volume of intersectoral sales by peasants at uncontrolled prices was reduced substantially. Moreover, prior to the imposition of the producer levy system, the state converted traditional grain markets in cities and in market towns to state grain markets, where prices were subject to state control. The only remaining outlet for cereals were smaller informal markets within the countryside. But even here sales were limited in volume and private millers could no longer purchase grain in these markets for ultimate resale to market town or city dwellers. Private traders and processors came under the administrative jurisdiction of the Ministry of Food and its local agencies. All of these restrictions were necessary to ensure that grain taxes, paid in kind, and quota delivery targets were fulfilled. Consequently, the magnitude of grain transactions in rural markets was curtailed substantially, from

about seven to eight million metric tons in the early 1950s to two to three million metric tons by 1954-55. Restrictions on cotton which was also subject to delivery quotas were more severe. Private sale of raw cotton was prohibited and the sale of handicraft yarn spun or cloth woven by cotton growers was also prohibited.

In the decades following the imposition of producer levies at fixed prices rural markets have been liberalized in three periods; from the middle of 1956 through the fall of 1957, from 1961 or 1962 through 1965, and since 1979. In the first two of these periods the emergence of the opportunity to sell products privately either undermined or raised the cost to the government's system of producer levies and the scope of the markets subsequently^{was} curtailed. Thus for most of the years since 1953 government procurement policy has tended to depress the average price received by farmers below the price that would prevail in the absence of government intervention, reducing production incentives. Moreover, the curtailment of local marketing not only reduced the prices peasants received, but reduced their opportunities to earn income from the sale of commodities not subject to state producer levies.

Comparative Advantage, Interregional Trade, and Productivity Growth

While constraints on local marketing imposed efficiency losses because of the inhibition of specialization within local marketing regions, curtailment of interregional trade was far more serious since it interrupted the patterns of regional specialization based on comparative advantage that were such an important source of production growth during the Ming and Ch'ing dynasties. The suppression of inter-regional trade was^{not} much in evidence prior to the Great Leap Forward.

Indeed during the early 1950s and continuing through the First Plan (1952-1957) state policy facilitated trade and specialization. The interprovincial flow of cereal crops recovered rapidly in the early 1950s, reaching a peak of 7.85 million metric tons in 1953, about 5.5 percent of cereal production.¹⁶ Interprovincial flows were only slightly less than this for the four-year average 1953-56.

While a portion of these flows actually went to feed the two largest cities, Peking and Shanghai, which had provincial level administrative status, a significant share supported patterns of comparative advantage cropping that had evolved over previous centuries.¹⁷ A detailed analysis of the regional distribution of cropping of cotton, China's most important non-food crop, for example, shows that its production was concentrated in traditional cotton-growing regions of the North China Plain. Among all Chinese provinces Hopei had the strongest comparative advantage in cotton production (as measured by the yield of cotton relative to cereal crops) and the highest share of land sown to cotton (8.5 percent). Moreover 80 percent of cotton production was concentrated in the southern and central portions of the province. In the eight major producing counties cotton sown area on average absorbed a third of total sown area and in one county, Ch'engan, reached a peak of 51 percent. During those years 40 percent of the cotton produced in the region was shipped to other provinces or to Shanghai, China's traditional textile center. Because of its concentration in comparative advantage crops such as cotton, and to a lesser extent, peanuts and sesame, the province was the single largest

importer of cereals during the First Plan. The state supplied on average over a million tons of foodgrains per year, slightly over 10 percent of provincial production.

Cotton was not unique; interregional trade facilitated specialized production of soybeans, other oilseed crops, sugarcane, sugar beet, etc. Nor was specialization necessarily limited to the Yangtse River region or cotton producing regions on the North China Plain where water or rail transport facilitated low cost movement of bulky crops. Even more remote regions sometimes specialized in high value crops. In mountainous southern Yunnan Province, on the border with Laos and Burma, grain production in the Hsishuangpana Thai Autonomous Chou historically was never sufficient to meet consumption needs. In the 1950s, prior to the emergence of local self-sufficiency as a policy, this area continued its historic specialization in production of high value noncereal crops such as tea, shellac, tropical fruits, and medicinal herbs which they traded for 70 percent of their food requirements. In remote mountainous northwest Hunan a single prefecture prior to liberation produced one-fifth of China's tung oil. In the 1950s tung oil, tea oil, timber, medicinal herbs, and forestry products were the basis of the local economy and were traded for rice produced in the alluvial regions of Hunan, especially around Tungting Lake.

Although its origins are not well understood, local self-sufficiency in cereals became an important policy objective during the Great Leap Forward. The communes formed at that time were to become largely self-contained local communities each with their own small-scale industries, food processing plants, and social service system. Provincial Party

secretaries on the North China Plain, such as Wu Chih-p'u in Honan, sought to demonstrate the success of the Great Leap locally by proclaiming that they had become self-sufficient in cereals.¹⁸ Policies of self-sufficiency were abandoned in the first half of the 1960s as economic policy formulation increasingly was influenced by Ch'en Yun, the highest ranking Party economic specialist. In the 1950s Ch'en had promoted more favorable price and marketing policies, but he was pushed aside by Mao Tsetung when the Great Leap Forward got underway.¹⁹

However, interregional trade never recovered to the level of the 1950s and, after the onset of the Cultural Revolution in 1966, trade shrank further. In 1965 interprovincial cereal exports were 4.7 million metric tons or 2.8 percent of production. That presumably was up from a trough in 1960-61, but data for those years are not available. By 1978, after a decade of emphasis on cereal production and self-sufficiency, interprovincial exports had shrunk to 2.05 million tons or less than one percent of output. And of this flow 1.68 million tons was destined for international markets.²⁰ Thus internal trade of domestically produced cereals had shrunk to a few hundred thousand tons, less than one-tenth of one percent of domestic production. In Hunan province, for example, with a population of about 50 million where per capita grain production (80 percent rice) in 1978 was 84 kilograms or more than 25 percent in excess of the national average, rice exports were only 500,000 tons, less than three percent of production, and probably less, in absolute terms, than they were two and one-half centuries earlier. Rice exports of other provinces, where the widespread adoption of high yielding short-stalk rice varieties had contributed to rapid growth of output and high levels of per capita production were similarly low.²¹

Suppression of interregional marketing by the government appears to have substantially reduced the efficiency of farm production. The reduction or loss of external sources of cereals led to less efficient production in regions that historically tended to specialize in non-grain crops that they traded for cereals. Traditional cereal producers, in response to reduced supplies of nongrain crops from external sources, sought to increase their own production of sugar and other crops, although the opportunity cost in terms of lost cereal production was considerable. Increased inefficiency is reflected in western estimates of declining total factor productivity between 1965 and the late 1970s and in a sharp rise in the cost of purchased inputs as a share of the gross value of output.²²

Although one cannot separate out the effects of reduced interregional trade from egalitarian distribution policies within individual producing units that may have diminished X-efficiency, the significance of reduced interregional trade is suggested by examining a few individual localities.

In northwest Hunan by 1979 there were 915 poverty stricken production teams, where per capita incomes were less than forty yuan per capita annually, the monetary value of the nationally established poverty line in rural areas.²³ As external supplies of grain had been curtailed the region had been forced to pursue cereal self-sufficiency, largely through slash and burn methods that destroyed the traditional basis of their livelihood, tung oil and other forestry products.

In the 1950s Fukien province on the southeast coast of China was a major sugar producer and exporter, continuing a pattern that had been

evident since the twelfth century.²⁴ Since sugar is a minor food item, the share of land devoted to its cultivation was low for the province as a whole (about one percent of sown area) but production was concentrated in a few densely populated counties in Chinchiang Prefecture where as much as twenty percent of the land was devoted to sugarcane cultivation. This region of Fukien continued to depend on external grain supplies in the 1950s as it had for centuries. Production fell because of the crisis brought on by the Great Leap Forward, but had fully recovered by 1965 in the wake of the more favorable price and market policies adopted in the early 1960s. Just before the onset of the Cultural Revolution Fukien shipped 100,000 tons of refined sugar, over half of total production.

By 1976 sugar yields, production, and export had all fallen sharply. Exports, for example, fell to 22,000 tons, a fifth the level of 1966. Naturally as trade opportunities were reduced peasant income and consumption fell sharply.

the most important sugarcane producer in Fukien,
In Hsienyu County, by 1976 per capita cereal consumption averaged only 145 kilograms (unprocessed) per capita, well below the 200 kilogram level that constitutes the official poverty standard in south China. The depression of farm income and consumption through the curtailment of long-established trade patterns is not surprising. The dense population on the southeast coast could only be sustained on the basis of specialized production of high value crops such as sugarcane and fruits. Arable land in Hsienyu in the late 1970s was extremely limited, .03 hectares per capita, about two-thirds less than the national average.²⁵ Although rice yields in the region were among the highest in all of

China, trade curtailment reduced the region to abject poverty.

The high cost of trade restriction is confirmed by developments in more recent years. Only four years after the central government guaranteed the availability of cereals for sale to cane producers, cane sown area increased two-thirds, yields more than doubled, refined sugar output more than tripled, and shipments of refined sugar out of the province rose over seven-fold. Income of peasants in sugarcane producing regions roughly doubled. Moreover this transformation was achieved solely through restoration of marketing opportunities. In peasant transactions with the state there was no change in the ratio of the price producers paid for grain and the price they received for sugarcane.

State Investment and Credit Policy

Undervaluation of agriculture by the state is also reflected in state investment and credit policy.²⁶ For the years 1953 through 1978 the state allocated 12 percent of state investment to agriculture, 60 percent to industry. Since agriculture in 1952 was the sector of origin of over three times as large a share of the economy as was industry, the disproportion is even larger if the investment magnitudes are expressed in terms of rates of reinvestment within each sector.

Naturally a complete analysis of the sectoral allocation of investment requires an analysis of the flows of credit from the state banking system and the internal reinvestment of collective farm units and of state industrial enterprises. The main points that emerge from that analysis are as follows. First, on balance the Chinese have pursued a

classic Stalinist industrialization strategy. Credit supplied by the state banking system to collective agriculture has been quite modest. Moreover, internal reinvestment in agriculture by collective units in the aggregate has been quite small, averaging for example six to seven percent of value added in agriculture in 1977 and 1978. On the other hand internal reinvestment of retained earnings by enterprises are quite large, especially after 1966. But for complex bureaucratic reasons these data are not reflected in state investment allocation data. Thus the 1:5 ratio of investment shares may understate the real tilt toward industry. However, policy has not been uniformly imbalanced in favor of industrial growth. Up to 1957 and again since 1978 state credit flows to agriculture have been significant. Internal reinvestment by farmers up through 1957 also was somewhat greater, about 10 percent of value added in agriculture. At least in part higher rates of reinvestment in this period were possible because farmers were not yet encumbered with a flow of high-priced agricultural producer goods such as chemical fertilizers and machinery. After 1966 internal reinvestment was held down because declining productivity growth and the growing burden of overpriced modern inputs reduced the growth of net revenues of collective units. Simultaneously state credit and investment flows were reduced, the former in absolute and the latter in proportionate terms.

The niggardly flow of resources to agriculture from the state and the high degree of taxation embedded in the price structure governing peasant-state transactions is reflected in the very modest stock of assets in collective agriculture. Fixed assets (excluding land) per

agricultural laborer in 1977-78 averaged only 275 yuan, less than a tenth the level in industry. The model communes to which western visitors are taken invariably have innumerable tractors, pumps, and a vast array of other types of farm machinery and equipment. But the total fixed assets of the average team, which in 1977-78 had 60 workers and 20 hectares of cultivated land, were less than 17,000 yuan. At the farm level prices prevailing in the late 1970s total physical productive farming assets per team would be a single large tractor or three walking tractors.

Summary

The inability of agriculture after 1949 to improve upon its historic pattern of simply matching the rate of growth of population seems paradoxical. During the first three decades of Communist rule there were important improvements in irrigation systems, the early development and wide diffusion of high yielding rice varieties, the development of a large modern chemical fertilizer industry, and major improvements in transportation systems, particularly roads and railroads. The pace of these developments should have been conducive to agricultural output growth in excess of demographic growth but that did not, in fact, occur.

Instead what emerged was a classic pattern of imbalanced growth, whether measured in output trends, discussed at the outset of this paper or in terms of investment shares, discussed in the last section. Not only did industrial growth accelerate while agriculture stagnated, most industrial growth was concentrated in heavy industry. Coal, steel, and

electric power output soared while per capita cotton cloth consumption by 1978 was significantly lower than two decades earlier. In short, Chinese agriculture proved far too complex to thrive in an economic system in which the state systematically interfered with local markets, reduced interregional flows of agricultural commodities, and suppressed farm prices.

Development Policy Since the End of the Cultural Revolution

In many respects 1977-1978 appears to mark a major watershed in Chinese agricultural development policy. All of the factors retarding growth in the past now have been modified. State purchase prices for farm products on average rose more than 40 percent between 1977 and 1981 and the state bank substantially increased the flow of credit to agriculture. Rural markets were reopened widely by 1979 and sale of grain and edible vegetable oils by producers is legal, after government delivery quotas are filled. The state also has sought to guarantee the sale of adequate supplies of cereals to producers of cotton, sugarcane, and some other economic crops, when necessary through interregional grain transfers.

These policy changes have led to a remarkable acceleration of agricultural growth. Between 1977 and 1981 cotton output rose 45 percent; sugarcane, 70 percent; sugar beet, 160 percent; oil seed crops, 155 percent; meat, 62 percent.²⁷ While part of this growth of output of noncereal crops reflects increased allocation of sown area to noncereal crops following a relaxation of the emphasis on cereal production and an increase in the relative price of noncereal as

compared with cereal crops, much of the growth is accounted for by increased yields. Cereal sown area has fallen by more than six million hectares, not only because of increased area sown to economic crops but an even larger reduction in the multiple grain cropping that had been undertaken in the first half of the 1970s when pressure was brought to bear to increase grain output without adequate consideration for costs. Despite these losses in grain sown area, output rose 15 percent between 1977 and 1981, since yields rose more than 20 percent.

A large portion of the growth of yields and output can be explained by the reemergence of more rational cropping patterns. State guarantees of adequate cereal supplies to sugar producers, undertaken as early as 1977 in Fukien, were extended to the other major producing regions, Kwangtung and Kwangsi in 1980 and 1981, respectively. The increase in yields, output, and shipments of refined sugar out of comparative advantage regions has so reduced production of cane in noncomparative advantage regions that even as output has risen 70 percent, total national sown area has shrunk by almost 15 percent.

Reemergence of specialized cotton production in northwest Shantung is another success story.²⁸ In the 1950s four prefectures in the northwest portion of the province continued their historic specialization in cotton production. In 1956 and 1957 their sown area was 590,000 and 530,000 hectares, 80 percent of the provincial total. At the trough of production in the 1970s, in response to the attempt to become self-sufficient in grain, cotton sown area dropped to as low as 250,000 hectares and most of the counties in the area fell into poverty. In 1977-79 the greatest concentration of rural poverty in terms of both

numbers of counties and of people was in the North China Plain and a large number of these were in areas of historic cotton specialization. Almost all of the chronic poverty in Shantung was in the cotton-growing regions of the northwest.

The success of the reemergence of specialization is reflected in a quadrupling of provincial cotton output between 1978 and 1981 and the reemergence of Shantung as a major cotton exporter. By 1981 exports were almost 60 percent of output--ahead of the 40 percent share shipped out during the 1950s.²⁹ More significantly by 1980 sown area in the northwest part of the province had recovered to the level of the 1950s and twenty of the twenty-two counties, with a total population in excess of twenty million, had escaped the poverty level with incomes rising from one-third below the national average in 1978 to 10 percent above the national average in 1980.

Much of the growth in yields and output since 1978 can be accounted for by the reemergence of specialized production, as in central coastal Fukien and northwest Shantung, the renewal of marketing opportunities, and the sale of adequate supplies of food crops to peasants producing economic crops.

Although the new policies seem initially successful in terms of their positive stimulus to output, efficiency, and farm income, it is not clear that they will be sustained. Already there is evidence that the Party is retreating from the policies embraced so eagerly in 1978 and especially 1979. Promised reductions in the prices of major agricultural producer goods have not been forthcoming; promised increases in state funds for agricultural investment have fallen victim

to the general budgetary retrenchment of the past few years; rural markets, that have contributed so much to the revival of the farm economy, have come under increased state regulation and price controls; even the higher prices the state has paid since 1979 for farm products, are under pressure. Perhaps most surprising, in the spring of 1982 the government froze the existing levels of interprovincial cereal transfers for a three-year period.³⁰

The root cause of all of these signs of retreat is the Party's continued commitment to insulate urban consumers from higher farm level prices and an unwillingness to reduce further the rate of investment. The policy of providing staple foods at fixed prices to the urban population is not new. It began in 1952 but since the mark-up between state purchase prices for unprocessed grain in the countryside and the resale of wheat flour and polished rice at ration prices in cities was between 100 and 150 percent, these transactions were highly profitable.³¹ Even after absorbing processing losses, transport costs, and marketing costs, profits, which were channeled to the state treasury in the form of budgetary revenue, were about one half billion yuan per year. By the mid-1970s, however, losses had become significant since farm-level prices had been raised considerably in the first half of the 1960s and retail price adjustments were quite modest--three to seven percent for major cereals. Between 1974 and 1978 losses on the purchase and resale of cereals and vegetable oils cumulated to 20.8 billion yuan.

Losses mounted rapidly after 1978 because retail prices remained fixed while procurement prices rose sharply. Losses on cereals

and edible vegetable oils are now .2 yuan and .8 yuan per kilogram meaning that the ration price of cereal covers only 60 percent of the cost of procurement and marketing and an even lower share of the costs of edible vegetable oils.³² By 1981 total subsidies, almost all of which accrued to the urban population and the small number of state employees in rural areas, were about 25 billion yuan. That is the equivalent of fully one-quarter of state budgetary revenues (combining all levels of government), more than six percent of national income (based on the Chinese national income concept), or 30 percent of the wage bill of state workers and employees.

These subsidies dwarf those for the Food Corporation of India which manages India's Fair Price Shop System with losses well under one percent of national income. More significant, Chinese subsidies far surpass those prevailing in other centrally planned systems. In the most notorious case, Poland, food subsidies soared in the 1970s and by 1980 were 18 percent of the wage fund, only about two-thirds the Chinese level.

The financial burden of food subsidies on the state by 1981 had grown so large that it became clear that the state could no longer simultaneously maintain an investment rate of thirty percent or more; provide basic food commodities to urban consumers that in nominal terms were only about five percent above the levels of 1952 and in real terms had fallen for three decades, and sustain the higher prices offered to peasants.

Most of the measures taken since 1980 suggest that the adjustment to this financial burden is being borne by the peasantry. Ch'en Yun,

the chief architect of the reforms instituted since the end of the Cultural Revolution and an ardent supporter of more favorable price and marketing incentives for peasants, has ruled out upward adjustment of urban retail prices for staple foods, recognizing that this could cause urban chaos.³³ Although state investment has declined from its peak of 37 percent in 1978 to 28 percent in 1981, it appears to have remained stable since then. Moreover, the newly announced plan to quadruple agricultural and industrial output by the year 2000 has created a new impetus for high investment rates. On the other hand, no less an authority than Hu Yaobang, the Chairman of the Party, has stated that future growth of farm income must be derived from increased output and productivity growth, rather than higher prices.³⁴ Since 1981 in particular the state has made a concentrated effort to reduce average farm prices, not by reducing posted prices but by reducing the share of output purchased at higher above-quota and negotiated prices, that have been of increased importance since 1979. Ironically the state's curtailment of some rural marketing opportunities, primarily to reduce the main competitor to deliveries to the state, and its curtailment of long distance trade in cereal crops substantially reduces the prospects for peasants achieving income gains through productivity growth.

One is left with the impression that the modification since 1978 of the historic emphasis on urban and industrial development has been modest. Preservation of retail price stability for staple foods consumed by the urban population has been revealed as more important than providing incentive prices to producers. In some societies such

a choice might be justified on equity grounds since the absolute level of income of the urban poor is low and they frequently suffer sharp declines in their real income and consumption when food prices rose. Such an argument does not appear persuasive in China. As already pointed out, rationing of subsidized foods is not targeted on the urban poor but is universal for nonagricultural households. Second, according to official data the urban poor are extremely small in number, about 2 percent of the urban population.³⁵ That is hardly surprising since for two or more decades rural-urban migration has been strictly controlled by the Ministry of Public Security and secure urban employment has been the most important prerequisite for approval to change place of residence. Third, not only is rural poverty more pervasive than urban poverty, the living standards of the rural poor are probably lower than their urban counterparts. Thus it is likely that China's system of producer levies and urban rationing worsens rather than improves the distribution of income. Production incentives and equity would be jointly improved by imposing fewer constraints on farm level prices and providing subsidized food only to the small share of the urban population that falls below the existing urban poverty standard.

NOTES

¹Dwight H. Perkins, Agricultural Development in China 1368-1968 (Chicago, Illinois: Aldine Publishing Company, 1968) estimates that per capita output in agriculture was unchanged between the beginning of the Ming Dynasty in 1368 and the middle of the twentieth century.

²Between 1952 and 1978 value added in agriculture rose 2.3 percent per year, in industry, 11.3 percent. Yang Jianbai and Li Xuezheng, "The Relations between Agriculture, Light Industry and Heavy Industry in China." Social Sciences in China, No. 2, 1980, p. 183. This measure of agriculture growth is somewhat lower than that usually cited since it is based on a net value measure and thus takes into account the trend of rising production costs between 1952 and 1978. The sources of increased costs and declining efficiency of production are explained below.

³T.W. Schultz, Transforming Traditional Agriculture (New Haven, CT: Yale University Press, 1964).

⁴The best single study of these changes is the classic by Ho Ping-ti, Studies in the Population of China, 1368-1953 (Cambridge, Massachusetts: Harvard University Press, 1959).

⁵Ho Ping-ti, Studies in the Population of China and "Early Ripening Rice in Chinese History", Economic History Review, vol. 9, No. 2 (1956), pp. 200-218.

⁶Yoshinobu Shiba, "Urbanization and the Development of Markets in the Lower Yangtze Valley", pp. 13-48 in Crisis and Prosperity in Sung China, edited by John Winthrop Haeger (Tucson, Arizona: University of Arizona Press, 1975).

⁷Mark Elvin, The Pattern of the Chinese Past (Stanford, California: Stanford University Press, 1973), pp. 129, 166-72.
Evelyn S. Rawski, Agricultural Change and the Peasant Economy of South China (Cambridge, Mass.: Harvard University Press, 1972).

⁸Dwight H. Perkins, Agricultural Development in China 1368-1968, p. 144. Gilbert Rozman, Urban Networks in Ch'ing China and Tokugawa Japan (Princeton, New Jersey: Princeton University Press, 1973), p. 130. Chuan Han-sheng and Richard Kraus, Mid-Ch'ing Rice Markets: An Essay in Price History (Cambridge, Massachusetts: Harvard Asian Research Center, 1975), 59.

⁹Chuan and Kraus, Mid-Ch'ing Rice Markets, pp. 70-71

¹⁰Mark Elvin, The Pattern of the Chinese Past, p. 213. Ho Ping-ti, Studies on the Population of China, 1368-1953, p. 201-2.

¹¹T.W. Schultz, Transforming Traditional Agriculture. Samuel Popkin, The Rational Peasant: The Political Economy of Rural Society in Vietnam (Berkeley, California: University of California Press, 1979).

¹²Eric Jones, The European Miracle: Environments, Economies, and Geopolitics in the History of Europe and Asia (Cambridge: Cambridge University Press, 1981), p. 21

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For a sample of Asian developing countries in 1955 the arable land per worker ranged from a high of 1.8 hectares in Pakistan, 1.2 hectares in India, etc. Only in Bangladesh (then East Pakistan), with .54 hectares per worker, was the man:land ratio less favorable than in China. Yujiro Hayami and Masao Kikuchi, Asian Village Economy at the Crossroads (Tokyo and Baltimore: The University of Tokyo Press and the Johns Hopkins University Press, 1981), p. 40. Data for China are in Nicholas R. Lardy, Agriculture in China's Economic Development (Cambridge: Cambridge University Press, forthcoming), Table 1-3.

¹³Yujiro Hayami, K. Subbarao, and Keijiro Otsuka, "Efficiency and Equity in the Producer Levy of India", American Journal of Agricultural Economics, vol. 64, no. 4, (November 1982), pp. 655-663.

¹⁴In the longer-run the stability of the system and the persistence of a weighted price above a single free market price also requires that the (absolute) elasticity/^{of}demand of the rich exceed the elasticity of supply of producers.

¹⁵For documentation of the developments summarized below see Lardy, Agriculture China's Economic Development, chapter 2.

¹⁶Lardy, Agriculture in China's Economic Development, Table 2-2.

¹⁷Lardy, Agriculture in China's Economic Development, chapters two and four include a detailed discussion of the evolution of cropping patterns and interregional trade and complete citations to the relevant primary source materials.

¹⁸Wu's claims and Ch'en's response are analyzed in Lardy, Agriculture in China's Economic Growth, chapter 4.

¹⁹This period is analyzed in Nicholas R. Lardy and Kenneth Lieberthal, Chen Yun's Strategy for China's Development: A Non-Maoist Alternative (Armonk, New York: M.E. Sharpe, Inc., 1982).

²⁰Interregional community flow data from Lardy, chapter 2. Chinese cereal export data from Annual Economic Report of China, 1982 (Hong Kong: Hong Kong Modern Culture Company, 1982), p. VIII-47.

²¹Provincial cereal output data from provincial newspapers and broadcasts.

Rice export data from Kwangtung Economics Society, An Economic Investigation of Kwangtung (Kwangchou, Kwangtung People's Publishing House, 1981), p. 195. Other rice exporters (i.e. shipments out of province) were Kwangsi, 25,000 tons; Hupei, 300,000 tons; Kiangsu, 350,000 tons; Chekiang, 100,000 tons. Per capita output in these four provinces ranged from 408 to 340 kilograms, compared to the national average of 318. Exports as a share of grain production ranged from two-tenths of one percent in Kwangsi to 1.7 percent in Hupei.

²² See Anthony Tang, "Food and Agriculture in China: Trends and Projections, 1952-1977 and 2000," in Food Production in the People's Republic of China by Anthony Tang and Bruce Stone (Washington, D.C.: International Food Policy Research Institute, 1980), p. 28 and Lardy Agriculture in China's Economic Development, Table 2-8. The latter shows costs rising from 27.3 percent in 1965 to a peak of 35.7 percent in 1977.

²³ Wu Yun-ch'ang, "Speed up Agricultural Development in the Hsianghsi Minority Autonomous Region", People's Daily, September 15, 1980, p.4.

²⁴ This summary analysis of sugar production is drawn from Lardy Agriculture in China's Economic Development, chapter 2.

²⁵ Hsiao Hui-chia and Chang Jui-san, "Link up Sugar and Grain, Develop Comparative Advantage" People's Daily August 18, 1980, p. 2 gives Hsienyü County population and cultivated area data as 720,000 and 24,000 hectares, respectively. For the national data see Lardy, Agriculture in China's Economic Development, chapter 1.

26 Investment and credit policy and discussed more fully and data sources provided in Lardy, Agriculture in China's Economic Development, Chapter 3.

27 State Statistical Bureau, Chinese Statistical Yearbook (Peking: Statistical Publishing House, 1982) p.

28 This summarizes discussion in Lardy, Agriculture in China's Economic Development, chapters 2 and 4.

29 Pai Ju-ping "Adjust the Structure of Agriculture, Raise Economic Efficiency", Red Flag, No. 7, 1982, pp. 15-19.

30 Ministry of Food, Rural Procurement and Sales Office, "Purchased Grain May Not be Used to Fulfill Procurement Tasks". Agricultural Work Bulletin, No. 3, 1982, p. 45.

31 This analysis of prices and consumption subsidies draws on Nicholas R. Lardy, "China: Agricultural Pricing Policy", unpublished study prepared for the World Bank, November 1982.

32 Loss data per unit of ration sales is provided in Ministry of Food Research Office, A Discussion of Policy on Procurement and Sales of Cereals and Oils in Rural Areas (Peking: Finance and Economics Publishing House, 1981), p. 4.

33 Quoted in Teng Li-ch'un, Study How to do Economic Work From Ch'en Yun (Peking: Chinese Communist Party Central Party School Publishing House, 1981).

34 Hu Yuobang, "Create a New Situation in All Fields of Socialist Modernization," Beijing Review, September 13, 1982, p. 18.

³⁵The urban poverty standard is generally 20 yuan per family member per month or 240 yuan per year. In 1981 a survey of 8700 urban households showed only 2.1 percent of the families fell below this level. Li Ch'eng-jui and Chang Chung-li, "Remarkable Improvement in Living Standards", Beijing Review, April 26, 1982, pp. 15-18, 28. This article is a summary of a longer text with more details in Red Flag, no. 8, 1982, pp. 25-28.