AECO 6302 Term paper

China's Cotton Policies in the 1990's:

Changes and Performance

Presented to

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Introduction

Although the rural reforms and "open door" policies initiated in late 1970's, the government of China has been intervening heavily in its agriculture. From 1953 to 1979, the production, distribution, and trade of most agricultural commodities in China were governed by rigid central planning. One of the examples is that border measures (taxes and authorities of importing and exporting agricultural goods) effectively insulate domestic markets from influences of the world markets. Under the compulsory procurement system, incentives to produce were very low and agricultural productivity and living standards were improved very little during this period. In order to stimulate production and raise peasants' living standards, Chinese government decentralized decision-making of agricultural economic activities in rural areas in late 1970's. By 1985, there were three types of pricing system for consumer goods in China: (1) total state control-- the distribution and pricing of sugar, cotton, tobacco, and silk were strictly controlled by the state; (2) the double-track system-- loosened the control over the distribution of most agricultural commodities, including grains, edible oils, and livestock products and loosened price controls over livestock products and high-valued cash crops while maintain rigid control over the distribution and prices of other staple goods. Under double-track system, the government still distributes most agricultural commodities to urban residents and specialized households at fixed, low prices. Nonurban residents and coupon recipients who wish to purchase more than the rationed amount have to purchase from open markets. Also under this system, the government has increasingly distributed agricultural commodities to industrial users, such as food-or feed- processing enterprises, at a 'negotiable' price, instead of low, fixed prices; and (3) open market--some agricultural commodities, such as certain vegetables, were completely free of government control.

However, the Chinese government still intervenes in agricultural production and marketing with the following policies: (1) procurement and pricing policies; (2) input-use policies that are tied to procurement policies; (3) heavy subsidies for agricultural products to urban residents; and (4) border measures adopted by the state to restrain agricultural trade. In addition, Chinese government adopted many austerity measures, such as substantial cuts in loans and investments to control inflation in 1989 and then tighten its control over agricultural production to increase the production of some agricultural commodities.

Cotton is one of China's agricultural staples and it has been under "total state control" as mentioned above. However, as a part of China's agricultural policies, cotton policy has undertaken considerably changes. This paper will investigate these changes in China's cotton policies and their impacts on China's cotton production, consumption, and trade in recent years.

China's Cotton Policies

For most of the years since the foundation of new China in 1949, the production and distribution of cotton have been strictly under state control. However, China's cotton policies can be analyzed in three different phases: from 1953 to 1979, from 1980 to 1989, and from 1990 to present. During the period from 1953 to 1979, there was pure central planning in china's cotton production and distribution. No other system other than the central planning is allowed and market can not exist in such a economic environment. Procurement and selling prices are determined by government agencies. Also due to political factors, the productivity of cotton was so low that it was below the average level of developing countries. Since China in Mao's era was a close society, there was no much international trade in such agricultural commodities as cotton except foreign aid to "brother countries" such as North Korea, and Combodia etc.. In addition, during this period the statistics for many commodities were unavailable or inaccurate if they were obtainable. Therefore, the existing data are sensible in economic research. In sum, during this period, China's cotton policy, like other commodity policies, was purely a mandatory central planning orientation.

From 1980 to 1989, however, China's cotton policy became more flexible compared to that in the previous period. The "open door" policy and the introduction of market economy resulted in immature market economy which generated the "double-track" pricing system although the state control was still in a great degree. To direct market economy on a healthy track and avoid the conflict with central planning system, different tools were adopted to achieve economic goals. These tools used in cotton industry include subsidies, support price, target price, direct payment. restriction of input use, quota ,etc..

From 1990 to present, the period this paper will investigate, has been characterized as "more flexible". In 1978, 113 agricultural commodities were under state price control. By fall 1992, only six remained but with some degree of market complement: grain (including wheat, rice, corn, and soybeans, but not sorghum, millet, barley, oats, potatoes, and other miscellaneous grains), cotton, tobacco, medical herbs, wool, and resin. By the end of 1995, rice and corn were free from government control in terms of pricing. The prices of all other agricultural commodities are now determined by market forces. At the December 1992 National Conference on Reforming Agriculture, Premier Li Peng declared that China should build a "socialist market economic system" and should initiate the following reforms.

- Transform the functions of government;
- Change the way enterprises operate. Develop levers which can be used to expand or contact economic activity;
- Promote the development of markets (especially capital markets);
- Implement price reforms. The price mechanism should be allowed to function, but at the same time ways should be found to limit price fluctuations;
- Establish a legal system to support a market system. Regional barriers to trade should be reduced and domestic markets should be aligned with foreign market conditions for products;
- Improve the information system to report market conditions and to forecast supply and demand conditions for products.

As a result, China's rural economy will be governed both by market force, indirectly through government macroeconomics control levers, and by direct government intervention in markets through purchases and sales of agricultural commodities.

Specifically, in cotton industry, a cotton reserve system was organized to curb cotton price fluctuations. At the same time, a three-level marketing system for cotton distribution was established. The foundation of the system will be local open markets, the backbone of the system will be regional wholesale markets, and the state level wholesale market as the head. The cotton policy changes were announced at the March 1993 National Conference on Cotton Production:

(1) A target of 5.6 to 6 million planted ha for 1993 versus 6.84 million in 1992;*

(2) Cotton production targets of 5 million tons for 1993/1994 and given the reduced area, assuming relatively normal yields of 778 kg/ha, the production may fall to 4.35 million tons;*

(3) Mandatory state procurement of cotton will be abolished;

(4) The price for cotton purchase in excess of fixed quota procurements and purchases for state reserves will be determined by market forces, except that a minimum floor price of 10 percent below the state fixed price will be in effect. Over the next 2-3 years, the state will phase out state-fixed prices. However, the central government, at least in the near future, will support cotton grower incomes by acting as the guaranteed buyer of last resort;

(5) Price ceilings for open market (non-state) sales of agricultural inputs, including fertilizers, pesticides, plastic sheeting, and diesel oil, will be instituted;

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(1) The cash equivalent was increased to 329 yuan per 100 Jin in December 1995.

(6) Central government dictates that, except under special approved circumstances, provincial and local cotton procurement price add-ons must be eliminated;*

(7) For cotton procured by the state, provinces are allowed either to transfer the stipulated amount of agricultural inputs to the cotton farmer, as in the past, or any convert the value to cash. If it is given to the farmer as cash, it must not be included within the state fixed price (it must be separated and in addition to the state price). For cotton, the cash equivalent will be 240 yuan per ton.(1)

(8) As an experiment, the central government authorized Shandong province to eliminate the fixed quota purchasing and intra-province allocation system in favor of "guided" planning, procurement, and allocation. Prices will be determined through negotiation between buyers and sellers within floor and ceiling prices set by the provincial government. The provincial Cotton and Jute Corporation is charged with fulfilling the state's mandatory allocation plan (both intra- and inter-provincially). All cotton producers may sell their output to any authorized purchaser. And finally, a wholesale cotton market will be established in Jinan (the capital of Shandong province). cotton price deregulation was also authorized for Henan and Jiansu provinces, though as in Shandong they will likely impose floor and ceiling prices;*

(9) In addition to the state cotton reserve system established several years earlier,

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* Adopted from W. Hunter Colby's article *Cotton Output and Area Decline in 1993/1994(China)*, International Agricultural and Trade Reports --- China, Situation and Outlook Series, August, 1994. USDA Economic Research Service.

the provinces are now tasked with creating a provincial system of reserves equivalent to at least 6 months of demand, both to establish a market stabilizing instrument and to transfer some of the cost of holding stocks to the provinces from Beijing;

(10) Control over cotton imports and exports has been devolved to the provinces, though the central government is apparently still using its "approval" authority to keep trade within state plans. Nevertheless, assuming that 1993/1994 cotton production comes in close to the official planned target, then the central government will likely gradually move ahead with cotton marketing reforms and allow more independent trade decisions by the provinces.

(11) The subsidy paid by importing provinces to exporting provinces for cotton transfer was raised from 500 yuan/ton to 600 yuan/ton in order to alleviate financial losses, and the resulting reticence to abide by the state allocation plan of cotton-surplus provinces.*

It is obvious that although Chinese government is trying to loosen its control over cotton economy, policies listed above indicate that the Chinese government's intervention in cotton is still in a great degree.

Extent of Government Intervention in China's Cotton Economy

To evaluate the government's intervention in the production and consumption of its major agricultural commodities, the producer subsidy equivalent (PSE) and consumer subsidy equivalent (CSE) have been used since the 1978 economic reforms. The calculation of PSE and CSE is referenced to different prices such as Hong Kong import price and Unit Value of Asian Export as a base. The PSE's and CSE's are estimates of the amount of cash subsidy or tax needed to compensate farmers or consumers for removing government intervention. The PSE/CSE ration estimates are used to evaluate the effects of government intervention across major agricultural commodities in China. Estimates of PSE/CSE presented here do not account for government investment in infrastructure such as irrigation, transportation, or any of the marketing services that contribute value-added to the commodities. The PSE's/CSE's, when compared across agricultural commodities, show the relative degree of government intervention in different agricultural commodities. ?

? A PSE is calculated as the difference between the domestic production price and reference price, plus input subsidy per unit of output. A CSE is calculated as the difference between the reference and domestic consumer price. The domestic consumer price is the procurement price, minus the price subsidy per unit of output. Then, the reference price is used as a basis for computing the percentage of support or tax. The calculation s of PSE'/CSE's in percentage can be expressed as:

$$PSE = (P^d + S - P^r)/\ P^r * 100 \qquad (1)*$$

$$CSE = [P^r - (P^d - U)]/\ P^r * 100 \qquad (2)*$$

Where:

P^d: Domestic producer prices

S: Input subsidy per unit of output

P^c: Reference price

U : Urban subsidies per unit of output

Input subsidies and urban price subsidies per unit of output are estimated from aggregate budget data published in China's Statistical Yearbook for various years. The estimated Urban price subsidies, input subsidies, and average procurement prices are presented in table 1.

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*Who invented the original concepts of PSE and CSE remains unknown. PSE and CSE appeared in articles in the late 1970's and early 1980's. The mathematical expressions in this paper were adopted from Shwu-Eng H. Webb's article *China's Agricultural Commodity Policy in the !980's*, International Agriculture and Trade---China, situations and Outlook Series, July 1993. USDA Economic Research Service. The author of this paper updated data presented in the table 1 and 2 since 1991.

Table 1-- Estimated input price, urban price subsidies and average procurement prices of cotton, 1984-94 (yuan/ton)

Prices/year	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Input price Subsidies	45.4	26.7	27.9	21.6	17.3	14.1	33.4	49.8	52.5	64.2	61.3
Urban price Subsidies	181.8	263.6	320.9	291.8	283.9	223.4	389.6	355.7	346.0	366.1	408.0
Average procurement price	2680.0	3174.0	3116.0	3236.0	3422.0	3418.0	3218.0	3216.0	3563.0	4002.0	951.0

Source: China Rural Statistical Yearbook, various issues.

PSE Estimates

A negative PSE represents a tax on the producers of that commodity. Since cotton is a very important commodity for textile products, which have been the major export earners for China since the reforms. It appears that Chinese government is heavily supporting the production of cotton in order to support the rapid development of the textile industry in 1990's. Data in table 2 are the estimated Chinese PSE's for two alternative reference prices from 1984 to 1994. For most of the years, PSE's are large percentage numbers which indicate that Chinese government has heavily supported the production of cotton. Figure 1 presents a graphic view of PSE estimation of cotton by using these two different reference prices.

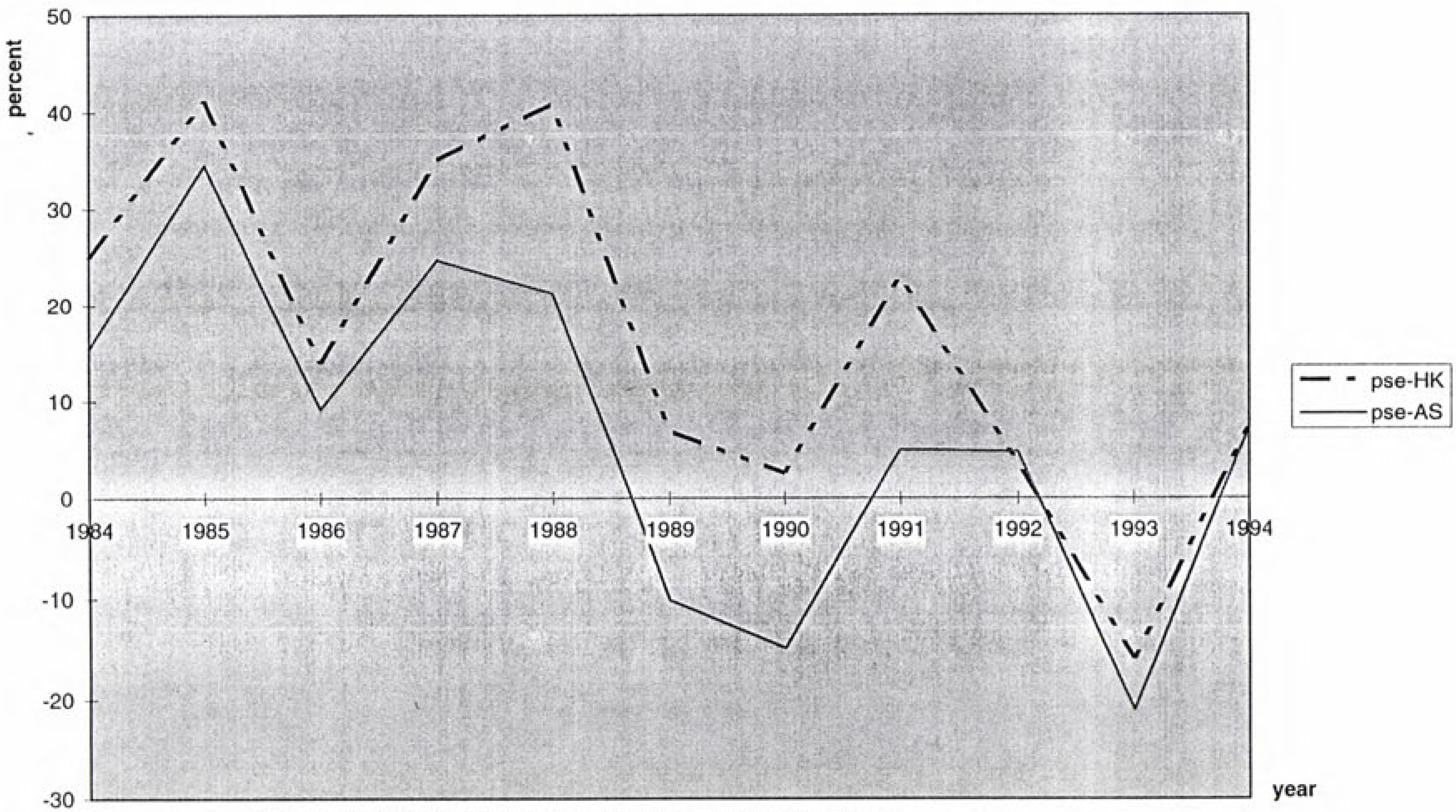

Figure1. PSE's of cotton using Hong Kong import prices and Asian Unit Values

Table 2- Estimated Chinese PSE's of Cotton in Two Alternative Reference prices, 1984-94

1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
		percent								
PSE's: Using Hong Kong import prices as reference prices										
24.97	41.27	13.99	35.13	40.83	6.8	2.5	23.00	3.46	-15.94	7.42
PSE's:Using Asian Export Values as Reference Prices										
15.46	34.54	9.15	24.72	21.26	-10.13	-14.85	4.9	4.7	-20.96	7.12

CSE Estimates

Urban consumers of cotton, on the other hand, are protected from paying high prices at the expenses of cotton growers. Urban consumers of cotton get a double shield from the government protection. First, border measures and transportation difficulties prevent farmers from exporting, forcing them to dispose of their cotton products domestically at lower prices. Second, the government sells cotton products to urban residents, not only below free-market prices, but also substantially below government procurement prices. Even at the much lower reference prices such as Asian export unit values, half of the CSE's of cotton are negative during the observed years (table 3 and Figure 2).

However, because of the competition and alternatives of the inputs of cotton production, the opportunity cost of producing cotton increases, which tend to increase the discrepancy between the prices paid by urban residents and the farmer's real costs of production of cotton. Thus, the government has to bear this cost.

Table-3 Estimated Chinese CSE's of Cotton in Two Alternative Reference Prices, 1984-94

year	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
					percent						
CSE's: Using Hong Kong Import Prices as Reference Prices											
	-14.54	-28.42	-1.15	-21.96	-28.20	0.76	11.95	-3.87	10.98	26.30	3.83
CSE's: Using Asian Unit Value as reference prices											
	-5.83	-22.30	3.14	-12.57	-10.83	16.49	26.86	11.41	9.91	30.70	4.11

From above tables, it is not difficult to note that China's cotton producers have been heavily subsidized since 1985 (the positive percentage) and cotton consumers have been subsidized since 1989 (most of the subsidized consumers were urban residents). The PSE and CSE estimates presented here provide an indication of how China's policies have distorted incentives to producers and consumers of cotton products. The choices of reference prices are crucial in the calculation of PSE and CSE. Traditionally, Hong Kong import prices have long been used by both Chinese economic researchers and officials because Hong Kong is a free port and shares a cultural background similar to China. But, to the extent that the quality of cotton products produced and consumed in China is reflected in Asia's cotton export, Asian Unit Values become a better set of reference prices. However, Both sets of PSE's/CSE's show that, in order to subsidize urban consumers of cotton, Chinese government has to sacrifice efficiency in the allocation of resources in the production of cotton.

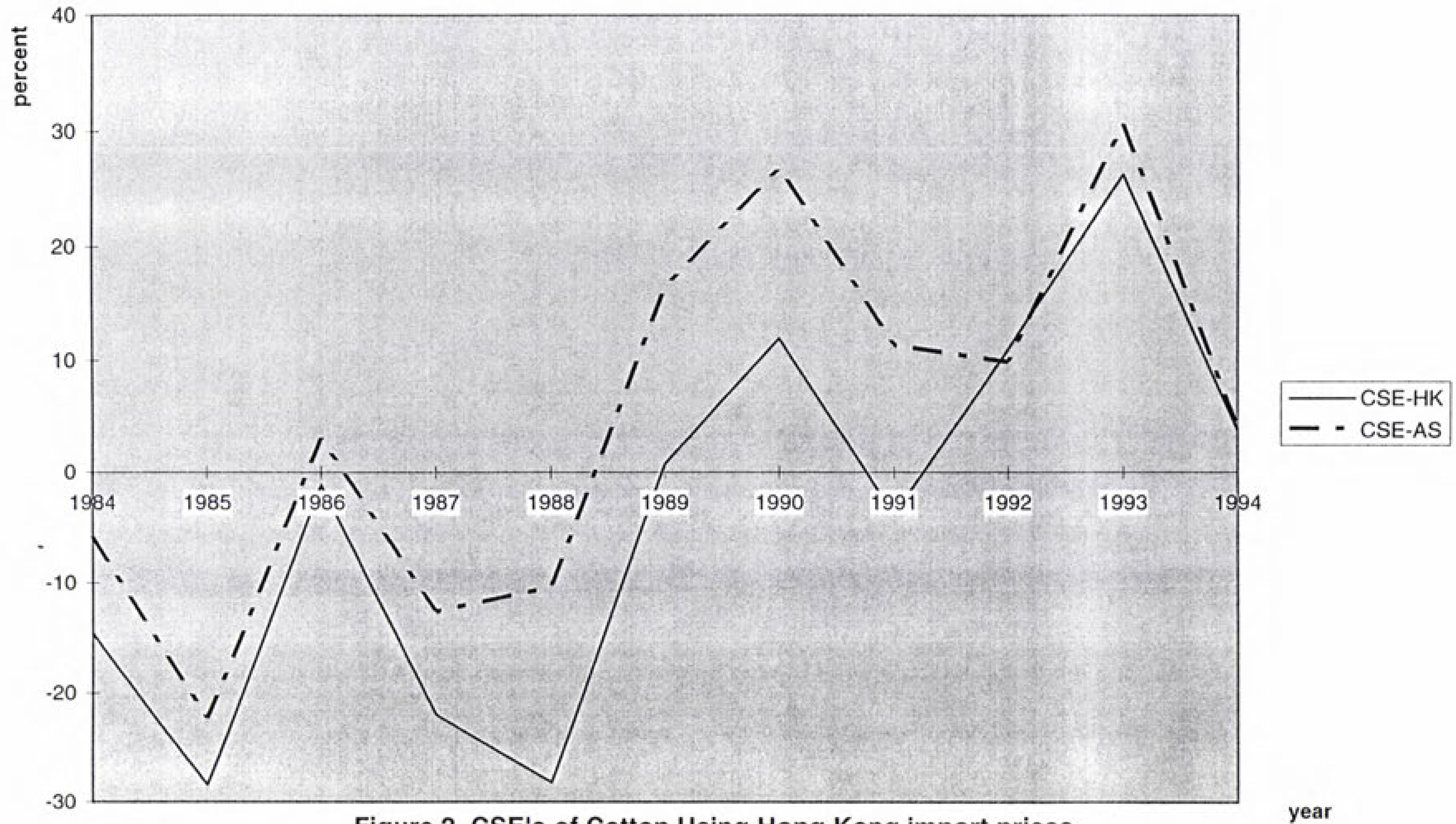

Figure 2. CSE's of Cotton Using Hong Kong import prices and Asian Unit Values

Performance of China's Cotton Policies

Cotton Output and Area Decline in *1993/1994*

China's 1993/1994 cotton output fell 17 percent to 3.75 million tons partially due to bollworms and flooding and partially due to the policy orientations. Cotton procurements tend to be problematic because of the growing black market for cotton to supply rural yarn and textile operations at the expense of state-run enterprises. All yarn and textile producing provinces will not have equal access to raw cotton. In addition to the traditional problem of transportation bottlenecks, the 30 to 50 percent of yarn mills in financial trouble will find it difficult to procure raw cotton supplies because producers provinces are increasingly reluctant to deliver to those with a history of poor payment. Table 4 (also figure 3) and table 5 present the cotton output, select provinces from 1988 to 1993 and China's cotton supply and utilization from 1990/1991 to 1994/1995, respectively.

It is obvious that China's 1993 cotton policies did not improve the situation of cotton production. First, government lost because it could not procure the amount it expected but continue to subsidize producers. Second, cotton consumers did not gain either because the shortage of cotton supply drove up the price which forced consumers to pay more.

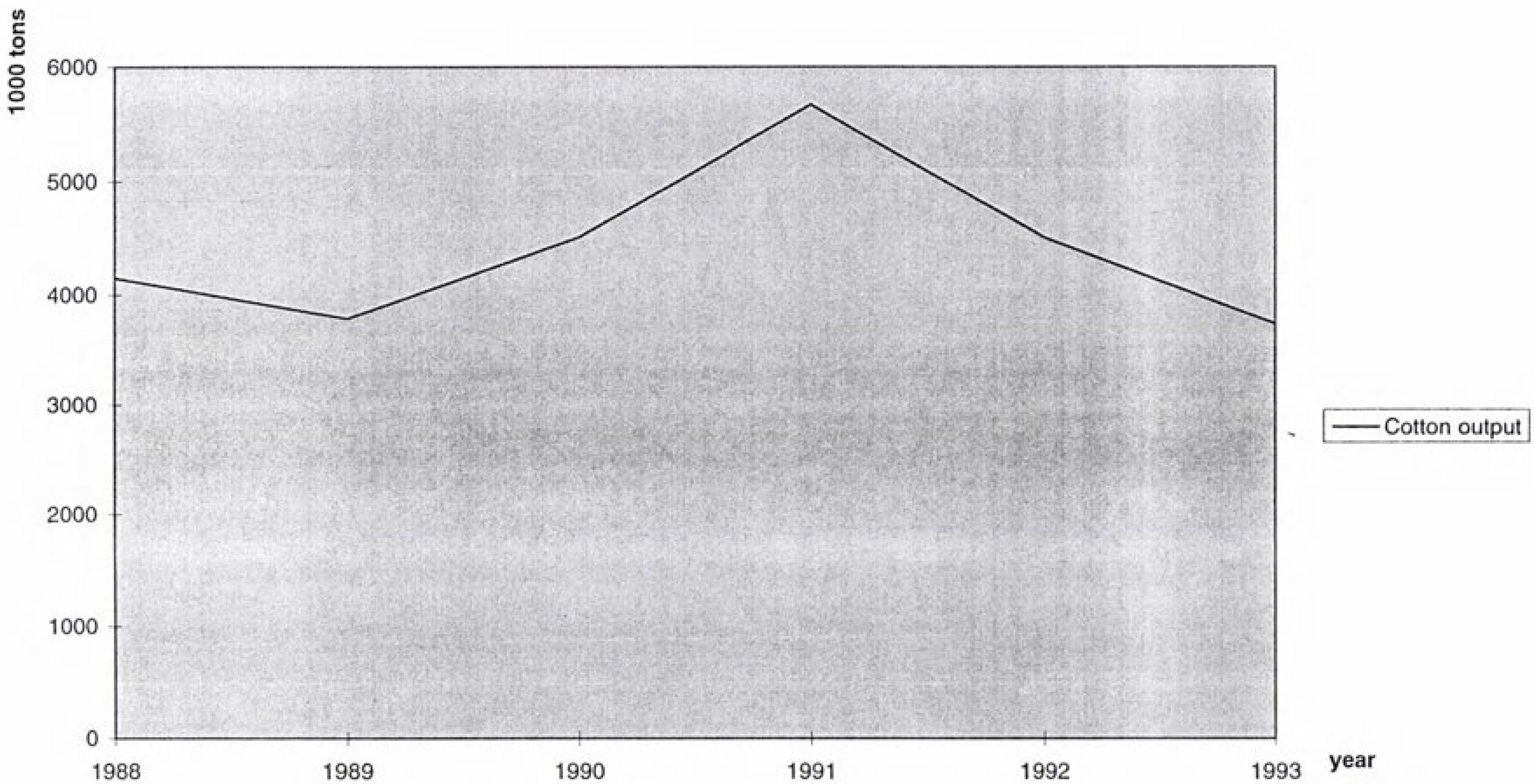

Figure 3. China's Cotton Output, 1988-93

Cotton Producers are Dissatisfied with IOU's

Cotton procurement were also afflicted with widespread use of IOU's. In lieu of cash, IOU's were given to farmers by the state cotton procurement agency, the cotton and Jute Cooperation. The cash shortages reportedly arose because of the misappropriation of funds (shifting cotton procurement funds to more profitable investments in rural village and township industrial enterprises) and rising operating losses at cotton and jute purchasing stations due to reductions in government subsidies. Thus, another cycle occurred which resulted in more losses of cotton producers. As a result, cotton producers will again shift their cotton production to other commodities, the supply of cotton will further decrease, consumers will pay higher price, the government has to subsidize more to both consumers and producers. If this situation remains unchanged, no one will gain under the 1993 cotton policies.

A significant number of unknowns continue to complicate this picture. How frustrated are China's cotton growers over decreasing returns and use of IOU's? Will that discontent, combine with steadily rising input costs, move peasants to reduce fertilizer and pesticide use, increasing the chance of below normal yields? Unfortunately, information currently available is insufficient to answer these questions. However, despite the potential for China's cotton production to fall below the state target of 5 million tons, there will not be a shortage. The current stock-to-use ratio is nearly 62 percent. Even if 1995/1996 production remains near 1994/1995 levels and consumption climbs somewhat, china still will have adequate cotton stocks

Table 4-- China's Cotton Output, Select provinces, 1988 to 1993 (1000 tons)

provinces	1988	1989	1990	1991	1992	1993
Shangdong	1137	1025	975	1351	677	410
xinjiang	278	295	469	639	668	680
Henan	637	527	676	948	659	660
Hubei	577	536	517	491	610	425
Jiansu	562	485	464	557	527	429
Anhui	206	170	236	271	256	260
Hunan	44	67	120	149	203	211
Sichuan	88	85	115	146	151	82
Shanxi	87	102	112	112	95	70
Hebei	577	536	571	634	350	192
All others	171	183	253	377	349	320
Total	4149	3788	4508	5675	4508	3739

Sources: China Statistical yearbook, 1988-1993

Imports Rise and Net Imports Likely in the Long Term

China's official plan for 1995/1996 calls for 6 million hectares of cotton area and 4.5 million tons of production. Findings attempt to explain that China's cotton import surge while China has high cotton stocks. Due to the modest domestic output the last two years, difficulty in procuring cotton through the state purchase system at the official government price, cotton being diverted away from the state procurement and allocation system by black market dealers, and China's needs to replenish useable stocks. In addition, the previous stocks are poor quality that they cannot even be used for spinning yarn.

Table 5-- China's Cotton Supply and Utilization (1000 tons)

	1990/1991	1991/1992	1992/1993	1993/1994	1994/1995
Beginning Stocks	953	1384	3153	2687	1882
Production	4507	5683	4507	3745	4355
Imports	480	355	60	217	305
Consumption	4354	4137	4682	4507	4572
Export	202	131	149	163	152
Loss	-	65	131	65	-
End of Stocks	1385	3153	2887	2517	-

sources: China Statistical yearbook, 1988-1993

Over the next decade, china's cotton production and consumption are expected to increase, but with domestic and export demand for cotton fiber rising more rapidly, China will likely become a relatively consistent net importer by the late 1990's. If China is unable to improve its pest controlling techniques, particularly with regards to the bollworm infestation, the shift to a stronger net importer will occur even sooner.

Conversely, export fell slightly, dropping to an approximately 149,000 tons in 1994/1995 from 163,000 in 1993/1994 because of higher domestic producer prices and reduced supply. It is unclear why export continued in a year where domestic cotton supply was short, though a continued need to earn foreign exchange may be part of the answer.

China's Cotton Policies Still Will Be Under State Control But With More Liberal in the Foreseeable Future

Under the pressures of decreasing domestic cotton supply and increasing demand of export, Chinese government will still heavily control over the production and distribution of cotton. To stimulate cotton production, Chinese government will probably further increase cotton price. For instance, in March 1995, China announced a government procurement price increase of 29 percent to 14000 RMB ($1642) per ton. This is up from 10880 RMB ($1262) during 1994/1995, though black market cotton prices reportedly reached 18000 ($2088) to 21000($2088). Along with the price increase, Chinese government will continue to authorize the monopoly of government buying agent by which the necessary amount of cotton can be procured to meet the demand of urban and industrial consumers. In addition to the procurement price increase, however, agriculture officials recently announced that individual provinces will now be responsible for their own cotton supply and consumption. Although it is difficult to predict the implications, it is one more sign that Chinese government will move away from a market oriented cotton distribution system if it still strictly controls the production and price.

A common question has been asked is that why Chinese government does not remove its control over cotton production and pricing like it did to other agricultural commodities such as rice and corn. One reason is that cotton products like textile are China's principal earners of foreign exchanges, the stability of input price of these products is crucial to maintain the stability of output, which will have impacts on China's economic strategies. Another reason is probably that the decline of cotton production in recent years makes China's government nervous about the domestic black market and the share of cotton production in the world market.

Summary and Remarks

Like other agricultural commodity policies, China's cotton policy has undergone dramatic changes. More often than not, however, the policy tends to focus on the state control over the production and distribution of cotton in different degrees, although there seems to be more market force than before. To measure the government intervention in the production and distribution of cotton, PSE's and CSE's have long been used. And China's procurement and urban subsidy policies have prevented prices from allocating production resources of cotton efficiently.

The performance of China's cotton policies has not been favorable to either cotton producers or government or cotton consumers. Producers lose freedom to dispose their products. Government has difficulties in procuring raw cotton and cotton products. cotton consumers need to pay higher prices. The dilemma that the Chinese government is now facing is how to bring more market forces into the cotton economy without losing its control on this staple in term of its domestic consumption and the main foreign exchange earner. It is save to say that china's government will continue to change its cotton polices to loosen its pressures under the net cotton importer and the shortage of domestic cotton supply while maintaining a desirable stock level. Next tasks Chinese government will face are to formulate new strategies to maintain its existing advantages and to adjust its cotton policy to be more market-oriented so that its cotton products are more competitive in the world market.

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