AGRICULTURAL PRICE REFORMS IN CHINA: EXPERIENCE FROM THE PAST THREE DECADES[1]

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ABSTRACT

This paper documents China's experience of transforming its food production and commerce from a centrally planned regime to a market system. The reforms have progressed in three steps: (a) raising agricultural procurement prices, (b) introducing market mechanisms to replace state controls, and (c) moving towards complete market operations. This series of reforms boosted agricultural production, raised per capita consumption of food products, and strengthened national food security. Agricultural price reforms in China in the past three decades suggest that right policies and institutions are essential in solving its food problems.
Key words: China, agricultural prices, food security, reforms, market.

RESUMEN

Este artículo documenta la experiencia de China en la transformación de un sistema de producción de alimentos centralmente planificado a uno basado en el sistema de mercado. La reforma ha progresado en tres etapas: a) aumento de los precios agrícolas pagados por el Estado; b) introducción de los mecanismos de mercado; y c) avances hacia la realización total de operaciones de mercado. Esta serie de reformas incrementó la producción de alimentos y fortaleció la seguridad alimentaria nacional. Las reformas de precios agrícolas en China durante las tres décadas pasadas sugieren que las políticas correctas y las instituciones son esenciales para resolver los problemas alimentarios.
Palabras clave: China, precios agrícolas, seguridad alimentaria, reformas, mercado.

RÉSUMÉ

Cet article est dédié à l'étude de la transformation connue par la production d'aliments en Chine comme conséquence du passage, d'un système de planification central, à un système de marché. Les dites réformes ont été menées en trois étapes: a) Augmentation des prix agricoles payés par l'État; b) introduction des mécanismes de marché; et c) avancements vers la réalisation totale des opérations sur la base des principes de marché. Cette transformation vers un système marchande a stimulé l'accroissement de la production d'aliments. D'ailleurs, elle a renforcé la sécurité alimentaire nationale. Le bilan des réformes des prix agricoles en Chine pendant les trois dernières décennies montre que les politiques correctes et la performance des institutions sont des éléments essentiels pour résoudre les problèmes alimentaires.
Mots clé : Chine, prix agricoles, sécurité alimentaire, réformes, marché.

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1 This paper is based on a speech-entitled «Agricultural Price Reforms and Food Security: The Case of China», delivered by Dennis T. Yang at the 2008 Venezuelan Feeding Forum. To preserve the sentiment conveyed at the Forum, the paper maintains the first tense, although Yuanfang Li has contributed to the research as a co-author.

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INTRODUCCION

This year 2008 marks the thirtieth anniversary of China's institutional reforms. Over the past three decades, China has achieved an economic growth miracle. The GDP of the nation has grown at 10 percent per year and its real per capita income has increased more than ten-fold. To date, China is the fourth-largest economy and the third-largest trading nation in the world. This spectacular growth has lifted more than 200 million people out of poverty and helped improve the health, education and other social standards of the Chinese population.

Dramatic improvements in food supplies are representative of the profound changes that occurred in China. Back in the late 1970s, basic foods such as grain, meat, eggs and cooking oil were distributed under strict state rationing. Likewise, there was almost no consumption of milk and other dairy products. The living standard was near subsistence level. All this have changed after economic reforms achieved magical outcomes. Today, food supplies are plenty and per capita consumption of major agricultural products by the Chinese population has surpassed the world average. Supermarkets and large food stores have long developed in Chinese cities, offering rich varieties of vegetables, fruits, meats, dairy products and processed foods at affordable prices even in slack agricultural seasons. In the late 1990s, about 20 years into the reforms, China declared it had solved the food problem.

What are the keys to these remarkable successes? It is widely believed that the crucial factors are China's reliance on markets and price signals, privatization, and its integration into the world economy. Agricultural pricing reform was one of the earliest and most crucial reforms carried out in rural China. In this paper, we focus on this aspect of reform and assess the impact of reform on food supplies in China. The next section presents an overview of agricultural pricing and commerce under central planning and discusses the related problems. Section II describes the major developments of reforms since 1978, while Section III discusses the impact of reforms on agricultural production, commerce, food processing industries and China's grain safety. Section IV provides several lessons from the Chinese reform experience.

1. AGRICULTURAL PRICING AND COMMERCE UNDER PLANNING

After gaining political independence in 1949, China, like many other less developed countries, began to pursue a heavy-industry oriented development strategy. In order to speed up industrial development, China adopted a scheme of price scissors in which the government systematically suppressed the prices of agricultural products and raised the prices of industrial goods. By extracting agricultural surplus and maintaining low urban wages, which was made possible with low food prices, the government succeeded in achieving capital accumulation for heavy industries.

Price controls were excessive under central planning. In 1978, on the eve of economic reforms, the Chinese government set procurement prices for 113 agricultural commodities; and, at the retail level, the government controlled the sales and prices of 158 commodities (CRDR, 1994). For each of the controlled farm product, the central planner set two prices: a quota procurement price and an above-quota procurement price. The latter was higher than the former, with an intention of providing extra production incentives beyond the fulfillment of the quota. Both prices were much lower than potential market prices. As Figure 1 shows, the procurement and retail prices of farm products were kept nearly constant during the entire period of central planning between 1951 and 1978.

To carry out price controls, China implemented a system of «unified procurement and unified sales» with the People's Communes serving as the basic organizations in rural China. Every year, the national planning authority assigned agricultural production targets to lower levels of the government in provinces, prefectures, townships, and, in the end, down to the People's Communes who were responsible for implementing specific production plans. The procurement of farm commodities was monopolized by the state. After harvests, state agencies purchased various products at quota or above-quota prices, transported the goods to cities, and then state-owned grain or grocery stores managed final sales. Individuals and private agencies were prohibited from specializing in food commerce and long-distance transport.

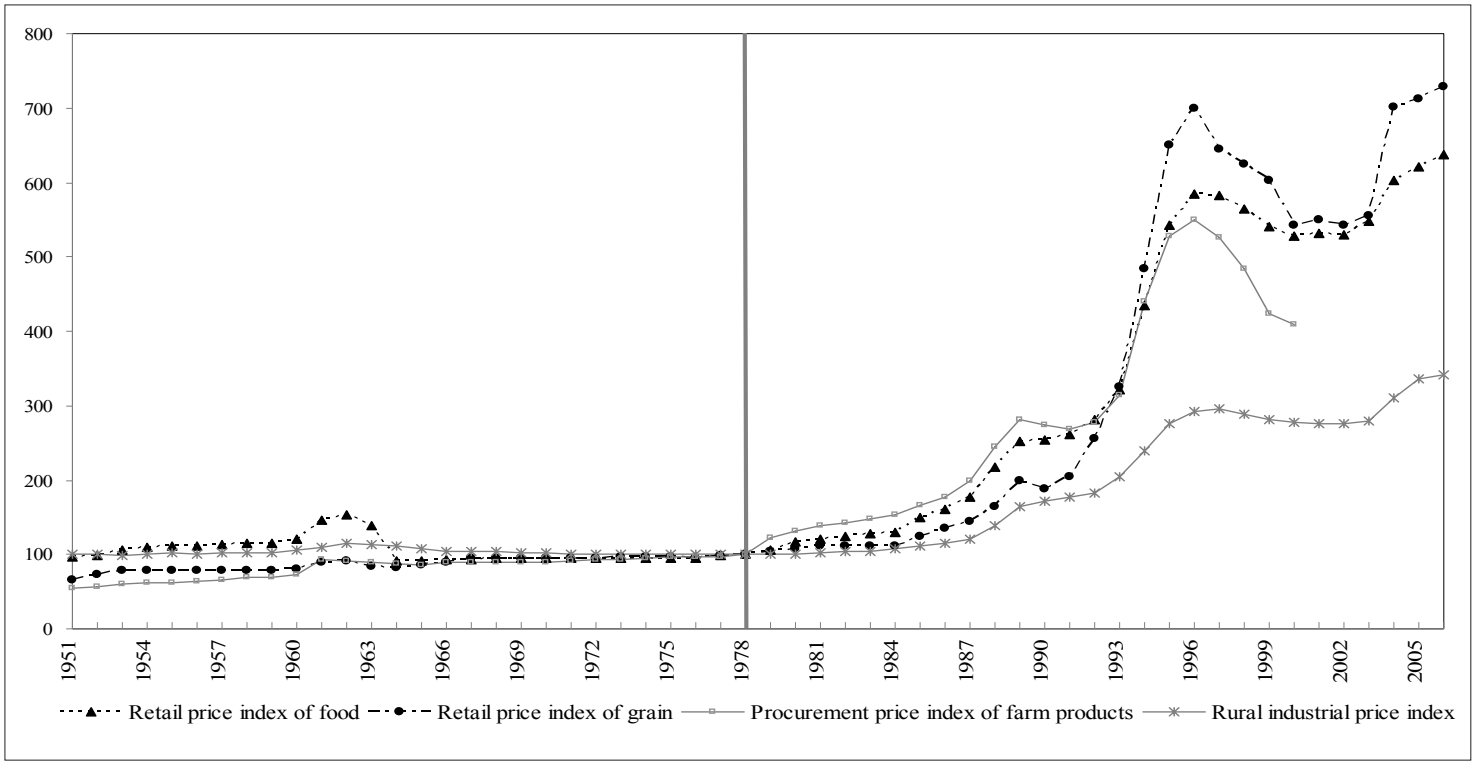
With severe shortages under price controls, the government had to use rationing to distribute major farm products, including grain, meat, cooking oil and eggs. In the pre-reform era, a resident living in a major Chinese city was typically allotted with a half kilogram of meat and the same quantity of cooking oil per month.

2. PROBLEMS WITH PRICE CONTROLS

Prices play a central role in guiding efficient distribution of commodities and optimal allocation of factors of production. Economists have long studied the problems with price controls. The experience of China and other developing countries has provided further evidence that price controls lead to losses in efficiency and welfare.

On the supply side, when prices are suppressed arbitrarily to below market levels, some firms will find it unprofitable to operate in that line of business and will

Figure 1
China: Price indexes of farm input and output, 1951-2006 (1978=100)



Sources: Procurement price index of farm products and rural industrial price index for the period 1951-1987 are based on NBS (1988); for the period 1988-2000 are based on NBS (2001). Rural industrial prices for the period 2001-2005 are based on author's calculations using information on farm producer goods (NBS, 2006). Retail price of food and retail price of grain for the period 1951-1987 are from MDT (1988, 1989); for the period 1988-1993 are from USEST (1994); for the period 1994-2005 are from USEST (2006); and for 2006 are from USEST (2007).

leave the market, while the firms remaining in the industry will also cut back production. Therefore, total supply is reduced. In China, as in other developing countries, price controls lower the incentive of farmers of supplying labor efforts, using fertilizers and machinery, and improving farm technology. In related industries of food processing and production, price controls reduce the incentives to improve storage facilities, production equipments, and transport capacity. Arbitrary low prices also lead to inferior goods quality and fewer product varieties. Moreover, lower profit margins and various uncertainties associated with price controls also discourage foreign investments in industries of food production and processing.

On the demand side, price controls impose direct welfare burdens on consumers. Long waiting lines result directly to misallocation of commodities -the goods in short supply are likely go to people who have lower marginal value of time, instead of those who have higher valuation of the goods- a direct welfare loss to the society. Due to the suppression of agricultural prices, shortages in food supplies were pervasive in all centrally planning economies[4].

Studies have shown that price distortions hinder economic growth. In the *1983 World Development Report*, researchers at the World Bank measured price distortions in 31 developing countries. Their analyses show that GDP growth rate for countries with high price distortions is approximately two percentage points lower than the average of the 31 countries, while the growth rate of countries with low price distortions is two percentage points higher than the average. Overall, price distortions can account for one-third of the variations in economic growth among all countries covered by the study (World Bank, 1983).

4 In 1984, one of the authors visited a large, multi-floor department store near the Red Square in the former Soviet Union. In contrast to the large size of the building, only few goods were available for sale. Long queues snaked around the shop for goods that were often not available, including a very long line for ice cream at the time of his visit. Ice cream appeared to be a rare commodity.

3. POLICY REFORMS IN RURAL CHINA

Decades of poor performance of the economy prompted the Chinese government to engage in broad institutional transformations. Starting in 1978, reforms in agricultural pricing and commerce proceeded in three phases with different emphases.

3.1. STAGE 1 (1978-1984): RAISING AGRICULTURAL PROCUREMENT PRICES

The initial policy changes consisted of a package of three dramatic and far reaching reforms. The first was an institutional change from collective farming to household-based production, the Household Responsibility System. The second was market and planning reforms with a purpose of reducing excessive production quotas and promoting the functioning of local free markets. The third was pricing reforms in which the government decided to dramatically raise agricultural prices that were suppressed for almost three decades under central planning.

The policy changes were aggressive. In 1979, the State raised the average quota procurement prices for grain by 20 percent, oilseeds by 25 percent, and cotton by 15 percent. The above-quota prices for the three commodities were raised even more by 30 to 50 percent. By 1982, average agricultural prices rose 42 percent relative to the 1978 level (Sicular, 1988; Lin, 1992). To provide extra incentives for production, the government also lowered the prices of agricultural machinery, fertilizers and pesticides by 10 to 15 percent during the same period (Xu, 2000). Figure 1 provides price indices of grain, food, farm products and rural industrial products for the period 1951-2006. Prior to reforms, prices stayed flat for nearly three decades. Since 1979, three agricultural output price indices continued to rise until the mid-1990s. By 1996, major food indices rose by 600 to 700 percent. The growth of these food prices was about two times higher than the growth of general consumer price index. As Figure 1 shows, the price index of rural industrial products that include fertilizers and farm machinery as its components increased between 1979 and 1996, but at a rate much slower than agricultural output prices. The increase in output prices relative to input prices greatly stimulated food production and was instrumental in raising rural household earnings.

Table 1 summarizes the growth of agricultural production during the central planning period 1952-1978 and the initial period of reform 1978-1984. Under the planned economic regime, the average yearly growth of overall production was 2.9 percent. During the reform period, this rate jumped to 7.7 percent, almost three times higher than under the planning regime. Growth in individual sectors also rose to much higher levels. In six years of reforms, the total value of farm production increased 42 percent. Careful empirical studies suggest that about half of the growth was attributable to the institutional change of adopting the Household Responsibility System. The other half of the growth was the result of price and market reforms, because higher prices and market opportunities induced farmers to raise cropping intensity and to use more productive inputs such fertilizers and machinery (Lin, 1992). Together with the expansion of rural industrial employment helped by the release of labor from agriculture, earnings of the poor rural population rose dramatically, helping to narrow the rural-urban income gap (Yang and Zhou, 1999; Yang, 2004).

Table 1

China: Average annual growth rates of agriculture, 1952-1984

	Annual growth rate (%)	
Subsector	**1952-1978**	**1978-1984**
Crops	2.5	5.9
Grain	2.4	4.8
Cotton	2.0	17.7
Animal husbandry	4.0	10.0
Fishery	19.9	12.7
Forestry	9.4	14.9
Sidelines	11.2	19.4
Agriculture (overall)	2.9	7.7

Note: The low base level is the main reason for fishery's high average annual growth in 1952-1978.
Source: Lin (1992).

3.2. STAGE 2 (1985-1992): REPLACING STATE MONOPOLY WITH MARKETS

The rapid growth in agricultural production strengthened the belief of the government that economic reform was the most effective way of solving China's food problem. Guided by the pragmatic philosophy of Mr. Deng Xiaoping, the architect of China's institutional reforms («A black cat or a white cat, it is a good cat so long it catches mice») China continued to build on its previous successes by further expanding the role of the markets.

There was a second factor that urged the Chinese government to give up the control of food production and sales. With increased agricultural production and higher food procurement prices, the government had to devote a large expenditure to both purchasing agricultural commodities from farmers and providing agricultural price subsidies to urban residents. In fact, these expenses added up to 14 percent of the state revenue in 1985 (DCS, 2006). With mounting budgetary pressures, the government could not find a viable solution but to give up its controls so that the general public could help absorb the consequences of rising prices.

In 1985, China announced the elimination of mandatory production and procurement of agricultural products. A new system, which can be described as «dual-track pricing» and featured with establishing purchasing contracts between the State and farmers, began to take effect. Under this system, for major commodities including grain, oil crops and cotton, farmers negotiated production contracts and sale prices with the government. After the deliveries of the contracted outputs, farmers could sell all remaining products in the free markets. For other farm products, such as meat, vegetables, poultry and aquatic products, farmers could make their own production decisions and the prices of the products were liberalized completely (Xu, 2000).

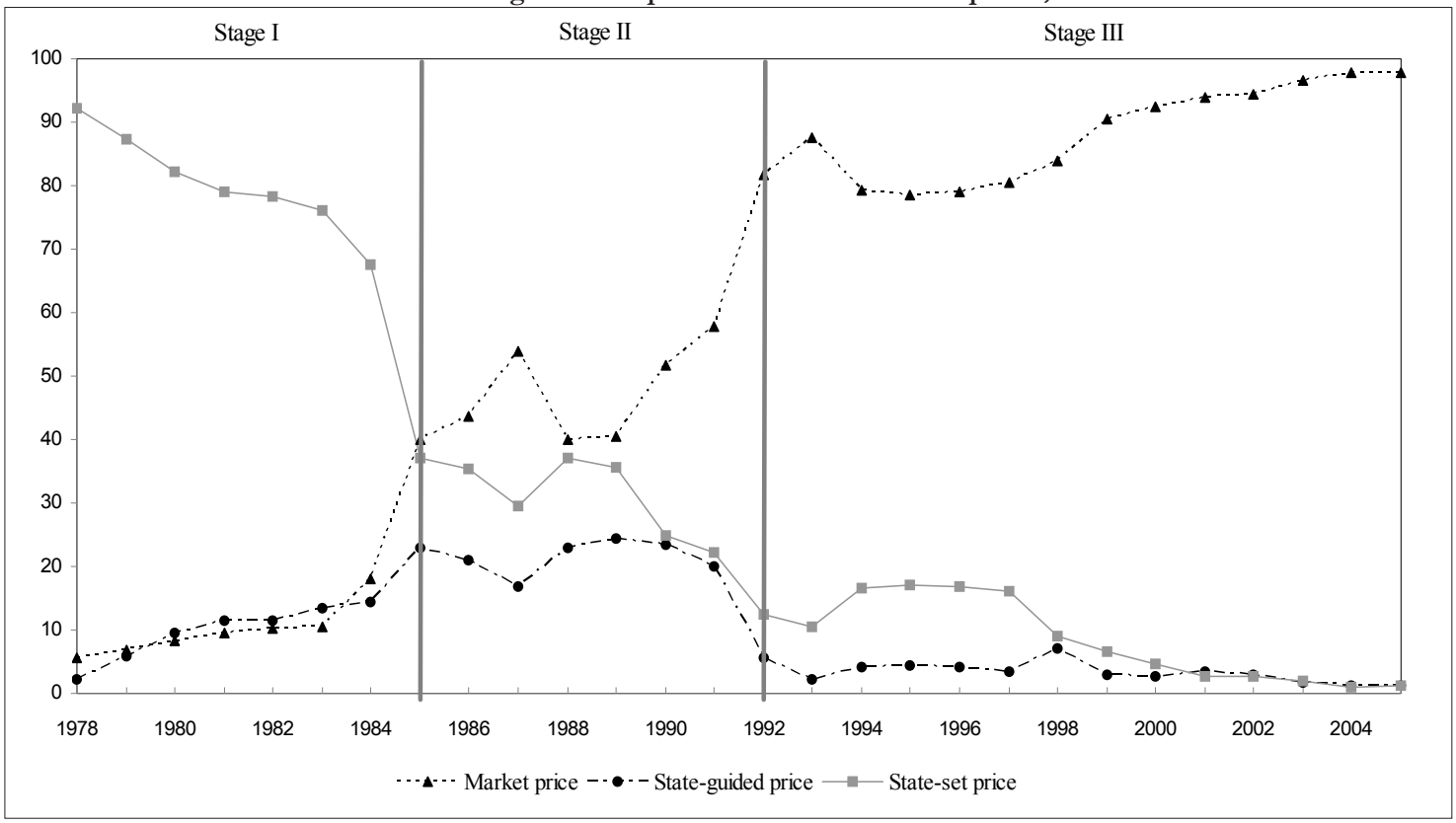
Although the occurrence of rampant inflation and the political unrest of Tiananmen Square Incident hauled back price reforms during 1988-1991, the trend has never changed. As shown in Figure 2, the share of agricultural commodities sold at State-set prices dropped at an accelerating pace during Stage I reforms, and fluctuated around a declining trend during Stage II reforms.

3.3. STAGE 3 (1993-PRESENT): MARKET DOMINATION IN FOOD PRODUCTION AND COMMERCE

In 1992, the Chinese government decided moving towards complete liberalization of the markets after 14 years of experiments and reforms. By 1993, 29 out of 31 provinces officially eliminated the rationing of grain, cooking oil, meat and other farm products. Since then, State-contracted purchase of agricultural commodities continued to decline and markets have become the dominating force behind agricultural pricing and commerce. It is worth noting that in 1993 the central government only intervened to set the prices of 7 food commodities in retail markets, 6 farm products in agricultural procurement, and 33 producer goods. In contrast, on the eve of the reforms in 1978, the corresponding numbers of goods were 158, 113 and 1,086, respectively (CRDR, 2006).

Today, the Chinese government still acquires approximately 10 percent of total grain output with an objective of stabilizing prices and managing a grain reserve, given that their purchase prices are predominantly

Figure 2
China: Shares of agricultural product sales at different prices, 1978-2004



Sources: Data for 1978, 1988 and 1990-2005 are from Hu (2006); for 1985-1987 and 1989 are CRDR (1994); for 1980-1984 are based on author's own calculations using NBS (1985); and figures for 1979 are interpolated from 1978 and 1980 numbers.

determined by the market. It is worth noting that in recent years, China has increasingly relied on foreign trade to adjust its domestic imbalances in grain supplies backed by its large holding of foreign currency reserves (Wang, 2005).

Figure 2 illustrates the entire process by which the Chinese government relinquished its controls over agricultural pricing and commerce. In 1978, the State controlled nearly all agricultural commerce-only 5 percent of farm products were sold at market prices in local trade affairs-. Since then, China has pursued price liberalization despite a few temporary policy setbacks. In 1992, midway into the reform period, 82 percent of farm prices were determined through the market. Now, markets play a dominating role in the purchase and sales of farm products in China, with 98 percent of agricultural goods already sold at market prices in 2005.

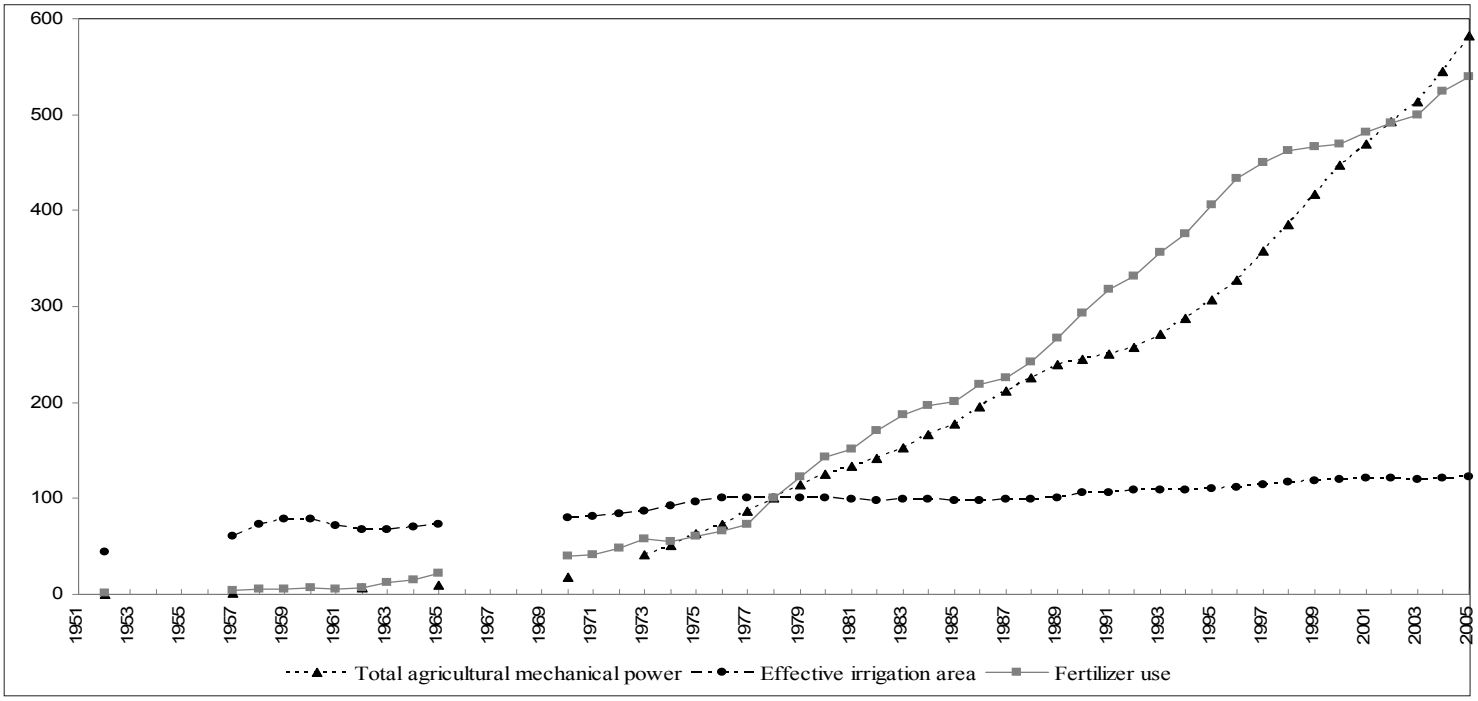
4. DEVELOPMENT OF FOOD INDUSTRIES IN POST-REFORM ERA

When arbitrarily suppressed prices under central planning were allowed to rise to their market levels, farm producers would find much needed incentives to work harder, use more inputs, and adopt new innovations and better technologies. The relaxation of agricultural price controlsnot only boosted the supplies of farm products but also raised the income of farmers, who were among the poorest in the economy. Moreover, higher food prices induced more investments into food processing and manufacturing industries, thus leading to improvements in storage facilities, refrigerating capacities, and better transport. In the case of China, both the quality and variety of goods have vastly improved as the consequence of reforms.

Throughout its history, China has faced the challenge of feeding its large population; food shortages led to famines that claimed millions of human life. Even in China's recent economic history, the Great Leap Forward industrialization campaign of 1958-1961 suffered from a series of central planning mistakes, leading to a great famine with an estimated total of 16.5 to 30 million casualties (Li and Yang, 2005). Indeed, one central objective of China's early rural reforms was to achieve basic grain safety by raising agricultural production. What a difference made by three decades of reforms-as we will show through long-term series of data, China has far surpassed its initial goal of national food security, entering a new era of abundant food supplies, prosperity in food industries, and dramatically improved nutrition for the 1.3 billion Chinese population.

Figure 3 reports the changes in the use of three agricultural inputs since the founding of the People's

Figure 3
China: Utilization index of agricultural inputs, 1951-2005 (1978=100)



Sources: Data for 1952-2004 are from DCS (2006); NBS (2006) provides the 2005 figure.

Republic in 1949. There have been increases in total irrigation areas, but the change has not been dramatic, suggesting that China had long exploited conventional methods of farming. The use of fertilizers and farm machinery has accelerated since the inception of reform. For instance, the index of fertilizer usage was doubled within the initial 6 years of reform. The total use of fertilizer and mechanical power continued to rise quickly throughout the reform period.

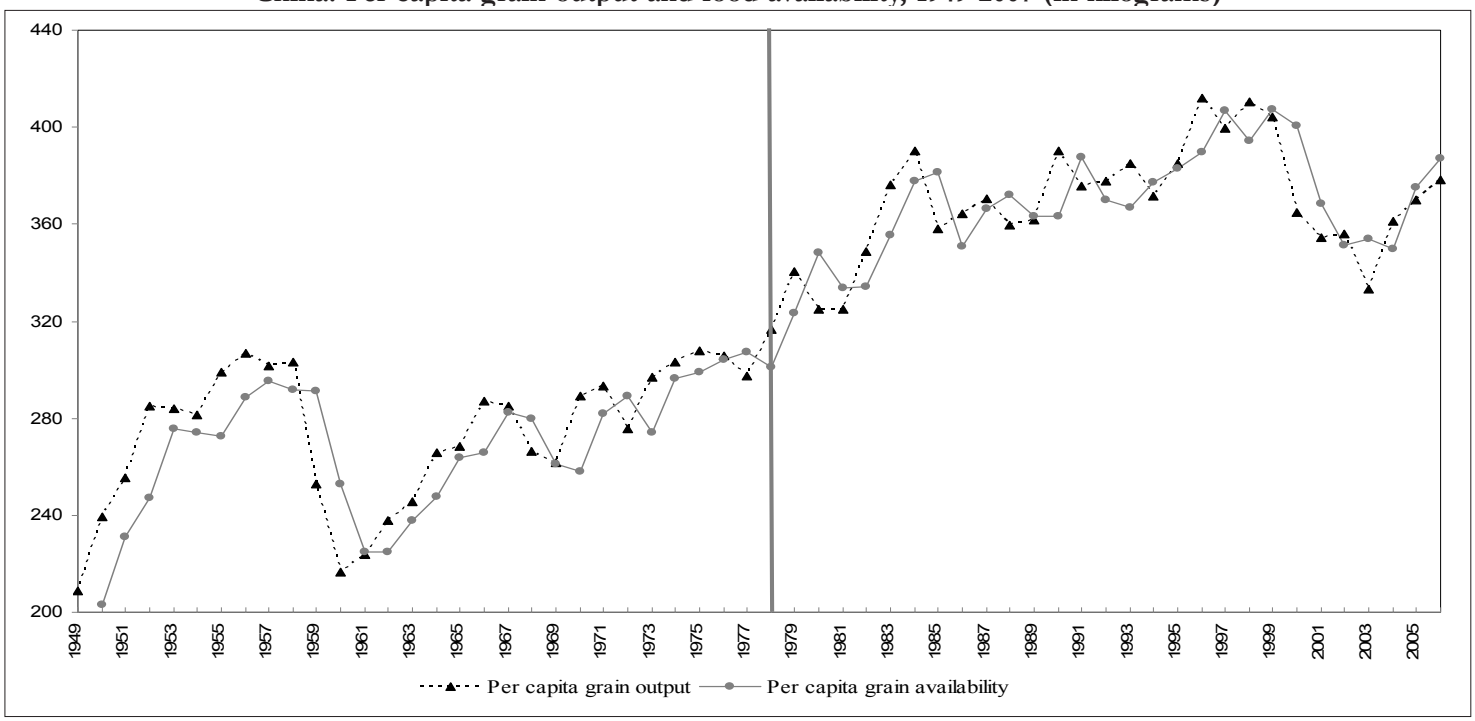
By 2006, supported with intensive use of modern agricultural inputs and technological advances, China's grain yields per unit land (5.01 tons per hectare) had already far surpassed the world average (3.53 tons per hectare); indeed, China's unit yield was even greater than that of North America (Liang and Bai, 2007). As a result, per capita grain output and availability in the reform era climbed to much higher levels relative to that of the central planning period, as Figure 4 indicates. The two lines in the figure have moved closely, the difference reflecting net food imports or exports. In the pre-reform period, per capita grain availability was generally below 300 kilograms per year, not much higher than the subsistence level. Therefore, grain production declined sharply between 1959 and 1961, it caused the major famine. Economic reforms have helped lift per capita food availability in China to a much higher level between 350 to 400 kilograms per year. Although there have been fluctuations in food supply, as it occurred in 2003, it only had minor impact on the supply of basic nutrition to the population.

Figure 5 reports per capita consumption of meat and aquatic products. During the central planning period, Chinese people did not have the fortune of consuming much meat or fish due to shortages in supplies. Today, the per capita consumption of meat and aquatic products are about 6 and 8 times higher than the levels of their consumption in the late 1970s.

The growth in the production of milk and eggs reveals similar patterns. Figure 6 shows that per capita production of eggs increased rapidly during the early years of reform and continued to grow in recent years. In 2006, per capita egg consumption reached 23 kilogram, which is about 3 times higher than the per capita consumption in Venezuela, although per capita income in Venezuela is about three times higher than that of China. Milk consumption has increased about 25 times since the inception of reform, still exhibiting accelerated growth in recent years.

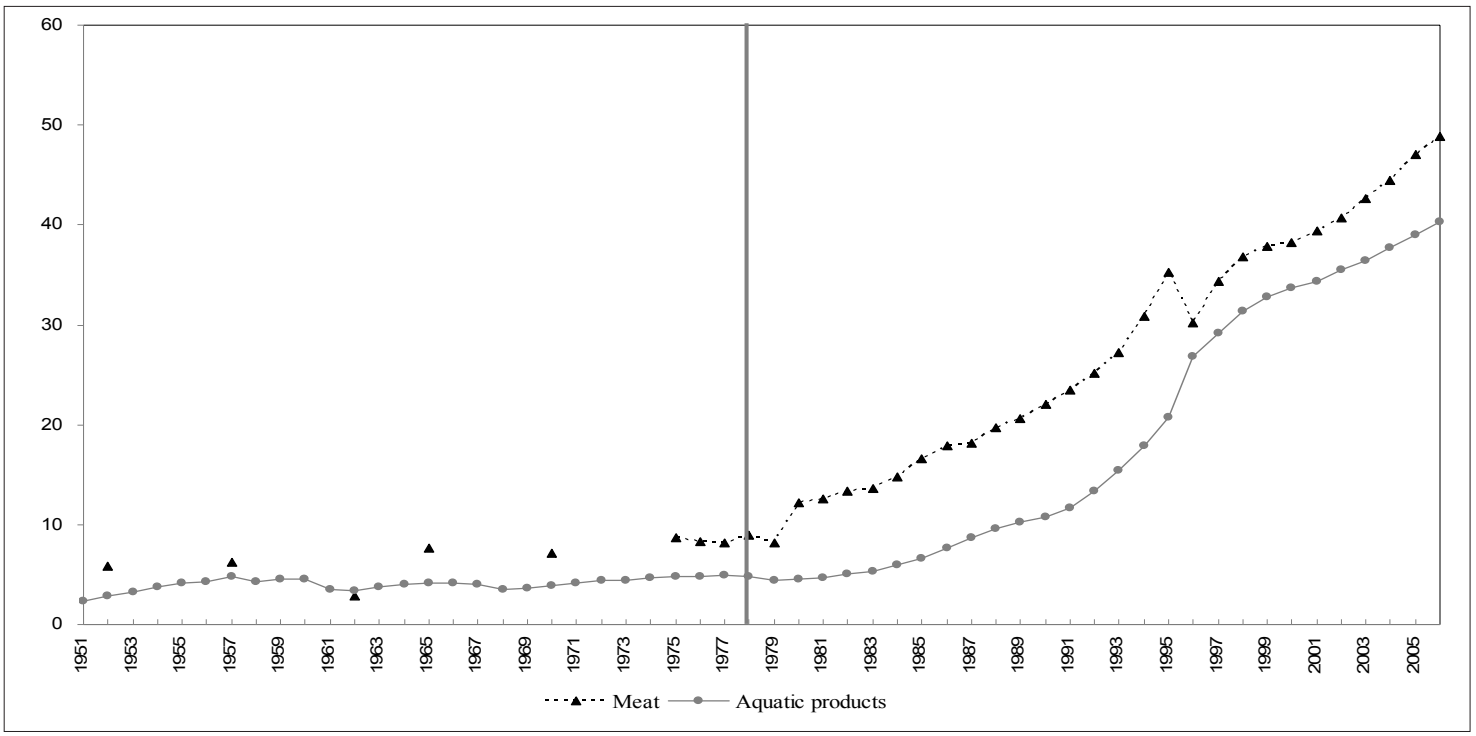
Throughout history, the Chinese people have used grain, especially rice, rather than meats and dairy products, as their primary source of calorie intake. Many believe that, because of the nutritional structure, Chinese people are

Figure 4
China: Per capita grain output and food availability, 1949-2007 (in kilograms)



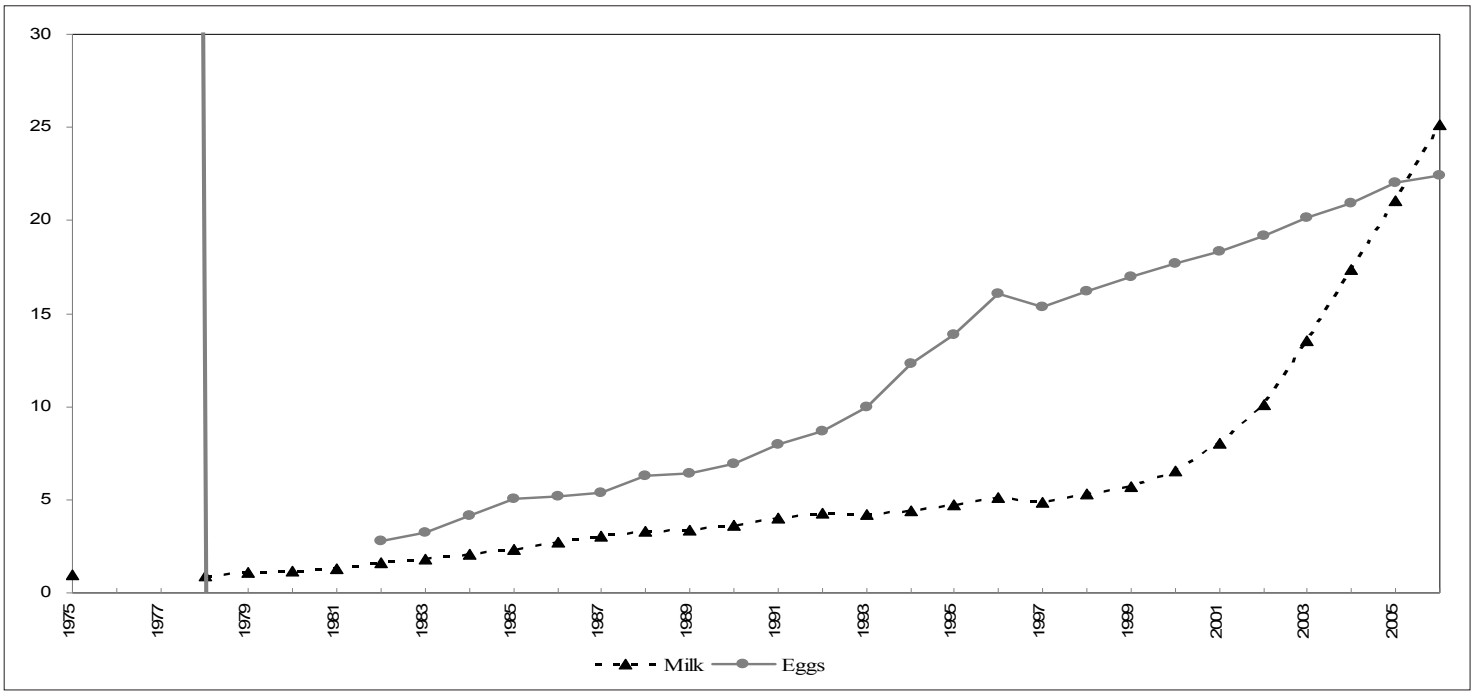
Sources: Per capita numbers are calculated based on population figures and grain output data reported in DCS (2006) and NBS (2006, 2007). For grain import and export data, 1950-2004 series are from Wang (2005) and 2005-2006 data are from NBS (2006, 2007).

Figure 5
China: Per capita production of meat and aquatic products, 1951-2006 (in kilograms)



Sources: Per capita numbers are calculated based on population figures and output data from DCS (2006) and NBS (2006, 2007).

Figure 6
China: Per capita output of milk and eggs, 1975-2006 (in kilograms)



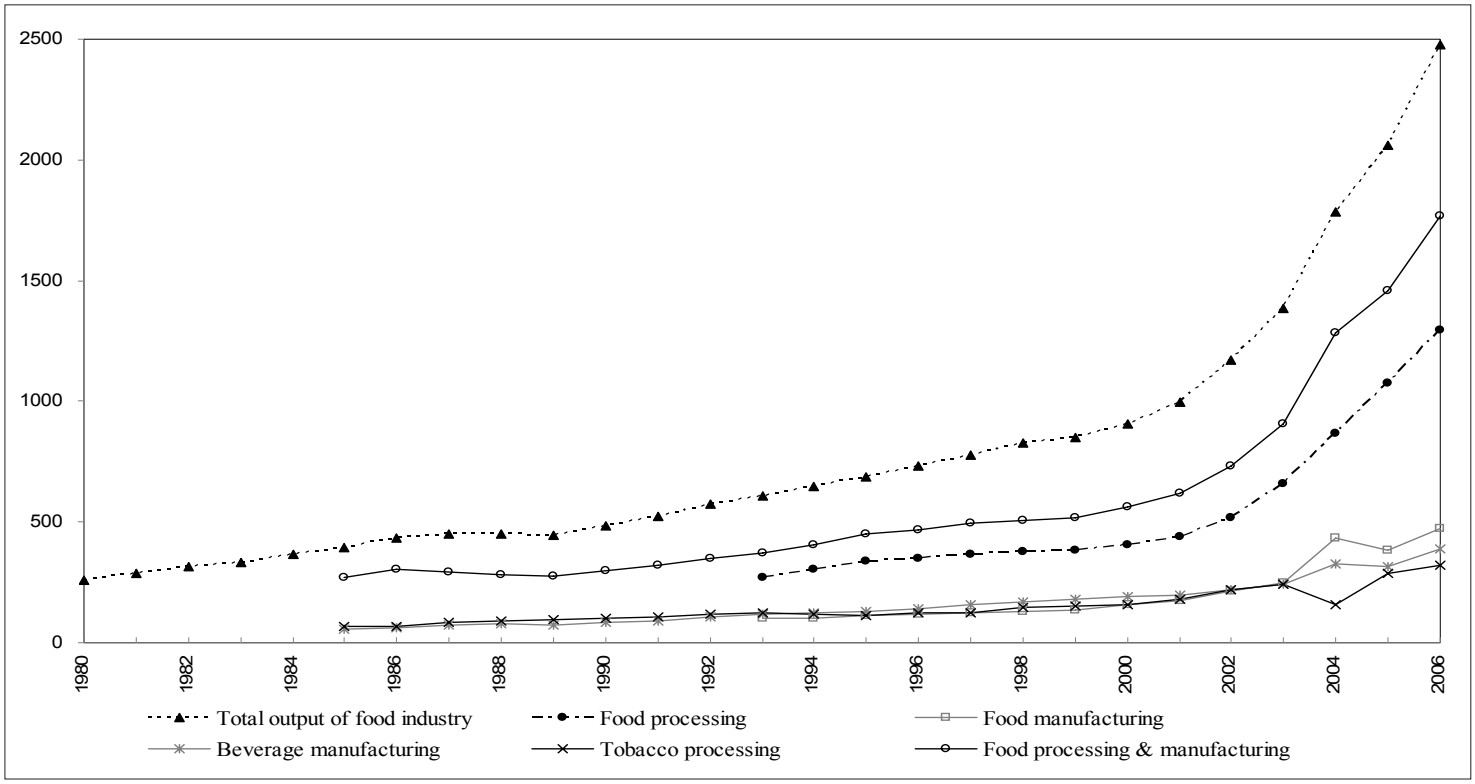
Sources: Per capita numbers are calculated based on population figures and output data from DCS (2006) and NBS (2006, 2007).

usually short and physically weak. Today, this perception is changing. Younger generations of Chinese born in the 1980s and later have enjoyed much improved nutrition; they are taller, stronger, and healthier.

On the same land with the same natural endowments, weather conditions and human resources, institutional reforms have helped China push out its food production possibilities to levels unimaginable in the past. In 1998, after grain output per person topped 400 kilograms for three consecutive years, the Chinese government proclaimed that after centuries of struggle China had finally solved its food problem (IOSC, 2001). By 2003, with only 10 percent of the world's arable land, China produced 18 percent of the world's grain, 27 percent of its meat, and 43 percent of its poultry products (Wang, 2005). China's per capita food output surpassed the world average, and the rate of grain self-sufficiency had been above 95 percent for a long period of time (Liang and Bai, 2007). Now, with increased food production and a large foreign currency reserve ready to obtain food imports, the Chinese government has shifted its policy focus to managing grain reserves in order to stabilize prices or deal with production shortfalls. The government has paid increasing attention to distributional issues of food, such as protecting the vulnerable population groups, including rural and urban poor, students, and low-income elderly. The shift in policy focus reflects the fact that market-oriented institutional reforms and its induced technological advances have overcome the traditional grain safety problem characterized by absolute supply shortages.

Food industries have also benefited enormously from market and price reforms. Figure 7 presents the growth of total output value of the food industry, including the aggregate value and by-sector numbers in food manufacturing and processing, the production of beverages, and the production of tobacco. In 2006, the real output value of the food industry exceeded 350 billion US dollars, with an increase about tenfold relative to the 1980 level. The figure shows that the growth of food production has accelerated at the highest pace in most recent years.

Figure 7
China: Output value of food industries, 1980-2006 (in billion 2006 Yuan, US$1 = 6.85 Yuan)



Sources: For total output value of food industries, data for 1952-2003 are from CFIAEO (1994, 2004); for 2004-2006 are from NBS (2005-2007). We deflate the total output value of food industries in current prices by China's national retail price index. Data for output values of sub-industries are based on NBS (1985, 1987, 1989, 1991 and 1992-2007).

Table 2 provides additional information on food production and exports contributed by firms of different ownership categories. In 2006, domestic private companies captured 49 percent of the market share in food processing, while foreign firms took 37 percent of the market share. In food manufacturing, these two types of firms contributed 32 and 49 percent of output, respectively. In contrast, state and collective enterprises only accounted for 14.5 and 19.2 percent of output in food processing and manufacturing. Domestic private and foreign firms captured even higher percentage of China's food exports. Because the food industry was previously monopolized by the state government, these output numbers reveal that China's food sector has experienced massive privatization and large inflows of foreign direct investments (FDI).

Table 2

China: Output and export of food industries in 2006 (In billion Yuan)

	Food Processing				Food Manufacturing			
	Output	%	Export	%	Output	%	Export	%
State-Own	1069.79	10.9	4.4	0.4	585.3	15.7	58.1	15.2
Collective	355.29	3.6	21.1	2.0	128.0	3.4	4.7	1.2
Private	4771.18	48.7	341.1	32.5	1,199.3	32.2	92.6	24.2
Foreign	3605.44	36.8	682.3	65.1	1,813.9	48.7	227.1	59.4
Total	**9,801.70**	**100.0**	**1,048.9**	**100.0**	**3,726.5**	**100.0**	**382.5**	**100.0**

Source: DITS (2007).

5. LESSONS FROM CHINA'S PRICE REFORMS

Reforms in agricultural prices and food commerce have induced enormous supply responses in production, raised the quantity and quality of food consumption, and created large welfare gains among the Chinese population. However, one potential concern of market reforms is that rising food prices may erode the purchasing power of the poor, as they spend a higher percentage of earnings on food; therefore, rising food prices may cause social resistance to change or even trigger social unrest. While the concern is certainly legitimate, China did not actually encounter a serious challenge, mainly because the benefits of reforms far exceeded the costs of higher food prices for the overwhelming majority of the population.

Gradualism was a feature of China's success. During the reforms, China relied on a strategy of «crossing the river by grouping the stones», meaning that the reforms were often based on sensible experiments and progress was made through incremental steps. At the beginning, increases in agricultural prices boosted the earnings of poor rural families, a result that helped improve income distribution. To ease the pressure of high food prices on low-income urban residents, the government provided reasonable price subsidies in cities. With the passage of time, the government gradually discovered that the population had good tolerance for higher food prices because consumers surely enjoyed increased food supply, better product quality, and larger varieties of goods. Moreover, fast income growth resulting from the successful institutional reforms also helped alleviate the pain of rising food prices. In the early 1990s, when the government sensed no strong political and social resistance to high food inflation, they became determined to speed up market reforms.

Over the past three decades, a consensus has emerged from academic communities and policy circles on how to solve China's food problem. The main message come in three sentences: «First is policy, second is science and technology, and third is production input». China's policy reforms have relied on markets and price incentives. The Chinese experience has shown that right polices are essential, because good policies can induce the application of science and technology as well as improved productive inputs. It is worth noting that economic reforms among the member countries of the former Soviet Union have also achieved great success. Collectively those countries have become a net grain exporter, with average net export volume reaching 13.27 million tons from 2001-2006 (Liang and Bai, 2007). Another successful example is Vietnam, China's socialist neighbor, who stayed as the world's second largest rice exporter in the 8 years after it begun agricultural reforms in 1986 (ECCO, 2007).

Today, casual observations on the prosperous food markets in all Chinese cities form sharp contrasts to the subsistence living standard under severe food shortages on the eve of economic reforms. In the late 1970s, the first of the article´s authors was a child living in Beijing. He still remembers that, before every Chinese Lunar New Year, his brother and he would get up at about 4 AM in an early morning during the cold winter. They would stay in line at a local state-owned food store for several hours before the shop opened, and in the end they were able to buy a chicken and some fish so that their family could have a hearty New Year meal. Those days are long gone. China's experience of economic reforms provides a valuable lesson that right policies and institutions can help a developing country successfully solve its food problem.

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