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Economic Reforms & Agricultural Parastatals: The Case of Cotton Corporation of India & Maharshtra Federation

August, 1996

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Comments Welcome)

Economic Reforms and Agricultural Parastatals: The Case of Cotton Corporation of India and Maharshtra Federation

by

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June 1996

An IRIS sponsored study

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Preface and Acknowledgement

The present study is a part of the IRIS project on India supported by USAID. I gratefully acknowledge the support provided by the IRIS center at the University of Maryland, and the USAID in India.

This study is a follow up on a similar study `Economic Reforms and Foodgrain Marketing in India: Case of Food Corporation of India' done earlier for the IRIS Center in its first phase of India project. That study was jointly directed by Ashok Gulati at the National Council of Applied Economic Research (NCAER, New Delhi) and Satu Kahkonen at the IRIS Center, University of Maryland. The present study had a similar theme but moved away from the sphere of foodgrain marketing to the marketing of cash crop, namely cotton. Initially, this study too was to be jointly directed by Ashok Gulati and Satu Kahkonen. But due to some unavoidable reasons, Satu Kahkonen had to withdraw in mid-stream. I regret not having her in this study team. I would very much welcome if she could still join back to combine the two studies into a book. This, I feel, is very much desirable as the two studies have a common thread of evaluating the role of India's largest agricultural marketing parastatals since their inception, and how it is going to change under a liberalised atmosphere of agricultural marketing in the years to come.

This study critically appraises the role of Cotton Corporation of India and Maharashtra Federation in marketing of cotton since their inception in early 1970s. First, we make an attempt to see whether these parastatals have achieved the objectives set for them, followed by the question of `at what cost?'. It is important to look into the commercial viability and economic efficiency of the operations of these parastatals. On both counts, they appear to be wanting a major improvement. Further, we bring in the issue of changing economic environment under liberalisation move that India has already initiated. The changing environment necessitates rethinking on the present form and functioning of these two parastatals. At the end, we present some concluding observations in terms of reform options.

I hope the study would be useful to the academic world as also to the policy makers trying to carry out structural adjustments in different spheres of economic activity in the country with a view to promote efficiency with equity.

Ashok Gulati

June, 1996

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(Project Leader)

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CHAPTER-I

INTRODUCTION

I.1 Backdrop on Economic Reforms:

Macro economic reforms have helped attain economic stability but it is the micro reforms at the sectoral level that will promote efficiency and help sustain rapid growth

Major and wide ranging changes in economic policies were initiated in India in 1991, in the face of severe balance of payments crisis at that time. The major focus at the critical stages of these policy changes was the macroeconomic stabilization concerned with restoring the external accounts to a more viable state and bringing the fiscal deficit of the government to a more manageable level. The success of these macro reforms in bringing about a balance in external accounts as well as in the government account would, however, depend crucially on the micro economic changes, or changes at the sectoral and firm level. The sectoral level changes would imply more efficient working of the markets such that cost of producing and supplying various goods and services in the economy are at a minimum both because of efficient use of resources and adoption of efficient technologies.

Agriculture has been largely by passed in the sectoral reforms so far

The micro economic reforms, or the reforms under the structural adjustment of the economy have been largely absent with respect to Indian agriculture, despite the fact that the economy is likely to benefit the most from such reforms, unless it is the case that the resource allocation in agriculture is already by and large efficient. The evidence so far, however, is that agriculture in India is subject to pervasive state interventions and the markets have been influenced to produce a significant level of dis-protection towards agriculture. The inputs such as water and fertilizer are heavily subsidized, but the outputs such as foodgrains and cotton are subject to a restrictive trade regime which isolates Indian farmers from sharing the opportunities in the world markets[0]. The interventions in the input markets are born out of the need to provide the critical inputs at a price "affordable" to the farmers. The underlying rationale for interventions in the output markets is to supply commodities to the final consumers at "fair price". Even where there is potential for trade in agricultural products, it is curtailed as the possibility of "value addition" by manufacturing is preferred to trading in primary products. The cost of such interventions is not often considered; alternatives not always explored; the need for continuing with interventions is not evaluated.

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Reforms in agriculture are critical to improve the lot of the masses and reduce poverty

The promise of economic reforms to the agricultural sector is the improved functioning of the markets as well as more efficient system of state interventions. Agricultural sector accounts for about 30% of the GDP in India and supports almost two thirds of her labor force. Improved productivity and output of this sector would have positive implications to the majority of India's population and also significant positive impact on reducing the incidence of poverty. However, for the market reforms to succeed it is necessary to remove impediments to achieving the necessary adjustments in the allocation of resources: between crops, between regions and between agriculture and other sectors. This also involves assessment of different interventions at various levels: for instance, the role of various marketing organizations erected for agricultural inputs and outputs, restrictions on pricing, stocks and credit for agriculture, pricing of inputs, restrictions on exports and imports, incentives to producers in the form of cheap power and other infrastructural facilities etc. It would be valuable information to policy makers to know what the achievements of various interventions are with respect to their goals and at what cost the interventions prevail.

Present study focuses on the impact of state intervention in cotton marketing

It is in this context that the present study has been undertaken. This study, addresses one of the many interventions by the government in the marketing of agricultural products in India. We have chosen cotton marketing for the present study. Cotton is one of the major cash crops in the country with important forward linkages with the industry and the trade offs between catering to domestic industry as against exporting raw material or exporting processed product become acute. Cotton is also a case where there are several forms of government intervention in marketing. There is a monopsonistic government agency which buys all the raw cotton in the state of Maharashtra, there are the Cooperative Marketing Societies as in the state of Gujarat and there is the public sector corporation, namely, Cotton Corporation of India, which buys raw cotton in the market in competition with the private traders. Each of the interventions were justified in the backdrop of the perceived inefficiencies prevailing in the markets. The interventions were aimed at remedying the inefficiencies. It is necessary to assess if the interventions have succeeded in achieving the tasks set out for them. It is also necessary to assess the cost of the interventions as aginst the benefits achieved.

The present study has a modest aim to examine the impact of the state interventions in cotton marketing, that is the impact of the activities of Cotton Corporation of India and the Monopoly (monopsony) Cotton Procurement Scheme in the State of Maharashtra. The Cotton Corporation of India was established as a public sector organization entrusted with the task of importing raw cotton to meet the needs of the industry, purchase raw cotton in the domestic market to cater to the needs of the textile industry in the public sector as well as to attain price stability in the cotton market, to carry out price support operations to protect the interests of the cotton producers. Lately, it has also assumed the role of carrying out programs to enhance cotton production in the country. The monopoly cotton purchase scheme in Maharashtra had an equally comprehensive role within the state to promote the interests of cotton growers by providing better control over the cotton market to the cooperatives in the state. Given this multi faceted role for the interventions, understanding the achievements and failures of the organization would be a valuable lesson in policy making in the arena of agricultural marketing.

I.1 Objectives of the Study

The study critically examines the extent to which CCI and Maharashtra Federation have succeeded in achieving the goals set for them, and at what cost.

The main objective of this study is to assess the role of Cotton Corporation of India and the Monopoly (monopsony) Cotton Procurement Scheme in the State of Maharashtra, in the overall context of marketing support provided by the government to the Indian farmers and more specifically to cotton producers in the country. The role of CCI and the Maharashtra Scheme has been evaluated with respect to the various tasks entrusted to it and by comparing the costs involved against the benefits received. The specific objectives of the study may be stated as

(a) to review the broad goals of public policy in providing market support to the farmers in general, and cotton producers in specific in India.

(b) to review the functions, organization and growth of Cotton Corporation of India and the Monopoly Cotton Procurement Scheme in Maharashtra (MCPSM).

(c) to examine if the objectives assigned to CCI with respect to the market support to cotton growers, supply of raw cotton to public sector textile mills and reducing instability in cotton prices, have been achieved. The achievements of the Maharashtra scheme are also evaluated with respect to its objectives.

(d) to compare the efficiency of CCI with that of private traders and Maharashtra's Monopoly Cotton Procurement Scheme, and

(e) to suggest measures to improve the functioning of cotton markets, particularly in the context of the market interventions by the state agencies.

The report is divided into six chapters. After this brief introduction, in Chapter II, the contours of cotton sector in India's economy are examined with respect to their importance to the economy, interlinkages of cotton with other sectors in the economy, development of the sector and the development of state policies in relation to cotton production, processing and marketing. In Chapter III, the aims and objectives of the two market interventions selected for analysis in this study are described. Chapter IV provides an assessment of the impact or benefits of the state interventions in cotton marketing. In Chapter V, the cost of market interventions in cotton marketing are evaluated and finally, the lessons derived from the market interventions for future policy options in the cotton sector are discussed in Chapter VI of the report.

ENDNOTES

There has been some opening up in agriculture, nevertheless. ieat and rice exports have been freed from minimum export rice requirements. Quotas for rice exports have been ibstantially increased. Imports of pulses and edible oils .so are under Open General License with 5% duty on pulses and)% duty on edible oils (with the exception of coconut oil iich has an import duty of 65%). All controls on internal ovement of agricultural commodities imposed by the Central overnment have been removed although some restrictions by the tates remain.

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CHAPTER-II

INDIA'S COTTON ECONOMY: STRUCTURE AND GOVERNMENT INTERVENTIONS

Structure of cotton economy that has developed over the years has been affected by government policies towards the textiles manufacturing sector

Cotton crop has several useful products: cotton seed is an oil bearing seed, its oil being used generally for non-edible purposes but also as an edible oil to some extent; lint is separated from the seed by ginning and forms the raw material for spinning yarn which then is used for weaving into fabrics either by itself or in combination with other types of yarns such as the synthetics. Cotton has very important forward linkages with the industry. The fabric is used for making various finished products of clothing. Nearly 70% of the cloth produced in India is cotton[1]. Textile industry is the largest single employer among the manufacturing industries. It is also the largest single export earner among the various industry categories. It is important to understand the evolution and structure of the textile industry in India as government policies towards cotton are a reflection of the policies towards the textile sector.

II.1 Structure, Growth and Interventions in the Textile Industries

The importance of the textiles sector including the decentralised handlooms and powerlooms lies in its employment potential and export possibilities

Cloth making in India has a history as fascinating as any. In the period before the advent of modern mills, India's hand crafted muslin was a prized commodity. Handlooms held sway on the clothing scene in the country. However, with the advent of the modern mills in Europe and the inequitable trade regime vis-a-vis the empires, Indian textiles suffered a set back.

The first cotton mill was established in India in 1854. At the time of independence, India had 10 million spindles and 100, 000 looms in the organized sector. Due to partition of the country, India ended up with a loss of 40% of production of cotton but nearly all the textile industry (98%) remained here. In other words, an acute shortage of raw material and import requirements arose. Since the independence, given the rising demand for clothing with the growth in population and incomes, the textile industry has also registered growth. In 1994, there were 29.1 million spindles and 150,000 looms in the organized sector. There were 962 spinning mills and 265 composite mills in the country. From a number of 2 million in 1947, the handlooms increased to over 4 million in 1994. The powerlooms, which were non existent in 1947 numbered 1.3 million in 1994[2].

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Since the 1960s, the powerlooms have gained market share in textile output at the cost of the mill sector

In terms of production, there has been a remarkable change in the structure. The organized sector has seen its share in fabric production dropping dramatically throughout the period beginning from the 1960s. **The powerloom sector has gained the share in fabric production with the handlooms maintaining its share at about 30%.** The growth of powerlooms was encouraged not only by government's policies towards the small scale sector but also because of its cost advantages vis-a-vis the mill sector. The handlooms again have benefitted by various promotional policies of the government. In the case of spinning industry, however, the organized sector is the main producer. In other words, cotton is lifted primarily by the organized sector with a small segment of the unorganized spinning industry which accounts for less than 5% of cotton yarn production.

The mill sector faced several interventions-- on pricing, product mix, labour by the government

There was thus, considerable growth in the textile sector and there was also a segmentation of the industry, mainly on account of the public policies aimed at supporting the labor intensive handlooms and small scale powerloom sectors. There were also price controls on certain types of cloth produced for the organized sector and quantitative restrictions on the type of cloth produced in order to ensure that cheaper quality was produced in the desired quantities. Even for the yarn that is produced, there were price controls and quantitative restrictions. The labour laws applicable to the organised sector also made it difficult for the mills to restructure.

Sickness in textile industry in the 1960s led to increased government intervention in the form of setting up the National Textile Corporation in 1968

In the 1960s, sickness in textile industry began to emerge. In the organized sector of the industry the problems related to stagnating demand, controls over product mix and product pricing and the rise of the decentralised sector, particularly the powerlooms. The government interventions on many fronts in the textile sector could not leave the government out when the industry began to experience financial difficulties. Several textile mills began to make losses, leading to shutdowns, and labor disputes. In 1968, the National Textiles Corporation was set up in the public sector to manage the textile mills in the public sector. **In 1968, there were 17 sick mills in run under the government** . In 1971, they were 31 in number and increased to 47 in March 1972 and 103 in October 1972. The sickness in the industry has not declined: At the end of June 1985, a total of 70 mills were closed; at the end of June 1995, this number was 132.

Public sector accounts for less than 10% of spinning mills but 40% of the composite mills, reflecting the rise of decentralised

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powerlooms in weaving and the sickness in the organised sector

As of the end of March 1994, of the total 905 spinning mills, 73 were in the public sector. Out of the total of 270 composite mills, 115 were in the public sector. The state, therefore had to step in cloth making sector more than in yarn making segment of the industry. Out of the total 1.02 million workers as of March 1994 in the organized sector mills, 0.25 million are in the public sector and another 0.10 million in the cooperative sector.

The export boom in textile products in the 1970s was a major source of increased demand for textile industry

It is the boom in textile exports which took place in the 1970s that has partly helped the textile industry regain some of its lost ground. While the decentralised sector has stepped into the exports of fabrics and products, the organised industry has benifitted in terms of yarn production and its exports.

The developments in the textile industry were marked by the difficulties in making adjustments in the structure of industry given the legislative framework on the one hand but also the political concerns at the time. However, during the period of late 1970s, India's exports of textiles and textile products also began to pick up. Thus, for one segment of the industry, the policies aimed at promoting exports became important incentives. The production of cotton had also begun to rise by this period of mid 1970s with the introduction of high yielding varieties of cotton.

Government interventions in the textile industry affected the economy of raw cotton

The cotton producers, therefore, had to contend with the developments in the processing sector which were influenced by the government policies. While the import-substitution polices would have helped introduction of the high yielding varieties and hence production, the inefficiencies in the textile industry also meant that the growth of cotton production sector was, to that extent, curtailed. The question, therefore, is whether the government interventions in the textile sector helped or hurt the cotton growers in the country: in other words, interventions in the processing sector may have meant a cost in terms of the primary producing sector.

II.2 <u>Cotton Production in India: Some Features</u>

India in world setting tops in area but ranks at the bottom in productivity

When we consider India's position in cotton at the global level, she ranks third among the major cotton growing countries in production with a share of 11.5 percent for the period 1991-95 (Gillham and others, 1995). China has the highest share of 24.7

Fig II.1 Distribution of Cotton Output Average of 1946-50

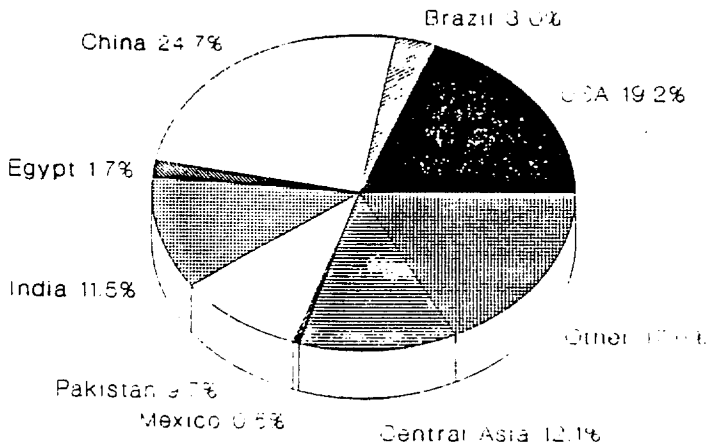

Fig II.2 Distribution of Cotton Product Average of 1991-95

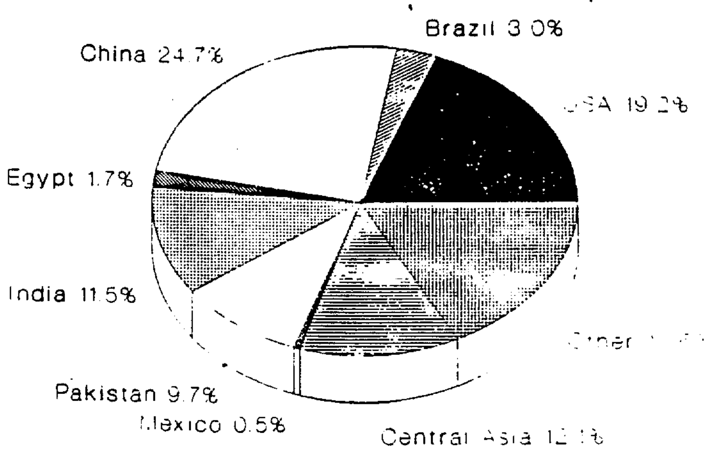

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Fig II.3. Distribution of Cotton Area Average of 1946-50

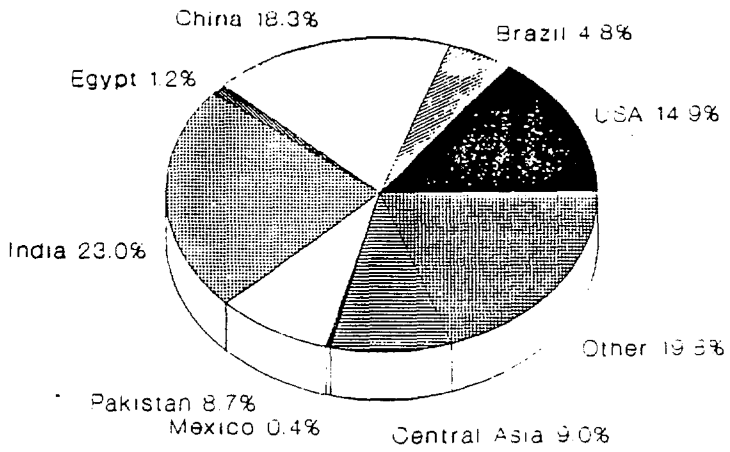
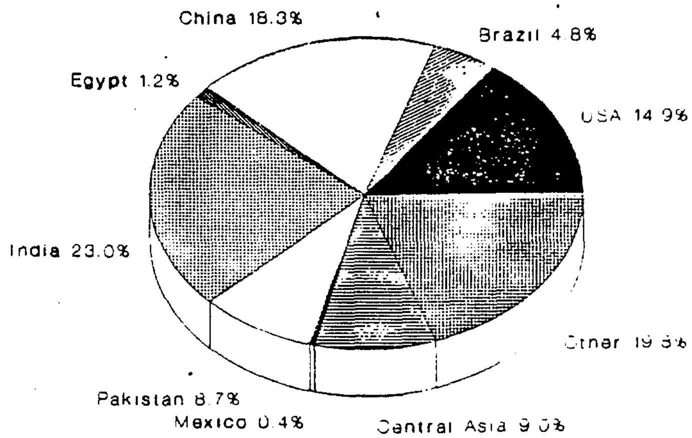


Fig II.4 Distribution of Area under Cotton. Average of 1991-95



Source: Gillham and Others (1995)

Fig II.5. Yield of Cotton by Countries Average of 1946-50

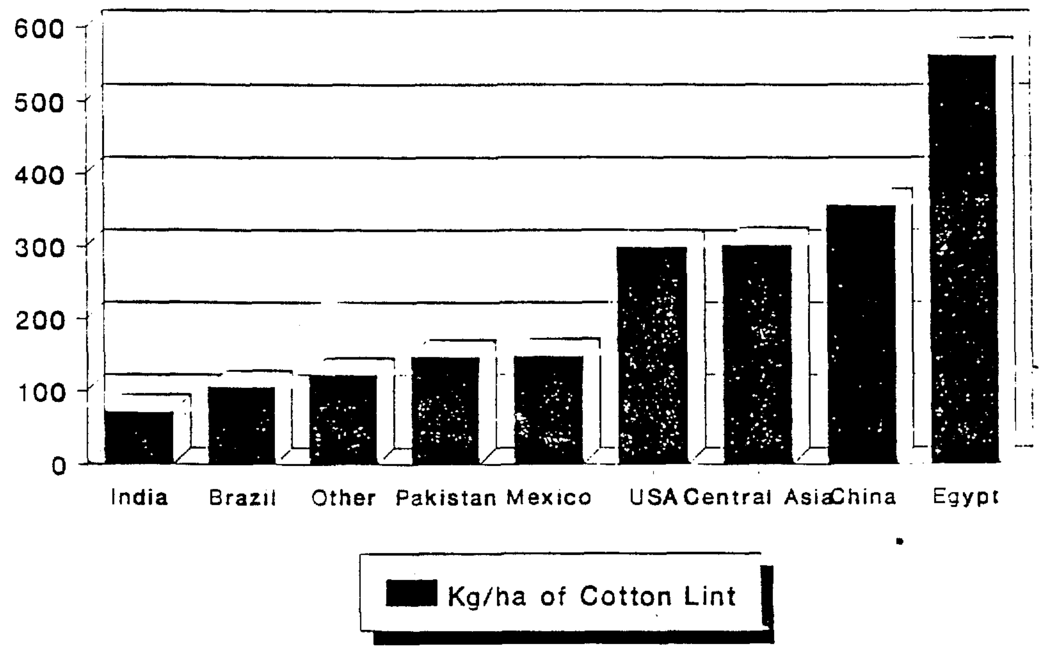
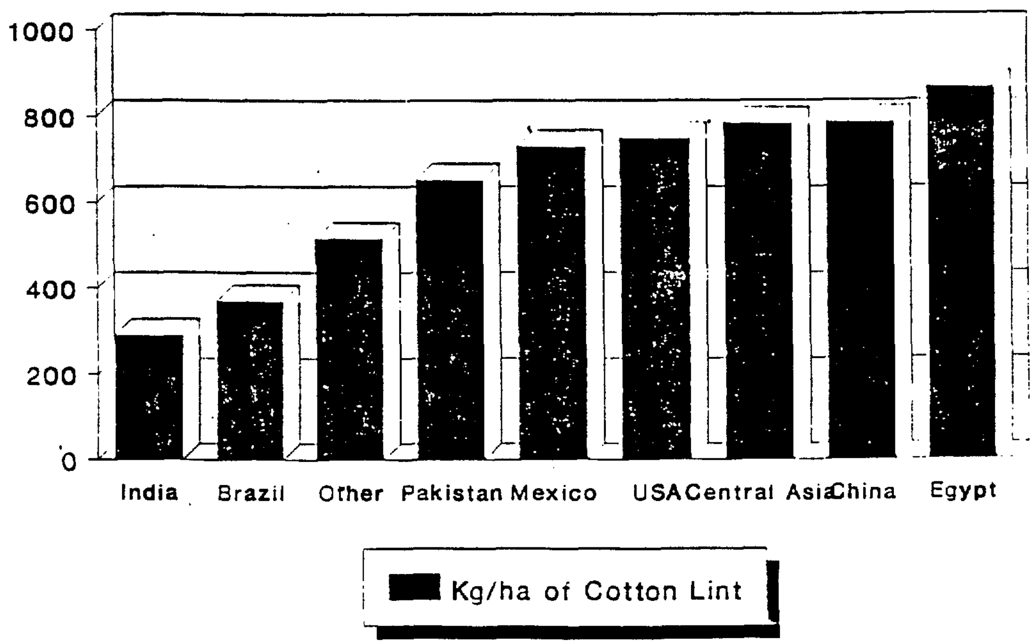


Fig II.6 Yield of Cotton by Countries Average of 1991-95



percent followed by USA with a share of 19.2 percent. In terms of area, India has the largest share of 22.9 percent among the major countries followed by China (18.3%) and USA (14.9%). The yield of cotton lint per hectare is the highest in Egypt at 866 kg. India has the lowest yield among the major countries considered: the yield in China is 3.7 times the level of India.

India's share in world production increased marginally during the period 1946-50 to 1991-95. The yield increased by 174% during the period in India, still it remained at the bottom rung in world hierarchy. The changes in cotton scene were more dramatic in China and USA. In China, cotton yield increased by almost 10 times during the 45 year period. In USA, while the per hectare yield more than doubled, its share in area declined by 55%. At the global level, cotton area increased by 25% and production by 260% during the 45 year period of 1946-50 to 1991-95. While India's cotton area increased by 47 percent, its production increased by 300 percent. The rise in per hectare yield was slower in India than in rest of the world.

Regionally cotton production in India is concentrated in Punjab, Haryana and Rajasthan in the north-west, Gujarat and Maharashtra in west, and Andhra Pradesh and Karnataka in the south.

Nine states in India account for 99% of area under cotton and nearly all the production five states of Punjab, Maharashtra, Gujarat, Haryana and Andhra Pradesh account for 75% of area and 75% of production. Rajasthan, Karnataka and Tamilnadu account for another 18% of area and 21% of production. Madhya Pradesh has over 6% of crop area but contributes only 3% of production. In terms of yield per hectare, Punjab and Haryana have an average yield of 510 kg/ha of kapas and Gujarat, Andhra Pradesh, Karnataka and Tamilnadu reporting between 250 and 300 kg/ha. Maharashtra and Madhya Pradesh have the lowest yields of about 125 kg/ha. In Punjab, Haryana and Rajasthan nearly all the cotton area is irrigated whereas in Maharashtra nearly all the cotton production is under rainfed conditions. Thus, there is a wide range of production conditions in which cotton is grown in the country.

States' Shares in India's Production of Cotton

	Average shares (%) for		
	1971-72 to 1979-80	1980-81 to 1981-90	1990-91 to 1993-94
Andhra Pradesh	4.29	9.45	11.79
Gujarat	26.70	19.39	14.55
Haryana	7.32	9.65	12.10
Karnataka	9.66	8.17	7.40
Madhya Pradesh	4.54	3.76	3.32
Maharashtra	18.29	19.08	18.50
Punjab	17.80	19.01	19.52
Rajasthan	5.91	6.70	8.69
Tamilnadu	5.70	4.79	4.10

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Fig II.7 Cotton Yield Across States

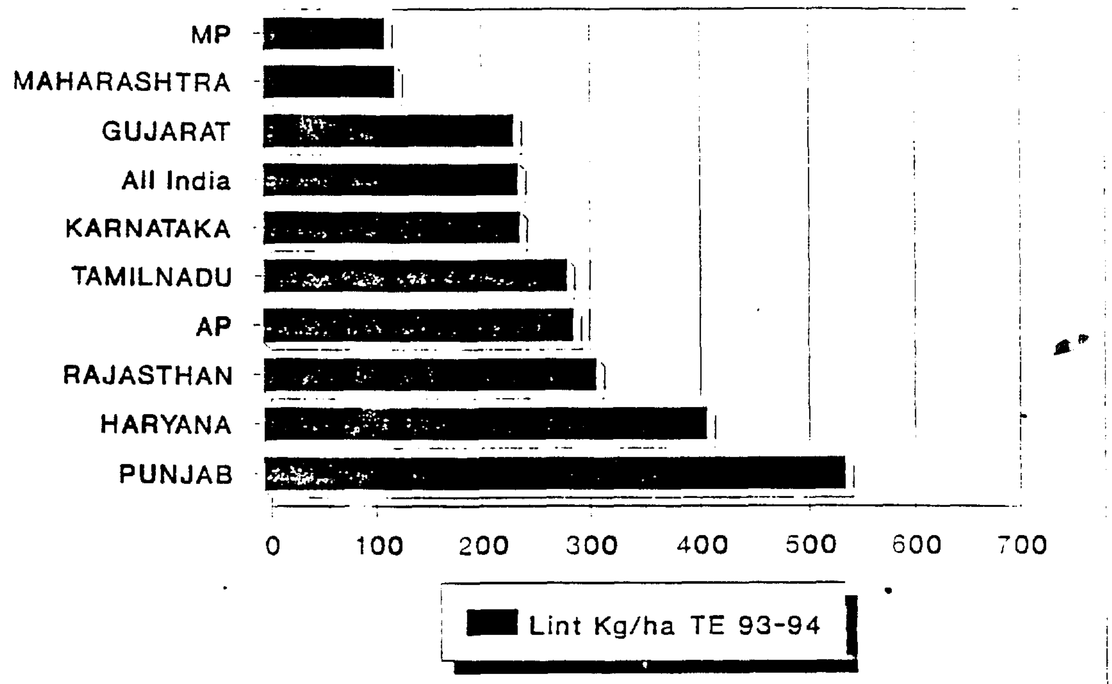
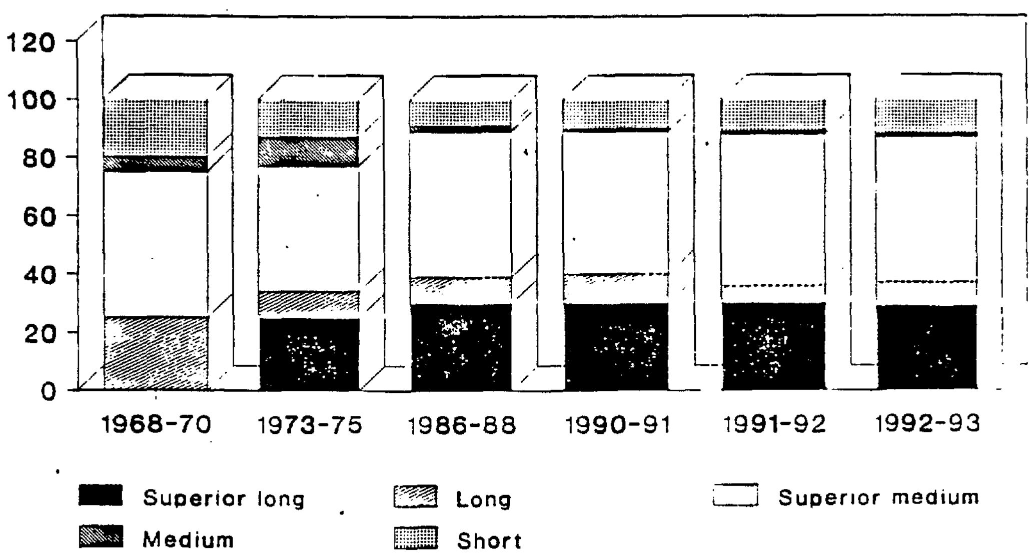


Figure II.8 Composition of Cotton Production by Staple Length (%)



Superior long is 27mm or higher, Long is 24.5 to 26mm, Superior medium is 22-24mm medium is 20 to 21.5 & Short is below 19

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States' Shares in India's Production of Cotton

	Average shares (%) for 1971-72 to 1979-80	1980-81 to 1981-90	1990-91 to 1993-94
Andhra Pradesh	4.29	9.45	11.79
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Punjab	17.80	19.01	19.52
Rajasthan	5.91	6.70	8.69
Tamilnadu	5.70	4.79	4.10

Varietal composition of Indian cotton has changed from nearly none of long staple in the period upto early 1970s to a significant share

There is also variations in the varieties of cotton grown in India. India has all the four cultivated cotton species. The northern region (Punjab, Haryana and Rajasthan) grows G. hirsutum and G. arboreum, the central zone (Gujarat, Maharashtra and Madhhya Pradesh) grows G. herbaceum in addition to the previously mentioned species and the southern zone growing G. barbadense in addition to the previously mentioned species. The G. barbadense is the long staple cotton, G. hirsutum, medium staple and G. arboreum and G. herbaceum being the short staple varieties. There has been a change in the composition of cotton output in terms of shares of cotton of different staple lengths: The short staple (less than or equal to 11/16") which accounted for 45% of cotton output in 1952 contributed only 9% in 1986-88. In 1994-95, the share of superior medium staple, long staple and superior long staple cotton (roughly equivalent to long staple of over 7/8") is estimated to be 87% in total production[3].

Trends in Cotton Production in India reveal that its growth is increasingly due to productivity gains.

The production of cotton in India increased from under 2.75 million bales (of 170 kg each) in 1949-50 to 5.60 million bales in 1960-61 and reached a high level of 11.42 million bales in 1989-90. Between 1949-50 and 1989-90, a forty-year period, area under cotton increased by 56% and yield by 165%, indicating the substantial gains in productivity per unit of land. During the same period, percentage of cotton under irrigation has increased from 8.2 to 34.5. There was also a manifold increase in area under the high yielding varieties of the crop between 1971-72 to the present period. Thus, cotton production attracted both land and other resources during the last forty years. The trends in area, yield and production also indicate that **the growth in production since 1960-61 is mainly on account of improvements in**

Fig II.9 Growth in Cotton Output
1951-52 to 1993-94

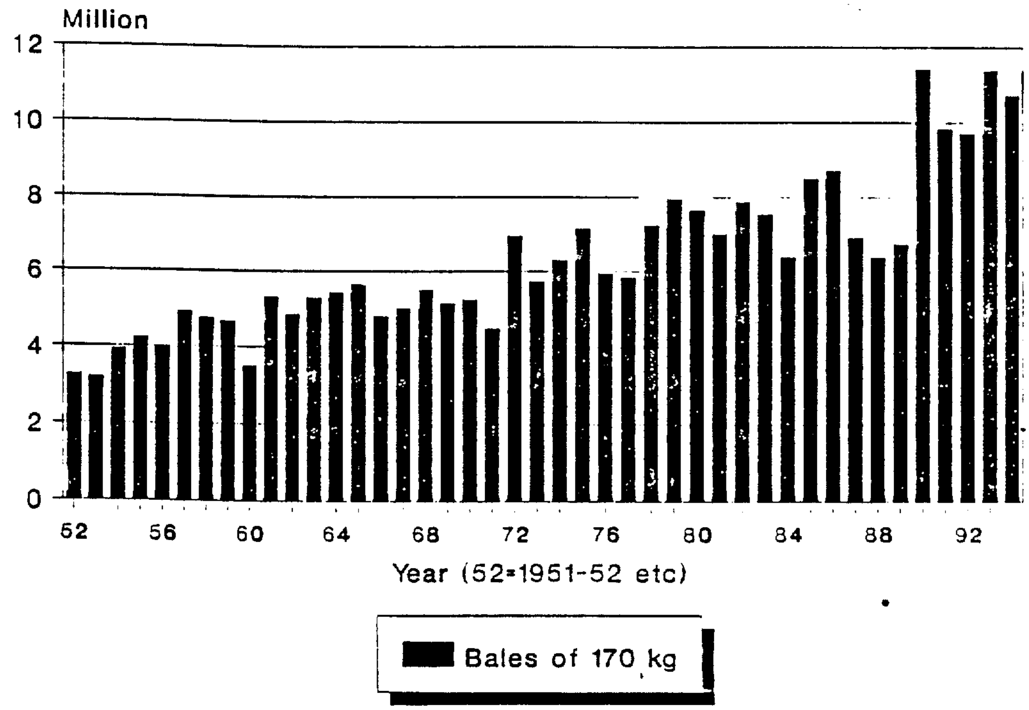
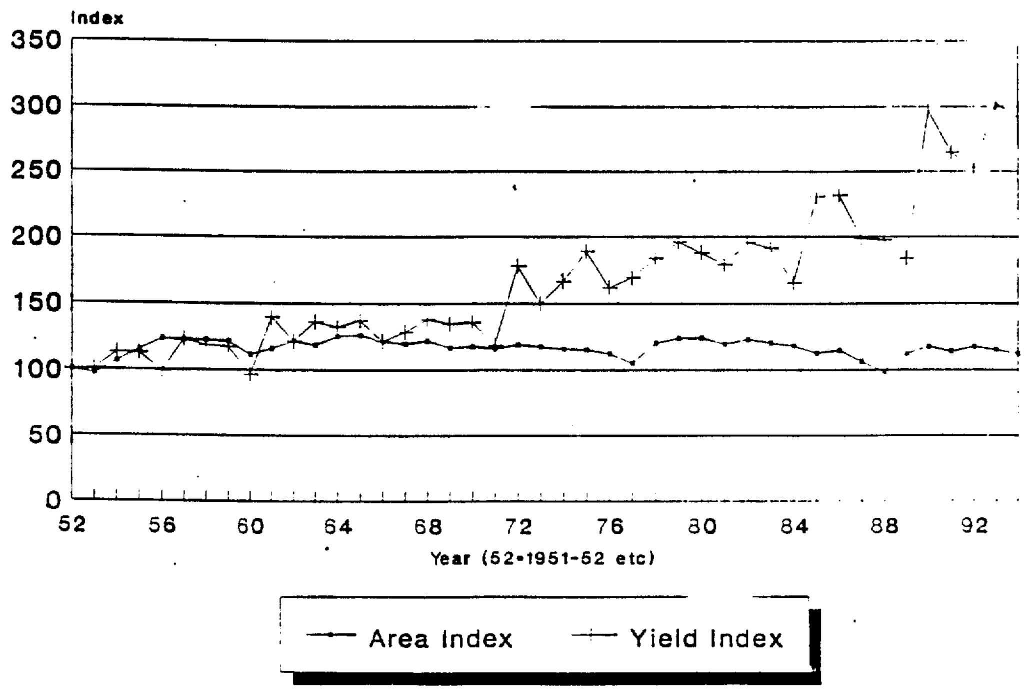


Fig II.10 Trends in Cotton Area and
Yield 1951-52 to 1993-94



Indices are with 1951-52 as base year

crop yields. In the 1980's there appears to be a shift away from cotton to other crops as there is a decline of 0.37 percent per year in area under cotton during this period. One of the reasons for the decline in the cotton area in the 1980's may be the rise in oilseeds area, particularly that of groundnut which is a competing crop for cotton.

Annual Average Growth Rates (%)

Period	Area	Yield	Production
1950-51/1959-60	4.29	-0.47	3.79
1960-61/1969-70	0.65	4.90	5.67
1970-71/1979-80	0.63	3.97	4.89
1980-81/1989-90	-0.37	5.89	5.94

II.3. Marketing of Cotton and Development of State Policies

The state policies for cotton marketing have aimed at improving marketing efficiency, stability of prices and assured availability of raw material for the industry

Cotton has been an important cash crop for the Indian farmers. It is grown mainly for the market. The poor state of marketing infrastructure such as lack of easily available market information, lack of adequate transport facilities combined with the inability of the individual farmers to stock the produce in times of relatively low prices in the market had led to perpetual indebtedness of the farmers (especially the majority forming the 'small farmer' category) to the village trader or larger farmers. In the case of cotton producing farmers, the situation was no different. After independence the government of India launched a number of measures to improve the agricultural marketing infrastructure, which included promotion of cooperative marketing organizations, setting up of regulated markets for agricultural produce, support prices for agricultural products and state organizations to purchase agricultural produce as a part of the support operations. In the case of cotton, all these measures were applied at different periods since independence.

It is important to note that **with independence and partition, nearly 40% of cotton production went to Pakistan whereas almost all the textile industry remained in India**. This led to sharply increased dependence on imports for raw cotton in India. Thus, there was an urgent need to improve the marketing of cotton as it had strong implications for the production of cotton. Even small variations in crop output led to large variations in prices and the chronic scarcity of foreign exchange meant that the textile industry was subject to significant uncertainties with respect to the key raw material. Besides the importance of the textile industry in the manufacturing sector and its implications due to the role of organized labor in this sector, cotton was also important from the point of view of the handloom sector. It was politically important in the 1950's and 1960's to support the handloom sector by assuring supply of cotton/cotton yarn to it, which again meant that cotton supply had to be managed carefully despite the large imports.

It was in this context that the Cotton Corporation of India was born. A year after CCI was set up in 1970, a monopoly (monopsony) cotton purchassing scheme was launched by the state of Maharashtra within the state. Besides the CCI and the Maharashtra's monopoly scheme, there are other complementary state or state supported organizations carrying out marketing of cotton such as the cooperative marketing societies. The private trade still accounts for over 70 percent of cotton purchased from the farmers at the aggregate level. It is estimated that 80% of cotton sales take place in regulated markets; however, only 20% of the farmers sell their cotton produce through the regulated markets[4]. Thus, the state supported marketing organizations account for a smaller part of cotton production at the aggregate level.

The main issues on which state intervention in cotton marketing was sought were,

(a) instability in the price of cotton which affected incomes of the farmers as well as that of the industry;

(b) the significant imports to meet the needs of the industry and the possibility of deriving greater economies of scale by entrusting the job to a single entity;

(c) the premise that farmers were not getting their due share in the price offered by the final buyers such as the cotton mills, with the traders cornering a large share;

These were the factors underlying the state intervention in the marketing of cotton. The state intervention, was expected to influence these factors. In addition, a public sector organization could also be entrusted with the task of taking up programs to enhance productivity of farms, promote scientific cultivation practices and to enable cultivation of new varieties by providing market support.

As noted earlier, the segmentation of the cotton market in India included separation of Maharashtra with a share in cotton output of about 20 percent from rest of the country. The desire to support khadi, handlooms, unprofitable textile mills necessitated trade barriers for Indian cotton. The growing textile exports have benefitted from the trade barriers on cotton. The marketing structure for cotton, that has evolved over the years appears to have led to a number of distortions. These

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have included the state interventions both in the domestic market as well as in international trade.

II.4. International Trade in Cotton

India has emerged as a net exporter of cotton since 1978. However, its export performance has been erratic

India's imports of cotton which shot up at the time of independence in 1947, declined steadily from the 1960s and by the late 1970s imports were not critical for the needs of the industry. India's imports in the early years were due to the absence of long staple cotton varieties grown in India. With the advent of high yielding medium and long staple varieties in the 1970s, the shortfall of such cotton from domestic production disappeared. India turned a net exporter of cotton by late 1970s.

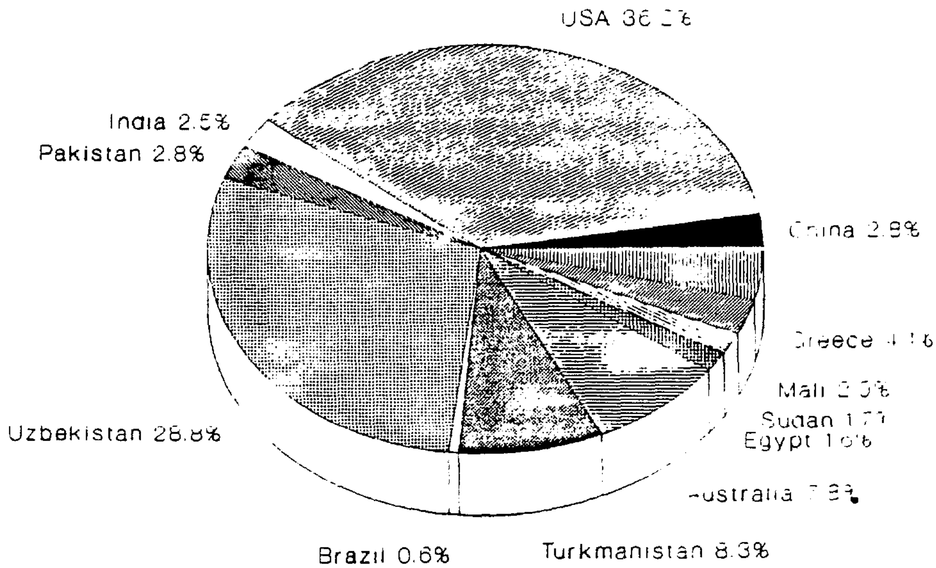
Imports of cotton were canalized from 1971 to 1995 with the CCI as the canalizing agency. Imports of cotton were, however, allowed for the exporting units directly. Since 1995, imports are placed under OGL with zero import duty which implies that any one can now import raw cotton for further processing.

India is a marginal player in cotton exports in the world

Exports of cotton assumed significant scale (say over 100,000 bales) by the second half of the 1980s. India's exports of raw cotton in 1993-94 were 71 thousand metric tons (Cotton International, 1996) or less than 1.5 percent of total world exports of 5884 metric tons. The United States of America was the largest exporter with a share of 25 percent followed by Uzbekistan with a share of 22 percent. However, India does not have a consistent export volume: in 1992-93, she exported 243 thousand metric tons accounting for 4.3 percent of world exports and in 1994-95, India's exports were a mere 7 thousand metric tons. India's position as an exporter strengthened only towards the end of 1980s. In 1988-89, the government of India announced a long term export policy for cotton with the objective of export of a minimum of 500,000 bales of cotton every year. Throughout the period since the emergence of exports on a significant scale, exports have been subject to export quotas and minimum export prices. The long term export policy expected that annual exports may go upto 2,000,000 bales depending upon the availabilities. The minimum targets were to be met even if it meant imports to cover the domestic requirements. The export quotas are allocated by the government with the bulk going to the state agencies such as CCI.

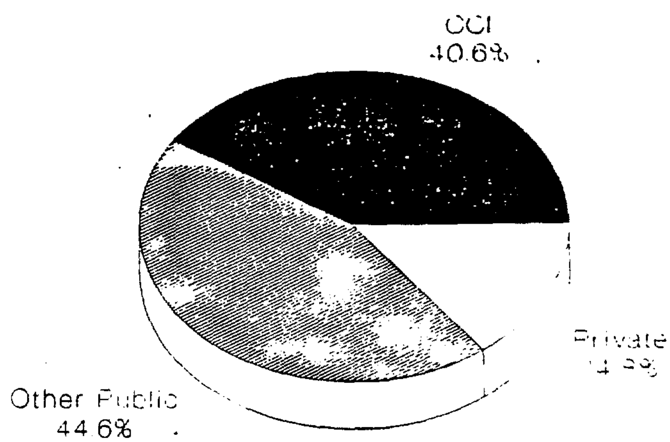
The minimum exports were specified so that India could establish itself as a reliable source of supply of raw cotton. Clearly, erratic supplies year after year would not be suitable for developing business relations in international trade. The actual export performance, however, has not met the objectives of the long term policy. In 1991-92, exports were only 77,000 bales, in 1993-94 exports were 390,000 bales- less than the minimum levels expected.

Figure II.11. Exports of Cotton Shares of Major Exporters (TE 1994-95)



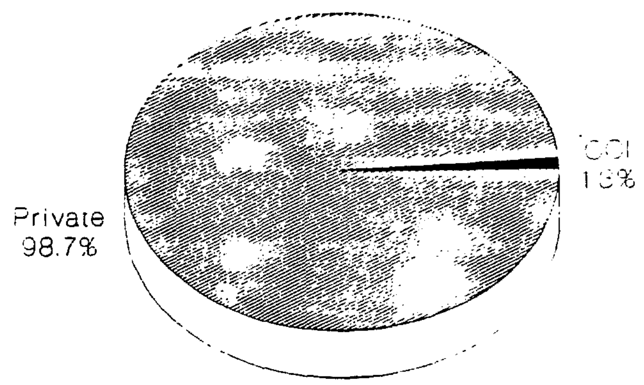
Source: Cotton International, 1996

Figure II.12. Distribution of Staple Cotton Exports by Agencies



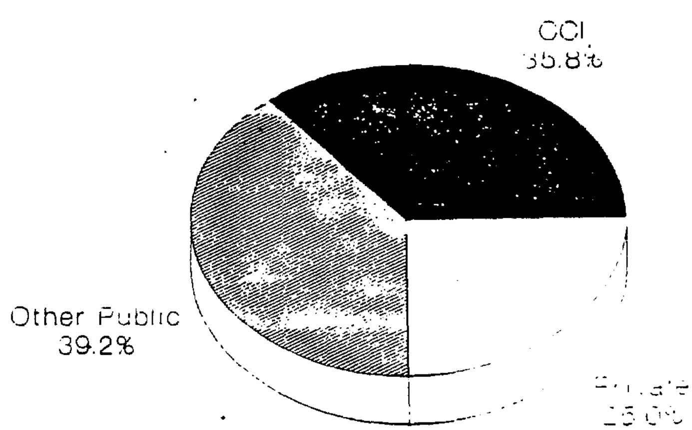
1988-89 to 1993-94 (Average)

Figure II.13. Distribution of Short Staple Cotton Exports by Agencies:



1988-89 to 1993-94 (Average)

Figure II.14. Distribution of Cotton Exports by Agencies:



1988-89 to 1993-94, AVERAGE

India's Cotton Imports and Exports
(Thousand Metric Tonnes)

Period	Imports	Exports
1960s		
First half	156	52
Second half	123	38
1970s		
First half	84	37
Second half	49	41
1980s		
First half	4	78
Second half	23	142
1990s		
First half		
1990-91	-	235
1991-92	51	13
1992-93	12	304

Source: Chaudhuri, S. (1994), Cotton Yarn Spinning in India, ICRA Sector Focus Series #1,New Delhi, and EICA for the data for 1993-94 and 1994-95.

II.5. Restrictions on Cotton Trade

Cotton trading has been subject to a variety of restrictions and regulations both within the country as well as in international trade

From the time of independence, cotton trade has been subject to a variety of regulations at the stage of marketing, processing and international trade. In the domestic market, there have been price regulations: floor and ceiling prices from the early 1940s to mid sixties, Minimum Support Prices from the mid sixties; control over stocks via the coverage under Essential Commodities Act; controls over bank credit to trade through the slective credit controls. Restrictions on who can buy in the form of monopoly procurement scheme in Maharashtra. In the arena of international trade there are price regulations: minimum export prices; quantitative restrictions: until recently canalization of imports, export quotas. Then there are restrictions in the processing sector: ginning and pressing are reserved for the small scale sector, ginning charges are regulated and so on.

Domestic Trade Restrictions

The domestic regulations have focussed on ensuring supplies of raw material to the textile industry at a reasonable price although the producer interests were sought to be served through minimum support prices and purchases at these prices when the

need arises

Cotton trade is covered under the Essential Commodities Act. Under this Act, there are limits announced by the government on the level of stocks that can be held by the traders, ginning and pressing units and the t xtile spinning mills at any given time. This meausre is aimed at ensuring that stocks do not build up due to speculative pressures. The available supplies are expected to flow in the market and reach the final consumer. There is also practically a ban on futures or forward trading in cotton, except a few varieties in whose case it was lifted in 1986, but never picked up.. The ban was imposed to eliminate speculative forces in the market which were thought to be significant in the period of the forties when cotton trade was affected by the World War as was the case in nearly all the primary commodities trade. In fact, futures trade in most of the agricultural commodities (with the notable exception of spices (black pepper, turmeric), castorseed, potato and gur) is banned in India today although there have been expert committee recommendations to bring in the futures trading selectively.

The Minimum Support Price provides the floor for cotton prices today. The support prices are set so that they cover all the major costs of production and provide a reasonable return to the farmer. The Cotton Corporation of India and other cooperative marketing agencies act as the purchasing agencies for purchases at the minimum price if need arises.

In Maharshtra, since the beginning of the monopoly purchase scheme (barring a year or two), farmers can sell the produce to only the Maharashtra Cotton Growers' Federation. The Maharahstra Federation purchases cotton from the farmers. The price it pays generally is higher than the minimum support price. As the price paid by the Federation (initially the guarenteed price) often varies from the market price in the neighbouring states. And when this variation occurs, there are movements of cotton between Maharashtra and the neighbouring states.

The selective credit controls effectively regulate bank credit to cotton traders. In times when cotton prices rise, the credit can be reduced so that traders will not be able to purchase and stock cotton. In times of easy availability of cotton, credit can be increased so that traders can purchase more cotton. However, the effect of such controls need not work in the expected manner always. When the availability is easy, traders may not in fact want to lift more cotton than necessary despite the availability of more credit!

International Trade Policies for Cotton

The international trade policies for cotton insulated the Indian farmer from the world markets

The policies on exports and imports have evolved keeping in view the interests of the cotton consuming sector-- the textile industry. Exports of textile products have received encouragement and incentives. Exports of cotton have been allowed only when the domestic textile industry's needs were met. Imports of cotton have been allowed when domestic output was not enough to meet the needs of the industry and the price of imports was higher than what was paid to the domestic producers of cotton. The cotton producers in India were effectively insulated from the vagaries of world trade and they were also insulated from the higher prices that prevailed in the world markets. On the other hand, textile industry in the country was provided with the raw material at prices lower than what prevailed in the international market. Imports of textile products faced a variety of restrictions which prevail even today.

With the establishment of CCI, cotton imports were the charge of this public sector enterprise. As cotton imports declined with the increase in cotton production in the country, the need for rigid controls on imports were not necessary. Cotton imports now have been placed under OGL with zero import duty--again to help the textile industry which is a major export earner for the country. Cotton imports and import of viscose fibre, a substitute for cotton yarn, have been allowed in the past when domestic output fell short of the requirements. However, mechanism of imports was rigid with little freedom in the negotiations for trade in the world market.

Cotton exports are subject to export quotas and minimum export prices. Export quotas are announced at the beginning of the year but they are "released" during the year in instalments as the size of the domestic output becomes more clearly known. Export quotas are allocated by the government, with the public sector agencies taking up the bulk of the quotas. the quota in terms of staple cotton are usually allocated to the public sector agencies and the non staple and short staple cotton quotas go the way of private trade. It is not clear why the public agencies are given bulk of the export quotas. One argument would be that they pass on the profits to the farmers (in the case of Maharashtra Federation for instance) or to the government (in the case of CCI) rather than enable the private traders to profit from the lucrative export market. The export business helps the public sector agencies to reduce their losses.

The overall marketing structure for cotton, therefore, has a segmented nature. Policies have evolved to serve the interests of the producers as well as the industry but they appear to be more attuned to the needs of the industry. The interests of the producer, to the extent that they are served critically depend upon how successful the parastatals have been. If they are not commercially viable, then the interests of the producers would be served only by subventions from the exchequer.

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ENDNOTES

1. If we take into account cotton fabric and hosiery production and 50% of blended fabric and hosiery output as cotton, the share of cotton in total textile output for the period 1991-92 to 1993-94 works out to 70%.

2. For data on the number of production units, there are are broad references in the annual reports of the Ministry of Textiles for the unorganised sector. For the organised sector, data are from the various annual reports of the Ministry of Textiles, Government of India.

3. Data from Chaudhari, S (1994) and reports of East India Cotton Association.

4. Source: Gilham and others (1995)

CHAPTER-III

ORGANIZATION OF COTTON MARKETING WITH FOCUS ON CCI AND MAHARASHTRA FEDERATION

Indian agricultural production is dominated by the small producers cultivating less than 2 hectares of land. The marketing of their produce is therefore a process where the small lots of produce is assembled at some stage which then is passed on down the marketing chain in more economic sized lots for further processing or sale. As the farmer is a small producer unable to either influence the market price individually or able to bear the impact of a price crash or failure of the crop, marketing infrastructure and organizations have evolved over the years to improve the efficiency of agricultural marketing as well as to benefit the small farmer. In the case of cotton, the Cotton Corporation of India and the Monopoly Cotton Procurement Scheme have now been in existence for about two and a half decades. In addition to the organizations, cotton marketing is carried out in a number of other channels in the country. There are cooperative marketing societies of cotton growers, particularly in the state of Gujarat, where the farmers market their produce through such societies. Farmers also sell their produce to private traders and commission agents in the regulated markets where sales generally take place through auctions. Private traders continue to buy cotton directly from the farmers in the villages outside Maharashtra. **The CCI and the Maharashtra scheme account for only about 25% of the total cotton produced today implying that the other channels dominate the cotton marketing scene**. However, in case of the Maharashtra scheme, its influence is nearly complete within the state as by legislation, no other channels can function for the farmer to sell his produce. To that extent, the influence of CCI is limited to the rest of the country. Therefore, the kind of influence CCI can exert on cotton marketing is determined by its efficiency and method of operation. It has to compete with the private trade to purchase its supplies. In this context, it is useful to understand the objectives of the two interventions, their organization and methods of operation.

III.1 Aims and Objectives of CCI

CCI was created to stabilise prices, regulate imports and supply raw material to public sector textile mills

The uncertainty in production, fluctuations in prices and need for imports which led to the recommendations of successive reports of APC in the late 1960s to establish an agency in the public sector to begin marketing operations in cotton. The APC recommendations were to set up an agency (1) to discipline the prices within and between the years, (2) to import cotton required by the mills and (3) to match the requirement of consuming mills with available supplies in different regions in the country. The APC based its recommendations on the limitations and weaknesses of the existing marketing arrangements for cotton in the country.

The Cotton corporation of India was established in July 1970 under the Indian Companies Act with an authorized share capital of Rs 100 million. The CCI is under the charge of Ministry of Textiles. At the time of its establishment the Corporation had as its main objective, canalizing of the imports of cotton into the country. The objectives were modified in the course of time for the Corporation to fulfill.

The main objectives of the CCI were, (1) to act as the canalizing agent for raw cotton imports, (2) to purchase cotton in the domestic market on commercial basis for supplying to the public sector mills and (3) to undertake domestic purchases for the price support operations of the government[0].

These objectives essentially emphasize the role of CCI as an arm of the government to purchase and sell cotton: the implicit objectives of price stabilization or improving the marketing efficiency of cotton trade do not get a specific mention. Besides its role as a canalizing agency for cotton imports, other functions were also entrusted to CCI over time.[3]

In 1975, following the recommendations of the Committee on Public Sector Undertakings of the Lok Sabha (Lower House of India's Parliament) the CCI's role was expanded to undertake supply of cotton to meet part of the requirements of National Textile Corporation. In 1978 Textile Policy, CCI's role was defined to include buffer stock operations.

The original role of CCI as the agency to import cotton was no more important given the rise in the production of cotton by the late 1970s. The price support operations were also relatively unimportant as the market prices generally were above the minimum prices recommended by the APC. Therefore, the "commercial" purchases were emphasized in this policy statement. The New Textile Policy of mid 1980s included "price stabilization" as a role for the CCI. Although the building up of a buffer stock of cotton was not achieved by CCI, an activity consistent with its "price stabilization" role, price stabilization remained an objective for the organization. In the 1970s, import substitution in cotton was also receiving considerable attention of the policy makers. Accordingly, providing a market for the output of the relatively recent long staple varieties of cotton became a responsibility of CCI. In the period of 1980's CCI was also engaged in productivity enhancement of both cotton production as well as processing (ginning for instance).

Thus, while it was the marketing role that was bestowed on CCI by various government policy pronouncements, the Corporation was also used as an arm of the government to implement several tasks which had any relation with cotton. In order to evaluate the success or the failure of CCI, it is necessary to define clearly the main roles assigned to it. For this clarity, we restate the major objective of CCI as,

(1) to reduce instability in cotton prices in the interest of both the cotton growers and the textile industry by price support operations, regulating imports, supplying cotton to public sector textile mills at economic prices and by providing competition to private traders in the domestic market[6].

(2) to increase marketing efficiency in the cotton sector, and

(3) generally undertake activities which would help improve productivity of cotton producers as well as that of the processors of raw cotton.

III.2 Organization and Methods of Operation of CCI

As a public sector corporation, CCI functioned under the directions of the Ministry of Textiles, Government of India. For its operations, it opened purchasing centers in all the major cotton growing regions in the country except in the state of Maharashtra where the state government began a monopoly purchase scheme for cotton. The CCI today has over 200 cotton purchase centers spread all over the country. It purchases cotton in the market on "cash" basis and sells also on the same basis. In the case of NTC, initially, the requirement of the mills was first indicated to CCI and CCI accordingly purchased cotton for the purpose. However, over the years, purchases of cotton by NTC from CCI are based on the availability of cotton with CCI. Besides NTC, cotton is supplied by CCI to the various other state government agencies, cooperatives, the Khadi Village Industry organizations and also private cotton mills.

Its operations in exports and imports is said to be hampered by lack of adequate freedom or autonomy in decision making: the decision to import or export tend to be made in public with the result that the crucial information is no longer the advantage of the Corporation.

III.3 Aims and Objectives of Monopoly Procurement Scheme in Maharashtra

Cotton is an important crop of Maharasahtra

Maharashtra has been one of the major cotton producing states in the country. In 1992-93, its share in India's cotton output was 16 percent. In terms of cotton area, the state's share in India's cotton acreage was 33 percent in the same year. The state has not only a significant proportion of crop area under cotton, but it also is the seat of major part of Indian textile industry. Thus, cotton is an important commodity in the state's economy. With the establishment of CCI, government intervention in cotton marketing became significant. However, this was felt to be inadequate from Maharashtra's stand point.

Maharshtra Federation was established to supplement the role of CCI but in the state it substituted CCI in the purchase

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operations

The Minister of Cooperation in the Maharashtra Legislative Assembly stated that although CCI has been set up in 1970 but it alone could not succeed in eliminating the middlemen and hence the attempt of government of Maharashtra to set up a monopoly machinery was not a duplicate effort. It was an effort supplementary and complementary to that of the CCI. Further, it is fair to note that CCI's role initially was to be a canalizing agency for importing cotton. Its role in purchasing cotton in the domestic market received importance only in the later years, when CCI started buying cotton in auctions in the regulated markets from 1977-78 onwards.

Maharashtra Federation was created by an act of the Maharashtra government in 1971, but started its operations only in 1972-73. At the time of inception of monopoly scheme the cooperative societies were functioning in the state of Maharashtra along with private traders. The functioning of societies was not found to be satisfactory. These societies founded on the model of Gujarat Cotton Sale Societies could not help in stabilizing prices and most of them were financially weak and could not repay the loans of cooperative credit societies. It was thought that an integrated scheme for the development of cooperative marketing of cotton will prove to be of much help in the revival and development of cooperative credit movement. This is the background which led to formation of Maharashtra State Cooperative Marketing Federation (MSCMF) which was given a complete charge of the operation of the scheme regarding procurement, processing and marketing of cotton. Thus besides improving the marketing conditions for cotton the proposed market intervention in cotton was also meant to overcome the inadequacies in the cooperative credit organization.

Maharashtra Federation's focus was to improve and stabilise farmers' income by eliminating market middlemen

The broad objectives of the monopoly purchase scheme for cotton can be stated as follows:

1. To ensure fair and remunerative price of cotton to the growers in the state,

2. To effect additional transfer of incomes to the cotton growers by eliminating middlemen and securing in full the advantage of terminal price,

3. To bring about stability in the incomes of the growers and thereby bring about stability and growth in the overall production of cotton in the state,

4. To supply scientifically graded quality cotton to the consuming mills,

5. To strengthen the institutional framework of cooperatives by involving the cooperatives fully in the process of procurement,

processing and marketing of cotton and establish an effective linkage between marketing and recovery of cooperative dues, and

6. To revitalize the rural economy by establishing a close connection between various processes connected with cotton, namely, ginning and pressing, oilseed crushing, spinning and weaving so that all workers and growers of cotton share advantages of larger incomes.

The objectives of the Maharashtra scheme were more comprehensive in their coverage of cotton production, processing and marketing activities. As the inadequacies of cooperatives were recognized when they functioned in competition with the private trade, the new scheme provided an opportunity to the cooperatives to function in a monopoly framework. The scheme was applicable only in Maharashtra and the attending problems of leakage of output from a "controlled" market and "illegal inflows" from other states were to be expected. The scheme was to be implemented by the Maharashtra State Cooperative Marketing Federation. The task was later handed over to Maharashtra State Cooperative Cotton Growers' Marketing Federation, hereafter referred as the Maharashtra Federation.

III.4 Organization and Methods of Operation of the Maharashtra Monopoly Procurement Scheme

The Maharashtra Federation is the chief agent of the Government of Maharashtra managed by Board of Directors comprising of representative of cotton growers, cooperative ginning and pressing industry, the State Cooperative Bank, State Cooperative Spinning Mills Federation, NABARD and Agriculture and Cooperation Department of the State Government. In order to implement the scheme Maharashtra Federation has created four divisions in its headquarters namely Procurement and Processing, Sales and Statistics, Finance and Accounts and Administration headed by executive directors. Taluka Sales Purchase Societies act as sub-agents of Maharahtra Federation. Around 145 sub-agents are currently functioning in the state. These sub agents depute representatives for the weighment of kapas, estimate the value of kapas tendered, the deductions to be made, maintain farmer wise ledger and other records concerning cotton tendered at guaranteed price and payment of bonus if any.

A green card is supplied to the growers to enable them to tender their kapas at the procurement center which serves as the authorized identity card. The kapas brought to the procurement center may be graded as super, fair average quality, fair and kawadi depending on the variety. After grading is done kapas is weighed by authorized weighman. Earlier state government used to pay 10 to 15% higher price than the minimum support prices fixed by the union government but now support prices are considered as the guaranteed prices. The entire amount is paid at the time of tendering the kapas. After kapas is collected at the collection centers, it is processed according to the variety in the factories of cooperative and private sectors. The sale of processed cotton bales is the responsibility of sales promotion committee appointed by the state government. The price lists for the different varieties are published and distributed to brokers and prospective buyers. Maharashtra Federation generally offers concessional sale rates to the mills in the cooperative and state sector.

The Maharashtra Federation provides large role for the bureaucrats

A state level coordination committee has been formed to give recommendations to the government regarding fixation of guaranteed prices of different varieties, stocks to be released for sale, selling of fully pressed bales in the domestic and foreign markets. This committee is headed by the secretary to the Government of Maharashtra in the department of agriculture and cooperation. Representatives from the Union Ministries of agriculture and commerce, the textile commissioner, the chairman cum managing director of the CCI, two representatives from Maharahtra Federation are other members of the committee. District level coordination committees under the chairmanship of District Registrar are there for each district.

`Guaranteed Price' is the hall mark of Monopoly Cotton Procurement Scheme.

The main feature of the Maharshtra government's Monopoly Cotton Procurement scheme is the `guaranteed price' for the grower. Once this price is fixed, the cultivator is assured that he will receive this as the minimum price, even if Federation earns losses. The schemes accounts are closed when about 75 to 80 percent of the total number of cotton bales are sold and there is no time limit for this. For this purpose, the variety-wise sale receipts of cotton, cotton-seed and cotton waste are taken together and added to the closing stock not disposed off. The latter is valued on the basis of average sale price realisation for each variety and grade of cotton sold before that day. From this total the expenditure incurred on processing, marketing and miscellaneous items is deducted. Thus, the final price for different varieties and grades of cotton is arrived at.

In case the final price happens to be greater than the guaranteed price, 75 per cent of the difference is distributed to the cultivators as bonus while 25 per cent is credited to the Price Fluctuation Fund (PFF). The PFF is created so that in years when the final price is less than the guaranteed price and hence there is loss to the scheme, the payment of guaranteed price can be ensured by withdrawing from PFF. The growers also contribute 1 to 3 per cent of guaranteed price towards Capital Formation Fund (CFF) since the 1980-81 season as per an amendment made in the Maharashtra Raw Cotton Act in 1981. Thus, under the monopoly procurement scheme in Maharshtra, the ultimate price that the grower receives is the guaranteed price plus bonus (if any) minus any contribution to CFF. The growers receive bonus in case the scheme makes profits. In case of losses, provision for guaranteed price is made in the PFF and CFF. If the balance in these funds

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is not sufficient, the losses are borne by the state government.

Funds from Maharashtra state governmment are a major source of capital for Maharshtra Federation

The share capital of the federation is contributed to a significant amount by the state government. The main sources of finance for the Federation are the "price fluctuation fund" and the "capital formation fund". According to the original act of 1971 the Maharashtra Federation was empowered to deduct upto three percent of the value of the cotton tendered by growers for capital formation fund. The deductions are usually made at the rate of one percent except when the fund requires replenishment. But these funds could not meet the requirements of the Federation. Increasingly it has relied on RBI, which provided credit of Rs. 163 crores in 1979-80 in comparison to Rs. 85 crores in the earlier year. In the next season the limit was raised to Rs. 210 crores. The increasing dependence on outside funds raises the interest burden. In 1975-76 the Federation had to spend Rs. 11 crores as interest. The prudent business maxim is that one should rather aim at quick turnover even if it involves relatively less profit. Because in the ultimate analysis gross profit work out to be higher. The need for finance would be less if one resorts to a quick turnover of the product one buys or manufactures. But this practice is missing in the case of the Federation.

III.5 The Export and Import of Cotton and the State Agencies

The role of export and import policies for cotton have an important bearing on the functioning of the CCI and Maharshtra Federation. Initially CCI was set up to regulate imports. Maharashtra Federation was more attuned to the interests of the farmer in the sense that, the Federation assured the farmer of a reasonable price and eliminated all price uncertainty within the crop year. When exports of cotton began on a significant scale in the 1980s, the state agencies were allocated bulk of the export quotas. Export earnings were higher on per unit basis and therefore, helped the state agencies to earn greater revenue. The instruments such as movement controls (within the country) and quotas for exports or restrictions on imports ensured control over the markets for the state agencies but they also kept the cotton grower from directly sharing the higher international market price.

The CCI and Maharashtra Federation were launched to regulate cotton trade from different perspectives. The CCI was more geared towards ensuring supplies to the textile industry with greater price stability while the price support operations were a secondary role given the fact that cotton prices were often above the minimum support prices. The Maharashtra Federation, on the other hand, guaranteed a price to the farmer, purchased all the marketed cotton, sold the purchased cotton to the mills and in world markets and shared with the farmer the profits it made--

losses were made good by the government. Both the organisations, however, were public sector entities subject to all the limitations of such organisations in commercial activites. The CCi began as the sole importer of cotton and the MF was the sole purchaser of cotton in the state. Both the agencies have sought to reduce price instability, improve farmers' share in the mill price of cotton and supply raw material to the textile industry. at an economical price. Have these two agencies achieved their goals? This question is taken up in the next chapter.

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ENDNOTES

[3]. Kulkarni (1987) provides a summary of the specific objectives of CCI from th various policy pronouncements.

[0]. As an arm of the government, CCI played a major role in support of cotto growers in the border states of Punjab, Haryana, Rajasthan and Gujarat in 1971 72 by purchasing cotton as much of the private trade was disrupted in the wak of India-Pakistan war during that period; the cotton crop was also at a recor level during that year necessitating price support operations.

[0]. In the course of time, improvement in the marketing efficiency an productivity of production and processing of cotton were also added to the aim of CCI in various discussions of the role of CCI.

CHAPTER-IV

HAVE CCI AND MAHARASHTRA FEDERATION ACHIEVED THEIR OBJECTIVES?: AN ANALYSIS OF BENEFITS

This chapter assesses the performance of CCI and Maharashtra Federation with respect to their objectives

The market interventions in cotton were introduced with a number of objectives in view. They were introduced in the background of shortages of cotton for the industry, price fluctuations and "inefficient" marketing systems which "exploited" the farmer. They were also introduced to feed the public sector textile mills with raw material at a reasonable price. The interventions also implicitly sought to reduce the instability in cotton prices. What then have been the benefits or the impact of the interventions after their existence for nearly two and a half decades? This chapter attempts to address this issue. We have followed an approach here which specifies the various objectives of the interventions and considers the extent to which these objectives have been fulfilled. For this purpose, we may restate the major objectives of the interventions as reduction of price instability through canalising imports of cotton and by its purchase and sale operations in the domestic market; price support to farmers, especially of long staple varieties which were beginning to be introduced in the country; and to supply cotton to the public sector textile mills[0].

Each of these objectives are examined first in the context of conditions prevailing at the time of introduction of the interventions and then we assess the developments over time since the interventions were introduced.

IV.1 Reducing Price Instability

Reducing price instability of cotton was an implicit goal of the state interventions

One of the main concerns with which state interventions in agricultural marketing are introduced is the wide fluctuations in prices which make it difficult for the consumers, in this case cotton mills, and the producers or farmers to plan their business activities. In the case of cotton, instability in cotton output often led to fluctuation in prices. While both support or floor prices and "ceiling" prices were announced by the government to ensure some stability in prices, without adequate mechanism to buy and sell cotton in the markets, such floor and ceiling prices were not effective. Thus, when production increased due to better rainfall, prices would fall and in years of poor crop, prices would rise above the "ceiling". The price fluctuations within a year were also significant as the cotton harvest is spread over a considerable period of time and decisions on imports and exports were made based on estimates of cotton output for the year. And there was considerable variation in the crop output estimates made by trade and the government agencies. Because of the intra-year variations, it was felt that the benifits of higher prices in the "lean" season accrued largely to the traders and not to farmers. The state interventions, therefore, were expected to reduce both the inter-year price variations and the intra-year variations.

IV.1A The Inter-year Variability:

The inter-year variability in prices at the national level did not decline after the state interventions in early 1970s.

The CCI was set up in 1970 and the Maharashtra Federation was instituted in 1971. We may take 1970-71 as the cut-off point for comparison of the price variability in the period when the two state agencies were operating and the period when these agencies did not function. By taking coefficient of variation as the measure of variability in prices, we have provided a comparison of price variability in the two periods in the table below. The second period is subdivided further into sub periods.

Period	Coefficient of Variation (%) in Cotton Price (Raw cotton, WPI)
Pre- CCI and Maharashtra Federation	
1960-61 to 1969-70	19.09
Post- CCI and Maharashtra Federation	
1970-71 to 1979-80	25.83
1980-81 to 1989-90	22.23

If one considers inter-year variations shown above, there is no clear evidence that this variation has decreased during the period after the interventions as compared to the period prior to this. While these results hold for the all India level prices, the case of Maharashtra may show lower variability in prices. In the case of price received by the farmers in Maharashtra, greater stability in prices may be achieved as the "guarenteed price" the farmers receive under the Maharashtra's Monopoly Cotton Purchase Scheme, does not fluctuate much over the years and little within a year. The final price received by the farmers is subject to the price realized by the Fedeartion through its sale of cotton and hence it varies from year to year.

The market intervention in Maharashtra was introduced partly also to stabilise the incomes of the farmers by reducing inter-year and intra-year price variations. While the variability was

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reduced, it has required subsidization by the government in the sense that the "price fluctuation fund" set up to finance the payments to even out the price fluctuations has been wiped out over the years (Shroff,1989).

The increased variability in cotton prices at the all India level may be due to factors such as increased variability in production which can not be necessarily ascribed to the market intervention. The point remains that inter-year variation did not decrease with the setting up of CCI in 1970 or the beginning of the Monopoly purchase scheme of cotton in Maharashtra in 1971. In the period 1980-81 to 1994-95, the variability in the price of cotton shows some decline. Again, it is difficult to attribute this result to the activities of CCI or the Maharashtra Federation. A number of factors including the substantial improvement in the production of cotton has helped stabilise the prices as imports became unimportant source of supply for the Indian textile industry by the early eighties.

IV.1B Price Variability in Cotton versus Groundnut and sugarcane:

Price variability in cotton widened compared to that of groundnut and sugarcane

The price variability in cotton may also be compared to the variability in the prices of the other cash crops. This of course does not imply if one form of intervention is better than the other. The comparison may, however, show if cotton price variability has changed over time from the pattern of the other crops. The CV calculated from the WPI for raw cotton, Groundnut seed and sugarcane shows that the variability has increased for cotton over time and in the 1970s and 1980s, the CV for cotton is higher than the other two cash crops. In other words, the state interventions in cotton have not been able to provide the price stability that is seen for the other two major cash crops.

Coefficient of Variation for Selected Cash Crops
(Based on WPI)

Period	Cotton raw	Groundnut seed	Sugarcane cane
1960-61 to 1969-70	19.09	30.56	22.71
1970-71 to 1979-80	25.83	24.41	15.62
1980-81 to 1989-90	22.23	20.37	19.27

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Figure IV.1. Variability in Selected Commodities based on WPI

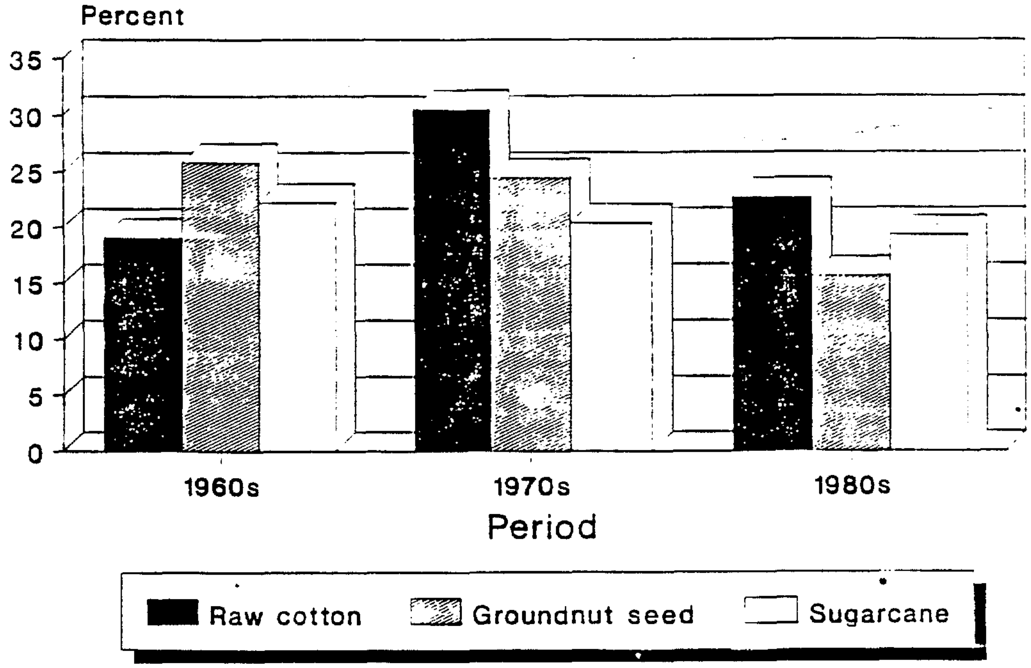

Figure IV.2 Price of Cotton Relative to All Commodities WPI

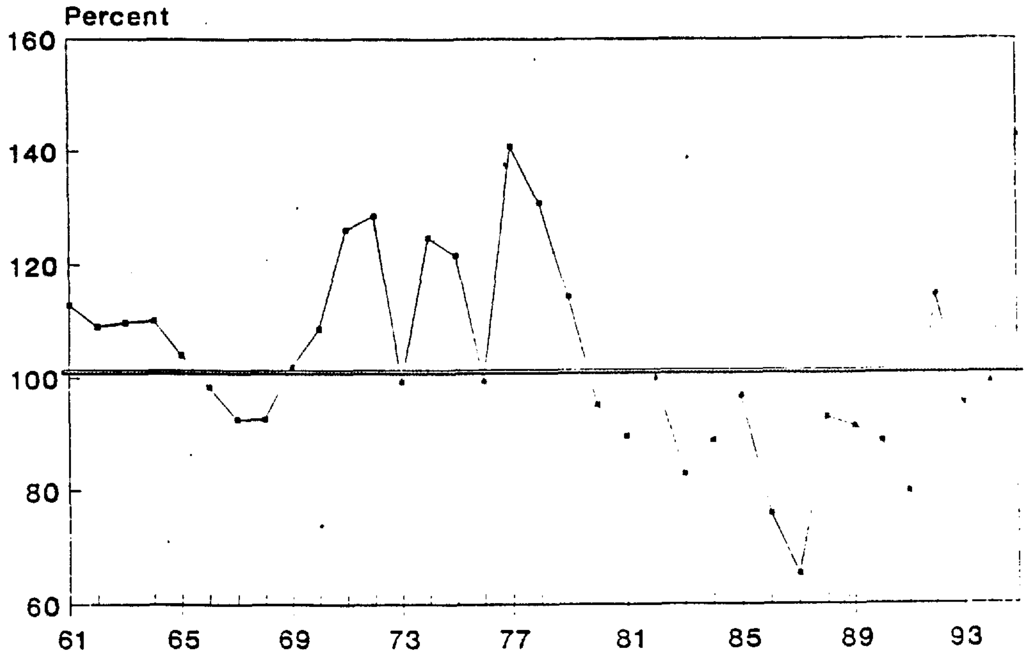

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Figure IV.3. Trends in Relative Price of Mill Cloth Vs Cotton Textiles

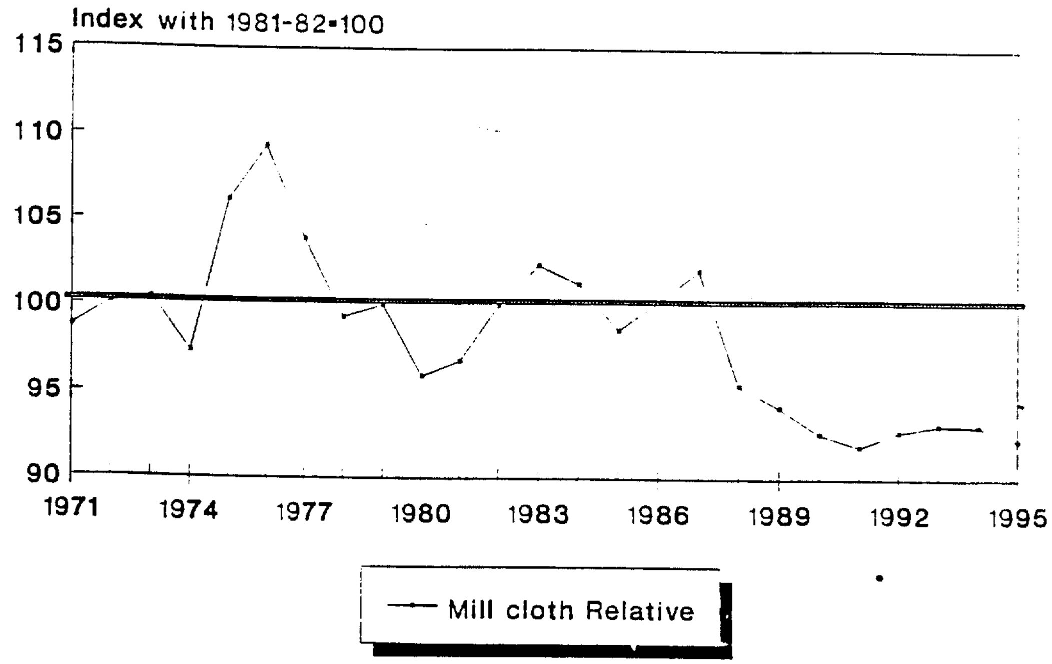
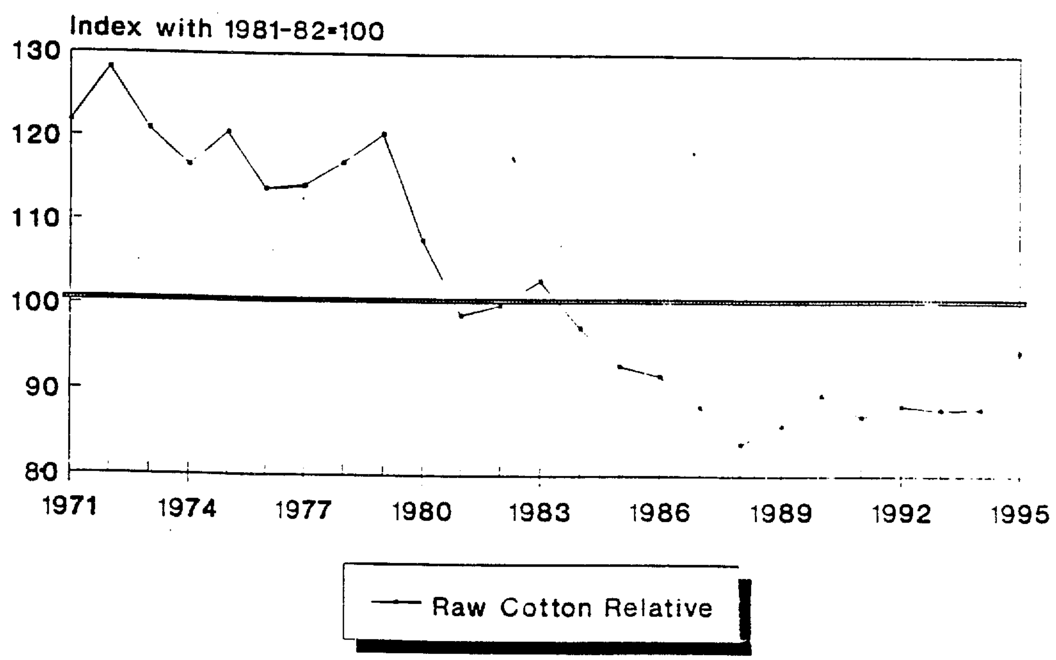


Figure IV.4 Trends in Relative Price of Raw Cotton Vs Mill Cloth



IV.1C Price Variability in Domestic and World Markets of Cotton:

Variability was greater in domestic market than that in international market for cotton

The price variability may also be seen from another view point, that of international price instability. A comparison of coefficient of variation(CV) in Indian prices with the CV of international prices reveals that price variability in the Indian markets is greater than in the international markets. In other words, Indian farmers and the consumers faced greater variability in cotton price than the international consumers and producers despite the fact that Indian markets were insulated from the outside market forces partly to achieve the opposite result..

Coefficient of Variation in Domestic and International Cotton Price

Period	International Prices		Indian
	Orleans/ Texas CIF N Europe	California CIF N Europe	Cotton Raw WPI
1965-70	12.97	11.66	14.61
1971-80	9.09	8.30	25.83
1981-93	8.16	7.62	38.14

Note:
The International prices are August-July for the period upto 1979-80 and November-February for later years. In the case of Indian prices, the year is April-March in all the cases.

Thus, whether one looks at reduction in price variability over time, reduction with respect to other cash crops or reduction relative to world prices, the price interventions at the national level have not succeeded in the case of cotton. In the case of Maharashtra, where there may indeed be a reduction in price variability for the producers (it is not possible to prove this unless there is data on price received by the farmers over the years for the period before 1971 in Maharashtra), this has been achieved at a cost to the ex chequer as the price stabilization fund remained negative for most of the years in the 1970s and 1980s.

IV.1D The Intra-year Price Variability

The intra-year price variability did not decrease with the emergence of CCI in selected major markets. The reduced variability in Maharashtra was achieved by recourse to subsidies

There are two issues relating to intra-year variations in cotton prices. One relates to the implications to the producer and the other to the consumer. First, the variations may be related to supply-demand variations over the season and secondly due to the differences in the quality of cotton that becomes available in the market at different points of time during the season. If the price variation is to account for the cost of carrying the stock, it reflects an economic function of the market. If not, then it is the trader who benifits from the variation and not the farmer. For the consumer, price variability -if greater than the economic cost of carrying the stock would imply higher cost of the raw material. For the producer, the same excess margin would mean a loss to his profits.

The market intervention, in principle, either by providing competition to the traders or by 'price regulation' can reduce variability. However, the empirical evidence on this score is often mixed. Variation in monthly prices of cotton lint in different markets around the country is analysed in great detail in Shroff (1989). Here we present the main results:

Market	Coefficient of Variation in Monthly Prices of Raw Cotton
1. Abohar (Punjab)	Remained high even after the entry of CCI
2. Buranpur (MP)	Decreased after CCI entry
Khandwa (MP)	Decreased after CCI entry
3. Bodeli (Gujarat)	Decreased after CCI entry
4. Raichur (Karnataka)	No major change
5. Adoni (AP)	Lower for Varalaxmi Variety which is purchased by CCI than Mungari which the CCI does not buy
6. Bhainsa (AP)	Lower for H-4 variety which the CCI buys than G-6 which it does not buy.
7. Tirupur (Tamilnadu)	Lower for CCI purchased Kapas than otherwise.

Except for Abohar and Raichur, the results indicate that the intra-year variation in raw cotton prices declined with the entry of Cotton Corporation of India.

Shroff (1989) also provides an assessment of the variability in the price of Kapas (seed cotton) in Maharashtra relative to other regulated markets in the country for similar varieties and the results are summarised below.

Variety	Market	Price of Kapas in Selected markets Coefficient of variation	Standard Deviation
1. H-4	Maharashtra	15.7	74.4
	Bhainsa, AP	24.6	116.9
	Adilabad, AP	21.0	102.3
	Khandwa, MP	18.2	88.8
2. G-6	Maharashtra	25.3	95.9
	Bhaisna, AP	28.1	115.3
3. AK-277 and 235	Maharashtra	26.0	99.3
	Adilabad, AP	27.4	109.2
4. L-147	Maharashtra	20.7	86.5
	Adilabad, AP	23.2	101.6
5. Laxmi	Maharashtra	22.0	93.0
	Hubli, Karnataka	23.0	78.7
6. MCU-5	Maharashtra	17.0	77.1
	Tirupur	19.5	101.6

Note: The prices used here are for the years 1972-73 to 1985-86.

Again, the results suggest that the intra-year variability in prices in Maharashtra has been lower than in the other markets in the country which implies that the market intervention has reduced the intra-year price variability. As noted earlier, in the case of Maharashtra, this has resulted in subsidies as the prices for the farmers were fixed at levels more than what the market was willing to pay.

At the national level, the reduction in inter year price variability is not evident. A comparison of the coefficient of variation for monthly prices of cotton lint in selected markets suggests that the variability has not decreased. We have also estimated coefficient of variation in monthly prices of cotton lint in selected markets for selected time periods. The results reported here are for lint and refer to the variability in prices for the consumers but they also reflect indirectly the scenario for cotton producers who sell much of their produce as kapas.

Intra-year Price Variability in Cotton Lint

Period	Average Coefficient of Variation for Monthly Prices in			
	Karnataka	Maharashtra	Uttar Pradesh	Tamilnadu
1962-63 to 1970-71	11.49	5.59	10.31	7.49
1971-72 to 1980-81	13.46	9.31	10.10	8.92

Note:
The varieties and markets chosen are Jayadhar in Hubli for Karnataka, Bengal Deshi in Bombay for Maharashtra, Bengal Deshi in Kanpur for Uttar Pradesh and Cambodia I sort in Tirupur for Tamilnadu. The prices are monthly average wholesale prices.

The overall results suggest that while the market interventions by the state may have helped reduce the intra-year price variability, particularly for the farmers in Maharashtra, the price variability over the years has not seen any moderation. It is difficult to know if the price variability would have been greater if the intervention were not there, since the state agencies did not carry out any buffer stock operations for long periods.

IV.1.1 <u>Effectiveness of the Instruments Chosen to Reduce Price Instability</u>

IV.1.1A <u>Regulation of International Trade</u>

There were no special advantages for CCI in terms of information for operating in world marekts as an importer or exporter.

Regulation of international trade in cotton through restrictions on its imports and exports was a key instrument used for reducing price instability of cotton for Indian producers and the consumers. Canalization of imports was implemented through CCI from 1971 onwards and controls on exports prevailed through allocation of export quotas and minimum export prices for cotton[0]. Canalization of imports can be said to have aimed at broadly reducing the inter- year variation in prices as in years when domestic prices increased, the government agencies imported cotton and when the domestic output was satisfactory, imports were low.

The period 1970-71 to 1973-74 was one marked by CCI's development as the canalising agency for cotton imports. In 1970-71, the share of cotton imports by CCI was only 26% which grew steadily to 57 percent, 82 percent and 100 percent in the next

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three years, respectively. During these years, CCI operated along with the private trade while it had the control over the transactions that were made by the private traders in the imports of cotton. It is important to note that by 1973-74, the imports of cotton had fallen dramatically in comparison to the levels seen during 1970-71 to 1972-73. Cotton imports continued into 1978-79 in amounts exceeding 100,000 bales and then decreased to negligible levels since then. Thus, the role of CCI as a canalising agency for imports was redundant. In fact 1994, cotton imports were placed under the Open General License so that any private party can undertake imports of cotton at specified levels of duty.

The CCI as a canalizing agency for imports could not reduce variability in prices in the domestic market. Perhaps by itself, this would not have been an adequate instrument. The limitations of functioning of CCI, however, may be mentioned.

The entry of CCI as a canalising agency highlighted an important aspect of cotton sector in the country which is the fluctuations in cotton output. For instance, based on the estimates of cotton output, CCI prepared its import plans. In periods when domestic cotton output was less than the needs of the textile sector, the task was relatively easier as some amount of imports were always needed. However, once the country reached levels of self sufficiency in cotton output, accurate estimates of cotton output became important. Based on available estimates, CCI contracted for imports. When the production estimates became more firm, CCI was left with more than required levels of imports and hence stocks of cotton. CCI normally purchased when shortages in domestic output were observed. Therefore, in the world markets, CCI did not appear to have any advantage in terms of information. Finally, when the domestic output situation was known, traders or other agents could bid the prices down and CCI would be unable to sell its imports in the domestic market and often remained saddled with unrequired stocks.

In fact, from 1976-77 mills did not come forward to take the delivery of their earlier commitments to imported cotton. In the beginning of season, prices would rule high because of uncertain estimates of production compelling CCI to import. By the time imports were made or even as a consequence of import announcement, prices in the market reacted and went below those of imported cotton luring the mills to back out from their commitments to CCI. In 1976-77 and 1977-78 CCI imported 11 lakh bales of cotton to make supplies to the mills which remained unsold and it had to incur heavy losses.

There were no specific advantages for CCI in terms of information. Unless timely import decisions were taken with respect to timing and quantum, the impact on price variability of regulating international trade can not be favourable. The same observations apply in the case of exports also. Unless export decisions are taken such that the excess supply in a given year at the chosen price band is cleared, prices would fall below the minimum of the band.

Despite the full control over imports and exports of cotton with the state agencies, in the case of cotton, price instability has not reduced.

IV.1.1B <u>Domestic Market Operations of CCI and Maharashtra Federation</u>

Domestic operations were not adequate to achieve price stability

The effectiveness of market interventions in reducing price instability depends on the size of their operations relative to the total market as well as the efficiency of the agencies involved. Before the introduction of state agencies in the marketing of cotton, trade was handled by private traders and the rest by cooperative sector. After the introduction of CCI at the central level and Maharashtra Federation in Maharashtra the share of these two state agencies has increased and together their share reached 41% of total production in 1985-86. The share of Maharahtra Federation in the state of Maharashtra is total and, therefore, in Maharashtra, it can be expected that the influence of the state agency would also be total. In the other states where CCI essentially competes with other marketing agencies, its share in total production amounts to only about 15%. Thus, the influence of CCI in cotton marketing is likely to be indirect in the sense that it operates in the major markets and therefore influences prices in these markets and the impact on the other markets would be indirect only.

It is interesting to note that the domestic operations of CCI did not directly address the issue of price instability. At one point, CCI began the buffer stock operations but gave up following the expert recommendations to the contrary. In other words, CCI's role in affecting price instability could only have been through its price support operations entrusted to it by the government from time to time and its role as a canalizing agency for imports. Only in the case of Maharashtra Federation, the impact on price instability was direct but as pointed out earlier, this goal was achieved only with the help of subsidies.

IV.1.1C <u>Meeting the Needs of Public Sector Mills</u>

Quickly, CCI stopped being the main supplier of raw material for NTC

One of the objectives of CCI was to meet the needs of raw cotton of the public sector textile mills. This operation would also have helped reduce instability in cotton prices as CCI would have procured cotton at lowest possible prices when prices were on the upswing. In keeping with this objective, CCI made large purchases of cotton to meet the demands of NTC mills and other institutional buyers. For example in the year 1976-77 indents of five lakh bales were placed by NTC. In the next year 6.15 lakh

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bales were purchased by the CCI to meet the demand of NTC. Purchases by CCI on the basis of indents placed by NTC resulted in accumulation of unsold stocks since often NTC lifted much less than the indents placed. Most of the cotton was purchased by CCI at the beginning of the year when prices were higher. And it had to sell cotton at lower prices. The corporation suffered losses year after year since the 1977-78 season. These losses were mainly due to the CCI holding large stocks for which it had to incur heavy carrying costs and often sold these stocks on unfavorable terms. It is mentioned in the Eighth Annual Report of the CCI that it had to purchase those specific varieties of cotton which suited the orders placed by NTC and could not exercise its choice of buying those varieties where the CCI could take some price advantage. And thus CCI had to carry cotton incurring heavy carrying costs mainly in the form of interest and insurance charges. As NTC did not honour its commitments from 1978-79 it no longer placed indents with the CCI and the CCI offered quantities available with it to NTC at ruling market prices. Out of total sales of 13,40,000 bales in the year 1990-91, 3,17,000 bales were sold to NTC mills and in 1991-92, out of total sales of 10,27,000 bales 4,18,000 bales were sold to the NTC mills.

It is not clear why NTC mills did not patronage CCI for their raw material. It is likely that NTC could get cheaper raw material and more efficiently than CCI could supply. There are no explanations for this discontinuation of role of CCI as the main supplier of cotton to NTC.

Quantities Sold to NTC and Other Institutional Buyers

Year	Sold to NTC mills and other institutional buyers	Total Sales	Percentage sales to NTC and other institutional buyers
	(hundred thousand	bales)	(%)
1990-91	3.17	13.40	23.66
1991-92	4.18	10.02	41.72
1992-93	4.55	8.18	55.62
1993-94	5.10	13.03	39.14

Source: Annual reports of CCI for the relevant years.

The role of CCI as a supplier of raw material to NTC mills has therefore been reduced in significance since its original conception.

IV.2 Reasonable Price to the Producer of Cotton: Efficiency in Marketing and Price Support

IV.2A The Marketing Efficiency

Presence of institutional players such as cooperatives may improve the share of producer in the final price but the profitability of the institutional player may suffer

The role of private traders in agricultural marketing in India has been termed 'exploitative' in many of the studies, particularly in the pre-independence period. The money-lending and trading roles of the traders were often combined making such traders dominant in their relations with the farmers. In the case of cotton, while the research evidence was mixed, it was often felt that the presence of cooperative marketing organizations in the market had led to greater competition among the traders. Hence, marketing interventions, often allowed the farmers to gain a greater share in the price paid by the consumer for the produce.

Cost of marketing is generally viewed as a measure of efficiency in marketing in the past studies. Further, attention has been paid to,

- grower's share in the terminal price
- proportion of different marketing costs such as ginning and pressing, market fee, brokerage handling, assembling, transport to terminal market
- returns to traders for their services.

We summarize below some of the main conclusions of the past studies on the marketing of cotton.

Issue	Support	Contrary Findings
Producer's share in terminal market price is low	Khandevale (1960-62); Shroff (1967-72)	Dantwala (1937); Pavaskar and Radhakrishna (1962-63); Singh et al(1979); Rao(1985);
Producer's share is higher with Coopera-tives	IIM, Ahmedabad (1976-78); Hosmani et al (1984)	--

Note: We have treated the share of 85% or higher as being contrary to the view that the producer's share is low. In the other cases, the authors have strongly argued in favour of the issue.

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While our survey is not exhaustive, the general conclusions emerging from review is that the share of the producer in the terminal market price even in the private trade channel may not be excessive and the presence of cooperatives or textile mills or other competition would enhance the share of the producer. Therefore, the emergence of CCI and the Maharashtra Federation would only improve the share of the producer in the consumer price. The CCI and the Maharashtra Federation have been able to keep their marketing cost within 15% of the selling price implying that the producer's share in these marketing channels is above 85%. However, both these agancies have required government subventions or subsidies in order to be viable organizations. In other words, the producer's share in final price could be increased by these state agancies only at the cost of their financial viability.

IV.2B Reasonable Price to the Farmer

CCI and Maharashtra Federation have generally paid above the Minimum Support Price

Cotton producers have been assured of a minimum support price over the years so that they could cover all the paid out input cost as well as a reasonable return to their labour. However, the MSP fixed by the Commission on Agricultural Costs and Prices has not always covered the cost of production which included return to family labour also. As seen in the data from 1981-82 to 1991-92, the weighted average MSP for cotton was lower than the weighted average cost (C2) of production in 5 (out of 11) years. Even in Maharashtra, between 1981-82 and 1987-88, or a 7 year period, data is available for five years and in 3 years the cost exceeded MSP, in two years, cost was more than covered by MSP. The CCI, however, paid above the MSP generally. During 1988-89 to 1990-91, CCI paid 72% above the MSP for DCH-12 in Karnataka in one year and a low of 8% above MSP for JKHY-1 in AP in one year. Given these parameters, it can be said that both CCI and Maharashtra Federation have attempted to provide a reasonable return to the farmer even at the cost of their own commercial viability.

Maharashtra Farmers have not received higher prices than their compatriots in neighboring states

The price received by the farmers in Maharashtra has not always been more than the price received in the other states. In Gujarat for instance, the wolesale price has exceeded the final price in Maharashtra by a factor of more than 15% which allows for marketing cost in 8 out of 18 years between 1974-75 and 1991-92.

Cotton prices have increased at a lower rate than other commodities taken together (all commodities WPI) or other cash crops like groundnut and sugarcane

The WPI for cotton has increased at a lower pace than other cash crops for the period of 1970s and 1980s. In terms of price

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advantage, therefore, the state interventions could not provide a greater incentive to the cotton producer. The WPI for cotton (lint) increased at a lower pace than the all commodities WPI for the period 1970-71 to 1990-91 and only in the 1990s that the cotton price rose faster than the all commodities WPI.

Thus, while the state interventions have provided the cotton producers with prices that have covered the main costs of production, this has been done at the cost of the exchequer and this support did not neutralize the increases in competing crops such as groundnut during the 1970s and 1980s. It is important at this point to examine the impact of insulating Indian farmer from the world markets through various controls on international trade in cotton.

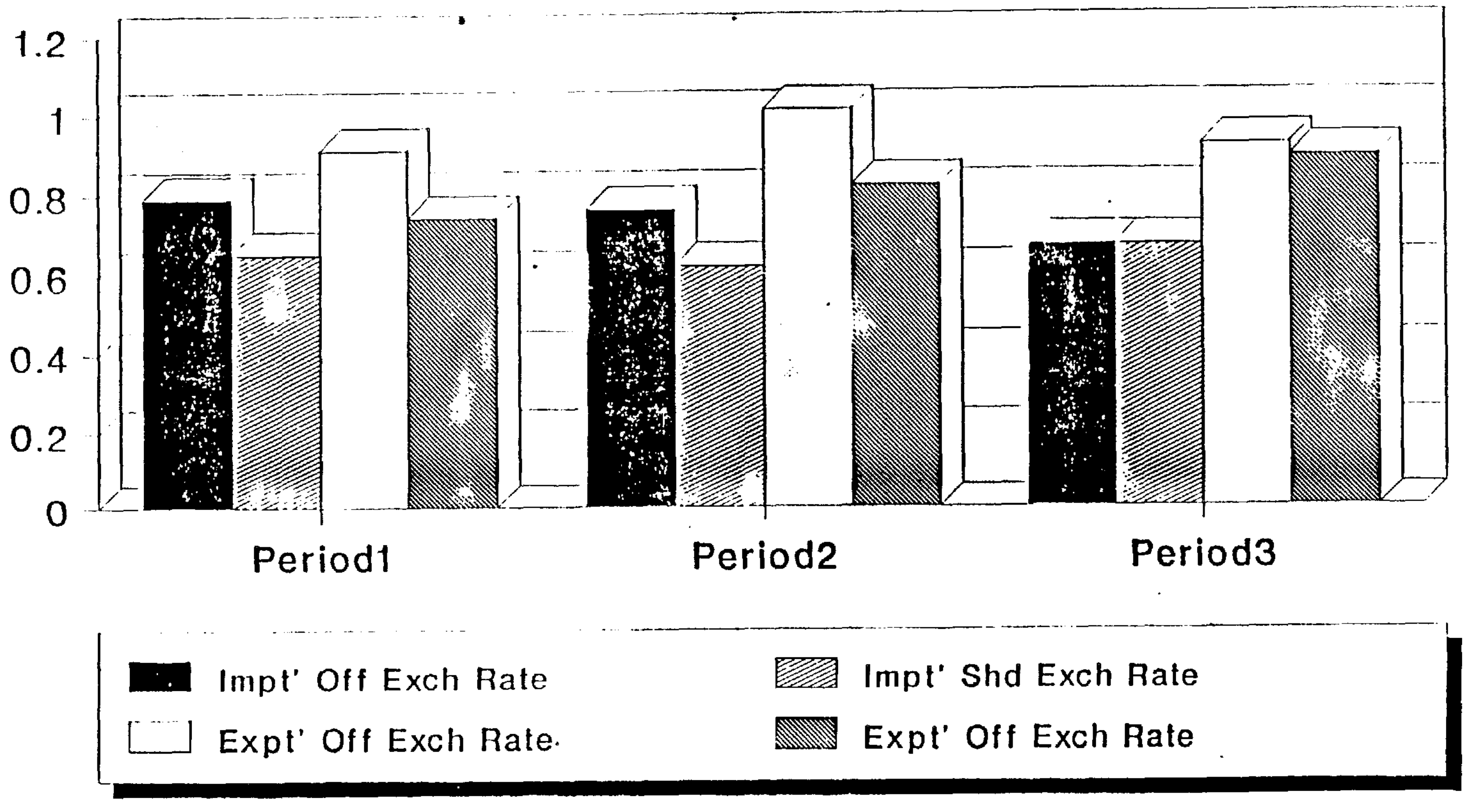
IV.2C <u>Insulating Indian Cotton Market from World Trade</u>

Indian cotton producer has received lower price than what he could have in the international markets

The impact of isolating domestic markets from the developments in the world markets may mean either protection to the domestic sector or a tax on the domestic producers of a commodity. For instance, if domestic price of cotton were to be systematically lower than the international price for a comparable variety, then Indian cotton producer may be said to have been "taxed". To this extent, domestic users of raw cotton, in this case the textile industry (including the handlooms) are "protected" or subsidised on this score. Thus, while state interventions may have reduced variability in domestic prices, it may have raised the average price level, it may have increased the share of the farmer in the terminal market price-- all this did not happen in the case of cotton-- the intervention may have kept the domestic price of cotton lower than the international market prices.

The evidence available suggests that this indeed may have happened. The Nominal Protection Coefficients (NPC) for raw cotton estimated for different periods, under importable and exportable hypothesis suggest that Indian cotton producers were getting 26 percent lower price during the period 1980-81 to 1986-87 under exportable hypothesis, if exchange rate were taken at its shadow price. In other words, during this period, cotton producers were net "taxed". While the extent of disprotection decreased over the years, it was still significant at 11 percent in the 1990s.

Figure IV.5 Nominal Protection Coefficients for Cotton under Inportable and Exportable Hypothesis



Period 1= 1980-81 to 1986-87
Period 2= 1987-88 to 1989-90
Period 3= 1990-91 to 1994-95

The estimated Nominal Protection Coefficients

	1980-81 to 1986-87	1987-88 to 1989-90	1990-91 to 1994-95
Importable hypothesis			
1. Official exchange rate	0.79	0.76	0.67
2. Shadow exchange rate	0.65	0.62	0.67
Exportable hypothesis			
1. Official exchange rate	0.91	1.01	0.92
2. Shadow exchange rate	0.74	0.82	0.89

The estimates by Gillham and others (1995) also indicate that the extent of disprotection to the cotton producers in India is significant. They have provided estimates for comaprable varieties by staple length as well as the Cotlook indexes: **for the period 1981-82 to 1992-93, they show that for the variety H-4 (long staple) the NPC is 0.71 or that tax is to the tune of about 30 percent.** However, it is not clear whether the price comparisons are at an Indian port or at an export destination. Nevertheless, the point that emerges from these calculations is that Indian cotton producers were not getting their full share in the world price due to the trade barriers against raw cotton.

There was clearly a trade off between the interests of the domestic textile industry (including the handloom, khadi etc) and the cotton growers. While price stabilization and minimum support price were to aid farmers, trade barriers were aided the industry.

IV.2D <u>Price Support to Cotton Growers in Special Cases</u>

In times of emergencies the CCI has performed price support operations as an arm of the government. But support to long staple cotton production could have been achieved with open trade policy

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One of the mandates of CCI was also to provide price support to the farmers in the years when high domestic production resulted in market prices falling below the support price. The year when CCI came into existence coincided with the break down of Indo-Pak war and there was a depressed offtake of cotton textiles as well as raw cotton by the traders in the boarder areas of Punjab, Haryana, Rajasthan and Gujrat. The Government did not fix statutory support prices for cotton for the season 1971-72, and instructed the corporation to buy cotton at stipulated procurement prices in various states. The prices of cotton declined substantially and the index number of raw cotton prices stood at 86.3 in August 1972 (1970-71=100). In a period of 3 months after this directive, CCI purchased as many as 5,17,000 bales. As a result of CCI's purchases at the stipulated procurement prices the farmers interests were protected.

The CCI provided price support to the producers of extra long staple cotton which was being developed as a measure of import substitution. The increase in the production of long and extra long staple varieties of cotton was accompanied by a stagnation in demand for these varieties. The corporation was assigned the responsibility of protecting the interests of extra long staple cotton as they substituted Egyptian and Sudanese cotton which India used to import. Because of inadequate marketing facilities farmers were unable to sell their produce in the open market in the initial years of their introduction. Despite the unsold stocks with the CCI, it continued to buy long staple cotton from the farmers. However, the market for long staple cotton was also stymied because of the controls on exports which prevailed. The domestic industry, reportedly, did not take more of long staple cotton because of the tax structure which favoured spinning short staple cotton. The higher output of long staple cotton could not be sold as there were export controls. Hence, the role of CCI though supported production of long staple cotton in the short run, this would not have been necessary if exports were free. In other words, the cotton revolution in long staple varieties can be said to have been delayed if not scuttled by the government interventions.

Purchase of and unsold stocks extra long staple cotton by CCI

Year	Purchase of Extra long varieties (lakh bales)	Value (Rs Crores)	Unsold stocks (In lakh bales)	value (Rs Crores)
1978-79	2.39	56.24	1.59	41.41
1979-80	2.21	60.73	0.89	22.50
1980-81	2.67	77.38	1.25	38.21
1981-82	2.75	69.05	2.49	61.82
1982-83	2.57	65.54	0.48	12.24

source: Shroff (1989) for data upto 1982-83

IV.3 Other Benefits

Productivity of cotton in India, measured as yield per hectare of land is one of the lowest in the world among the major producing countries. While the yields continue to be low, growth in cotton output in the last two decades has been largely due to the increases in yields. Yield increases have taken place as a result of increased area under irrigated production as well as cultivation of high yielding varieties of the crop. While there was no explicit mandate to the CCI or the Maharashtra Federation to take up development activity relating to cotton production or its processing, both the agencies have taken up activities in this direction.

In the case of CCI, it has begun to involve itself in a number of areas of research and extension with a view to improve productivity of cotton production as well as ginning and pressing of cotton. CCI has programs relating to certified seed production and distribution, financial support to research on improvements in DCH-32 variety of cotton, development and production of naturally coloured cottons, biological pest control,crop surveillance, distribution of pesticides and adoption of villages for demonstration of better cultivation practices. CCI also encourages modernisation and upgradation of the Pressing and Ginning factories in the country.

The coverage of CCI in terms of the R&D effort is small relative to the total requirements of the cotton sector. However, its involvement can prove to be a catalyst to focus on the more pressing areas of research in terms of requirements of the cotton marekt.

Evaluated with respect to the goal of reducing price instability or variability for the country as a whole there is no empirical evidence that this has happened over time, since the CCI and MF began their operations. This conclusion is to be qualified by the condition that we do not know if price variability would have been greater if the interventions were absent. But looked at from another perspective, price variability of Indian cotton is found to be greater in the domestic market than in the world markets. In other words, insulating Indian market for cotton from the world market has meant increased price variability in India. The governmentinterventions, taken as a whole in domestic and international markets, have not reduced price instability to the level seen in the world markets.

With in Maharashtra, since the inception of the monopoly purchase scheme intra-year price varuiability is lower than in other states. But this is accomplished through subsidies and not commercially viable.

There is also considerable evidence that insulating the indian farmer from world markets has essentially helped the textile industry. The nominal protection coefficient was less than unity even under exportable hypothesis with shadow exchange rate for the period 1980-81 to 1994-95. The governemtn interventions therefore, were not able to get the best available price for the farmer. It is the inability to operate as a commercial organisation that led to losses for the two agencies until the end of 1980s. It is the exopoert market and export quotas allocated to these agencies that has turned the corners for them. However, the experience so far suggests that the manner uin which the export quotas are announced and released would not get the best price for the exports to these agencies.

In recent years, CCI has begun programmes aimed at improving productivity of cultivation, ginning and pressing of cotton. These are likely to be supplememtary to the efforts of other R&D and extension agencies. As a proportion of total expenditures, the developmental expenditures of CCI is still very small. In terms of impact, it would have only a catalytic role.

Thus, while the government interventions have not succeeded in reducing price variability to the level seen in the international markets, bringing prices for Indian farmers to the level of world markets, they have benefitted from subsidies and export incomes. It is therefore important to know if the benefits that have accrued are justified by the cost. We attempt an analysis of this issue in the next chapter.

ENDNOTES

1. There was also an implicit mandate to help the sector in the enhancement of productivity of cotton production as well as processing, although this was not mentioned in any of the policy pronouncements.

2. From the beginning years of independence to the mid sixties, there were floor and ceiling prices for cotton lint. From the mid sixties the floor and ceiling prices were fixed for kapas (seed cotton). With the emergence of CCI, the floor and ceilings were removed and the Minimum Support Price continued for kapas.

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CHAPTER-V

OPERATIONS OF CCI AND MAHARASHTRA FEDERATION: AT WHAT COST?

V.1 Indicators of Commercial Viability and Operational Efficiency:

Level and behaviour of profit and loss accounts, per unit real costs of operation, and comparison of buying and selling prices (marketing margins) with other marketing agents can be various indicators of commercial viability and marketing efficiency

As has been noted in earlier chapters, the two main state agencies operating in cotton markets are the CCI and Maharashtra Federation. Together these two agencies command about one-fourth to one-third of the domestic cotton market, while their share in the export market is about three-fourth. Although the mandates of the two agencies have varied over time, their main objectives have been to bring about stability in cotton prices, ensure that the farmers receive remunerative price for their produce by increasing competition among the traders as in case of CCI or eliminating private trade altogether as in case of Maharashtra Federation. Further, CCI also had to perform the job of a canalising agency to import cotton and to buy cotton on behalf of mills of National Textile Corporation (NTC), and feed them and other mills with supplies of cotton. Lately, it has started doing developmental activity also by launching a major programme of seed production on selected farms.

In the previous chapter we evaluated the performance of these two marketing parastatals with respect to their objectives. In the present chapter, we examine whether these objectives were persued with efficiently, i.e, whether the costs of operations of these parastatals were kept at the lowest minimum feasible, or at least lower than the other marketing agents like private traders. There are several indicators of operational efficiency and commercial viability of these parastatals. The profit and loss accounts of the two parastatals, e.g, provides an idea of their commercial viability, and may also throw some light regarding their operational efficiency. Similarly, trends in the ratio of average sales realisation to economic cost of operations can also be an indicator of overall efficiency/ commercial viability in operations. The trends in the per unit real costs (adjusted for inflation) of the agencies can be examined to understand if there have been any improvement in the operational efficiency of the agencies. Further more, if the trends in real unit costs of operation are related to the size of operations, it would also give an idea whether the parastatals are having economies of scale or not. This can help in examining the optimum size of such parastatals. Analysis of structure of marketing costs, component-wise, can enlighten whether the administrative costs are unduly high, which normally is a problem with most of

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the parastatals. Finally, we may also compare the economic cost of operation (after duly adjusting for any hidden subsidies) of the two agencies with the wholesale price of cotton to assess the relative efficiency of the state agencies vis-a-vis other marketing agents dealing in cotton. This chapter uses various indicators to examine the operational efficiency/commercial viability of the two parastatals.

V.2 <u>Profits and Losses: Commercial Viability of CCI and Maharashtra Federation</u>:

CCI could earn profits only in 14 out of 25 years of its existence despite a clear cut mandate to operate on commercial lines, while Maharashtra Federation has been eating into the Price Fluctuation Fund and could not have survived without the government support

The annual reports of the CCI for various years reveal that in the first 10 years of its existence (1970-80), it made profits in 6 years; in the next 10 years (1980-90), there was profit in only 3 years. In the period from 1990-91 onwards, the Corporation has made profits for all the 5 years so far. In the last 25 years, thus, CCI has made profits in 14 years. The highest profit in absolute terms was Rs 36.21 crores in 1993-94, while the highest loss was Rs 34.95 crores in 1981-82 (Annex Table-5.1). But these absolute figures of profits or losses do not convey the right message as they have not been normalised for inflation over time. Thus, strictly speaking, they are not comparable over the 25 year period. They need to be converted either at constant prices taking care of the inflation rate in between or taken as a ratio to say gross receipts so that inflationary impact on the two variables- profits or losses and gross receipts, is cancelled out. We have done this latter exercise. Profits and losses are taken as percentage of gross receipts over the 25 year period and shown in Figure-V.1a. Highest profit to receipts ratio crosses 9 per cent in 1975-76 while the highest losses to receipts percentage touches (-) 9 in 1981-82. Since 1988-89, CCI has been making continuous profits and also paying tax on its profits.

On the other hand, it is bit difficult to define the very conept of profit/loss in case of Maharashtra Federation (MF). This is because of the PFF. Even if MF makes `profits' on its current operations, i.e, earns higher than the cost of purchases plus other marketing costs, still it can show negative balance in its PFF due to accumulated losses. Under the pricing scheme of cotton in Maharashtra, the Federation can not use the entire amount of `profits' to offset the accumulated losses. Only a part of `profits' can be used to adjust losses in PFF. This is because the Federation is bound by its rules that in case the final price being paid to the farmer exceeds the guaranteed price, not more than 25 per cent of that excess can be put to PFF. Thus, to examine the profit and loss situation of the federation, one

Fig V.1a Profits of CCI as % of Gross Receipts

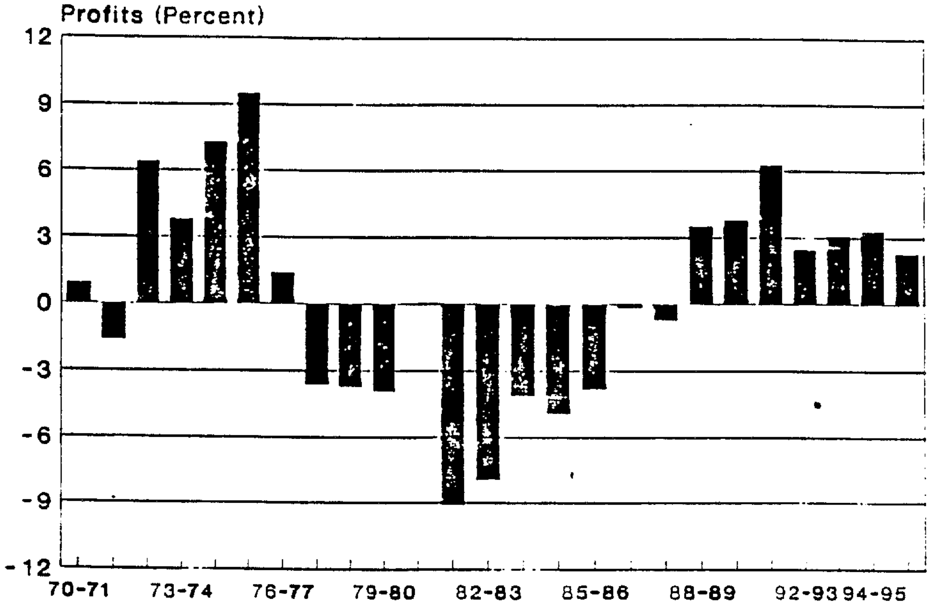
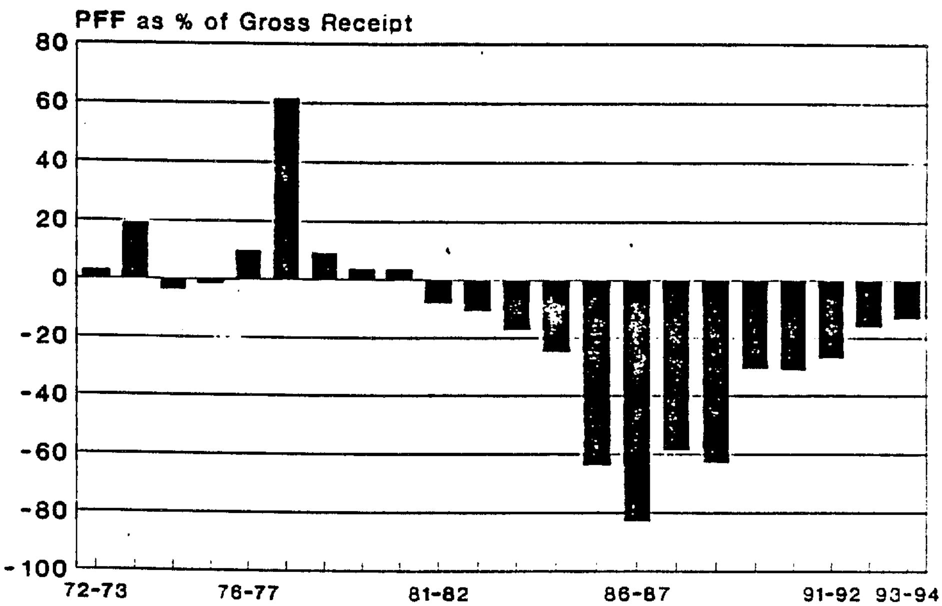


Fig V.1b Balance in PFF as % of Gross Receipts: Maharashtra Federation



PFF=Price Fluctuation Fund

should look at at least two variable, amount credited to PFF and balance in PFF. Both these have been presented in Annex Table 5.2. The variable `amount credited to PFF' was negative only in 8 out of 22 years, highest being (-)Rs 308.1 crores in 1985-86. But if one looks at the balance in PFF, it remained negative in 15 out of 22 years. Normalising it by gross receipts of the Federation, we obtain balance in PFF as percentage of gross receipts, which is depicted in Figure-V.1b. It is quite clear that the ***hugh losses that MF incurred during mid 1980s could not be settled even after a decade. It is still reeling under a negative balance of PFF to the tune of Rs 144 crores in 1993-94***. Federation would have had to wind up its operations had the state government not come to its rescue by a contribution of Rs 283.67 crores. Thus, at the overall level, operations of the Federation have not been commercially viable without support from the state government.

What has caused this type of a situation to arise? In theory, there can be several reasons for these losses, such as:

(a) higher price paid to the farmers relative to the market price;

(b) higher cost of marketing relative to the margin between the purchase price and the selling price; and

(c) inability to dispose off the stocks efficiently at a price to cover its costs of stocking and operations; etc.

Although all these reasons contributed to the losses of MF in varying degrees, it is somehat amusing to find that ***the primary reason perhaps was improper grading of cotton by the Federation***. The cotton of 'inferior quality' had often been graded as `superior quality'. This interesting fact was revealed by the High Level Committee on Monopoly Cotton Procurement scheme in Maharashtra (April, 1987), which went into the reasons behind huge losses of the scheme in 1985-86. It appears that the dispute relating to grading of cotton between farmers and the Federation, which was settled by the Wandha Committee, favoured farmers. As a result, Federation had to pay to farmers high guaranteed price for `superior' quality cotton, but could not recover it while selling in the market. The years of 1984-85 and 1985-86 were also years of bumper crop of cotton in Maharshtra as well as in the country. Maharshtra Federation was strained by paying high guaranteed prices but received low sale prices, resulting into a net loss of Rs 77 crores in 1984-85 and Rs 308 crores in 1985-86. *These losses could not be nursed from the PFF or CFF. Finally, the state government had to come to rescue of Maharshtra Federation to fulfil its commitment of paying the guaranteed price*. The government contribution to the scheme was Rs 51.4 crores in 1984-85 and Rs 283.67 crores in 1985-86. If it were not for this contribution by the state government, the share of grower which was 93.2 per cent and 115.8 per cent of gross

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receipts of the Federation in 1984-85 and 1985-86 respectively, would have been as low as 83.2 per cent and 74.2 per cent respectively.

It is also interesting to note that by such policies Federation created further distortions in neighbouring states. It led to hugh inflow of cotton into Maharashtra from neighbouring states of Madhya Pradesh and Gujarat. The Federation landed up procuring 29.88 lakh bales against Maharashtra's production of 19.8 lakh bales. This happened because the guaranteed price in Maharashtra was substantially above the support price prevailing in neighbouring states. Thus, the Federation `subsidised' not only the farmers of Maharashtra but also the farmers of neighbouring states, which further aggravated its financial problems. From 1986-87, the Federation followed a policy of fixing guaranteed price at support level. If the prices prevailing in other states were substantially higher than the support price, an advance additional price was paid to cotton growers which was adjusted in the bonus. As a result, the share of farmers in the post-1985-86 period averaged to only 78.5 per cent of the Federation's receipts. It was slightly higher (83.04%) in 1993-94 because in this season growers received 90 per cent of profits while only 10 per cent was credited to the PFF.

The accounts for the 1994-95 and 1995-96 season have not yet been finalised as the scheme is holding large amounts of unsold stocks. In the 1994-95 season, the procurement was 11 lakh bales of which only 3.5 lakh bales have been sold while 7.5 lakh bales have yet to find buyers. Similarly, in 1995-96 with a massive procurement of 26.5 lakh bales, 15 lakh bales are sold while 11.5 lakh bales are still in stock (as on May 1996). Holding stocks of 19 lakh bales is naturally going to attract heavy carrying costs and this is further going to weaken the commercial viability of the scheme.

Further, an analysis of available data (Annex Tables 5.1 and 5.2) indicates that the "effective sale price" of the CCI and MF for the cotton it purchased from the farmers exceeded the purchase price by more than 10% in very few years until the 1990s. As the marketing costs have generally exceeded 10% of the selling price, except in few selected years, the losses of CCI and MF are related to the fact that they were unable to sell the procured cotton at remunerative prices. Often, and particularly during mid 1980s, they were saddled with large quantities of undesired stocks of cotton, which raised their costs of operations and resulted in large losses.

These losses of CCI and Maharashtra Federation would have been higher had the two parastatals not received preferential treatment in allocation of export quotas.

Few points may be worth noting with regard to the profit

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and loss accounts of the two parastatals. First, these losses are underestimates of real situation which would have prevailed had the two organisations not got preferential treatment in export quotas. It was demonstrated in the previous chapter that Indian cotton prices remain below world prices in most of the years. Thus, exports are a lucrative area of marketing. Since 1978 India has turned out to be a net exporter of cotton. But the exports are heavily regulated through quotas and minimimum export prices etc. The export quotas are allocated by the government, and CCI and MF get a special favour in this respect (see Figure-IV.--,in Chapter IV). It indicates these export quotas and subsequent profits on these exports helped contain overall losses of these parastatals, else losses would have been much higher. Second, one of the important underlying reasons for the losses in both cases, presumably, is their inability to judge the market sentiments and quickly unload the stocks. (In case of MF, wrong judgement of `quality' led to this situation). The undesired stocks, especially during mid 1980s, and subsequent high interest costs, extend empirical support to this argument. Thirdly, Maharashtra Federation used to get concessional credit at 13.5 per cent against the market rate of 16 to 18 per cent, at least up to 1985-86. After that, Maharshtra federation also paid 18 per cent, and the concessional interest rate subsidy was thus withdrawn. What this implies is that upto 1985-86, the losses are underestimated. If Maharshtra Federation had to pay market rate of interest, the losses would have been higher. Fourthly, these losses have been turned into profits since late 1980s, and the financial situation of the two parastatals has improved, more so in case of CCI than for MF. The MF is bound by its own rigid rules regarding contribution to PFF. As a result, while it is making profits, it is still not able to wipe out negative balance in PFF indicating continuing support by the state government.

The above analysis clearly reveals that the two parastatals had made huge losses at least upto the middle of 1980s. Their operations were not commercially viable in most of the years. As a result, the State had to inject lot of financial support to make them survive. Since mid 1980s, CCI has turned tables and emerged as commercially viable organisation. But Maharashtra Federation has yet to wipe out its accumulated losses, despite having been able to earn profits lately. Favourable turn in the Balance Sheets of the two parastatals has been facilitated by preferencial treatment given to them in export quotas, especially of long staple cotton.

Another indicator of commercial viability can be the ratio of sales realisation to financial cost. Looked at from this angle also, one finds a similar picture. While both the parastatals had downswings, especially during early and mid 1980s, CCI was quick enough to recover. Since, 1988-89 this ratio has turned favourable to CCI. But in case of Maharashtra Federation, the cumulative losses still exist. This is because of the inflexible nature of the schemes, where only a maximum of 25 per cent of the excess of fianl price over guaranteed price can be transferred to PFF. It is clear that without government's support, it would have been very difficult for the Federation to continue its operations.

V.3 Real per Unit Costs of Operation: The question of Scale Economies

It would be interesting to examine how the per unit costs of operation of the two parastatals have behaved over time. To eliminate the impact of inflation, these need to be converted at constant prices. If they are related to the scale of operations, they can throw interesting light on whether the two parastalas enjoy economies or diseconomies of scale. This can be useful in deciding the optimum size of their operations. We make a modest attempt here in this direction.

For working out the real per unit cost of operation, first one needs to define the scale of operation. There are two relevant variables in this context- current purchases and opening stocks. Logically, one should take the two together. In case of CCI, both these variables are available, but in case of Maharashtra Federation, opening stock figures could not be obtained in physical terms. Thus, in case of CCI, we treat purchases during the year plus opening stocks as the relevant variable, while in case of MF only current purchases as the relevant variable, representing the scale of operation. For CCI, however, we also do an alternative exercise by taking only current purchases as the relevant variable, so that results are comparable with those of MF. Second, the current year nominal costs need to be converted to constant price costs to make them comparable over time. For this, we make use of the General Wholesale Price Index (GWPI), 1981-82=100. The resulting estimates are presented in Figures-V.2a, V.2b, and V.2c (also see Annex Tables-5.3a, and 5.3b).

Looking at the real per unit cost of marketing of CCI (at 1981-82 prices) over the period 1970-71 to 1994-95, one observes wide fluctuations. But fluctuations are wider when scale of operation is defined by only the current purchases. Nevertheless, a pattern, albeit weak, seems to be emerging. When one takes a comprehensive definition of scale of operation encompassing opening stocks, the pattern seems to be that of inverted `V'. ***This indicates that up to a scale of say about 12 lakh bales, CCI experienced diseconomies of scale as the real per unit cost of marketing increased up to that level. Thereafter it declined meaning thereby that it started experiencing economies of scale in marketing***. However, when the scale is defined by the current purchases only, the declining part of the plot seems to be weakening. There appears diseconomies of scale in marketing operations of CCI. ***The situation becomes interesting in case of MF, where one finds existence of strong diseconomies of scale.***

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Fig V.2a Scale Economies in CCI's Operations

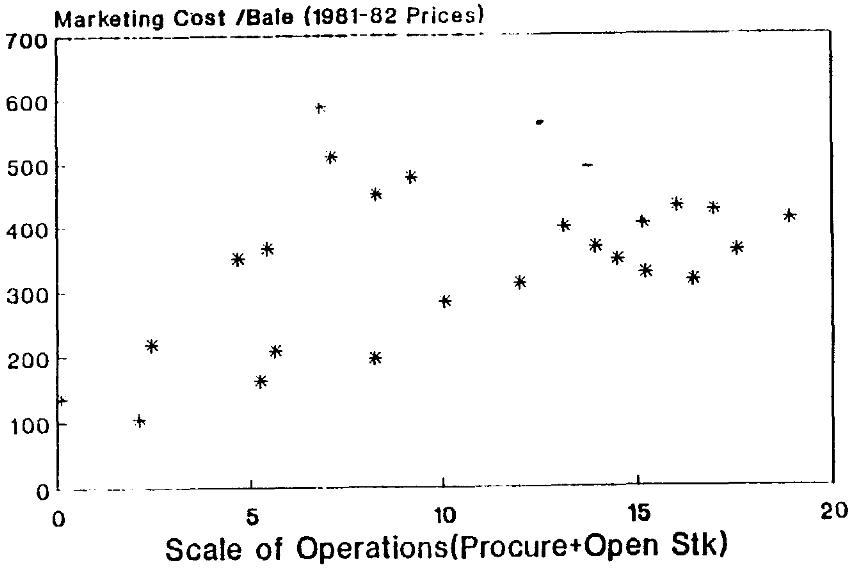


Fig V 2b Economies of Scale in CCI's Operations

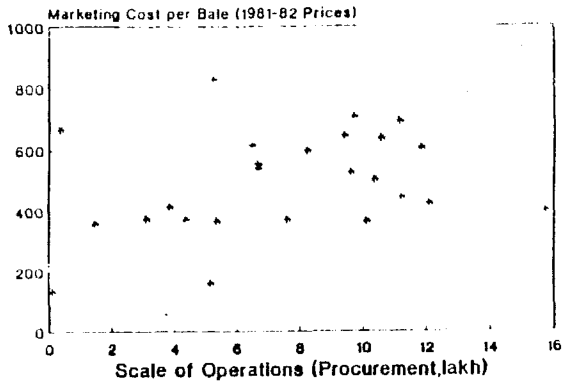
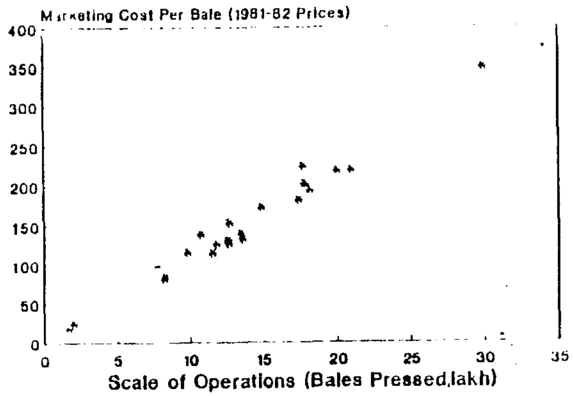


Figure V.2c Economies of Scale in Operations: Maharashtra Federation



The cluster of plots (Figure-V.2c) is so neatly arranged in an ascending order that it speaks of high statistical significance.

In terms of the temporal behaviour of real per unit costs of marketing operations of CCI, one finds that they were lowest at Rs 104.41 per bale in 1974-75 when the scale of operation was also one of the lowest, i.e, 2.11 lakh bales (purchases of 0.33 lakh bales and the remaining as opening stocks. This was next only to 1970-71, the very first year of operation of CCI, when it made purchases to the tune of only 0.11 lakh bales, and there were no opening stocks). They increased significantly during the first half of 1980s, when the scale of operation was also sizeably higher than that in 1970s. But since the second half of 1980s, the per unit cost came down (except in 1987-88), while the scale of operations remained fairly large. Thus, while temporally viewed over the last 25 year period, the real per unit costs of operation of CCI also revealed an inverted `V' behaviour.

In case of Maharashtra Federation, the temporal behaviour of per unit marketing costs (real) appears to be increasing over time (Annex Table-5.3b). Although, statistically it is not as smooth as is its relation with scale of operation, yet the two move in similar direction.

It may be interesting to analyse why there are strong diseconomies of scale in operations of MF. Two components of marketing costs seem to be contributing to this most. One is high interest burden, especially on unsold stocks, and the other is rising real salaries and other benefits (per bale) of the staff in Maharashtra Federation. As pointed out earlier, there have been years, especially in mid 1980s, when MF landed up procuring significantly more than even the production of cotton in Maharashtra due to its higher guaranteed prices. It resulted into a situation where these stocks could not be easily disposed off, and interest cost of carrying these stocks became high. This story is often repeated in Maharashtra. Thus, large procurement of cotton by MF signals that it would have to carry high interest costs as the market in neighbouring states would not be good. This leads to diseconomies of scale.

V.4 <u>The Structure of Marketing Costs</u>:

Marketing costs of CCI and Maharashtra Federation basically comprise of ginning and pressing charges, salaries and other benefits being given to the staff of these organisations, interest on working capital that is required to buy cotton and store it till it is sold, insurance of stocks, and other miscellaneous expenses. We have seen the behaviour of total marketing costs (in real terms on per bale basis) with respect to the scale of operation. But how much do they form as part of the selling price? This is a relative parameter giving an idea of the level of marketing costs. The data below shows that

CCI's marketing costs in relative terms had been quite low (5.14 per cent) during the first five years of their operation. Very quickly, these caught up with the cost levels of Maharashtra Federation, especially during 1980-81 to 1984-85 period. This is the period, when both parastatals made losses, and became the subject of severe criticism. Thereafter, CCI has made substantial improvements. It could reduce its marketing costs from 16.92 per cent during 1980-1984 period to 10.73 per cent by 1990-92 period. But this could not happen with MF, which remained saddled with high cost structure of about 15.7 per cent of its selling price.

Year	Marketing Cost as % of Selling Price	
	CCI	MSCGCMF
Average for		
1970-71 to 1974-75	5.64	13.99
1975-76 to 1979-80	11.94	12.80
1980-81 to 1984-85	16.92	16.10
1985-86 to 1989-90	13.68	16.20
1990-91 to 1992-93	10.73	15.70

What have been the relative shares of different components of marketing costs in the operations of both parastatals? How have they changed over time? Few points worth noting in this regard are: First, that CCI buys large amounts of pressed bales while the MF buys larger amount of kapas and gets it ginned and pressed. This is due to the difference in their respective roles. While CCI has acted as a canalising agency, and feeds the mill sector, especially NTC mills in earlier years, it transacts business more in bales than in kapas. On the other hand, MF is closer to the farmers of Maharashtra, especially in its price support operations. There is no private trade that operates in buying cotton from farmers in Maharashtra. As a result, its operations start with làrge buying of kapas, and therefore its ginning and presing charges form a larger proportion of marketing costs than that of CCI. For the entire period for which we have the detailed cost structures, on an average, ginning and pressing charges accounted for a little asbove 30 per cent of the marketing costs of MF as against only 22 per cent in case of CCI. In both cases, over time, this component has revealed some variation (Figure-V.3a and V.3b; also see Annex Tables 5.4a and 5.4b).

Second, interest cost in case of CCI is the most dominant of all marketing costs. On an average it formed 39 per cent of the marketing costs over the period 1970-71 to 1994-95. It went as high as 62 per cent during the five year period 1980-81 to 1984-85. This is quite in contrast with interest component in Maharashtra Federation's marketing costs, which on an average

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Figure V.3a Structure of CCI's Marketing Cost

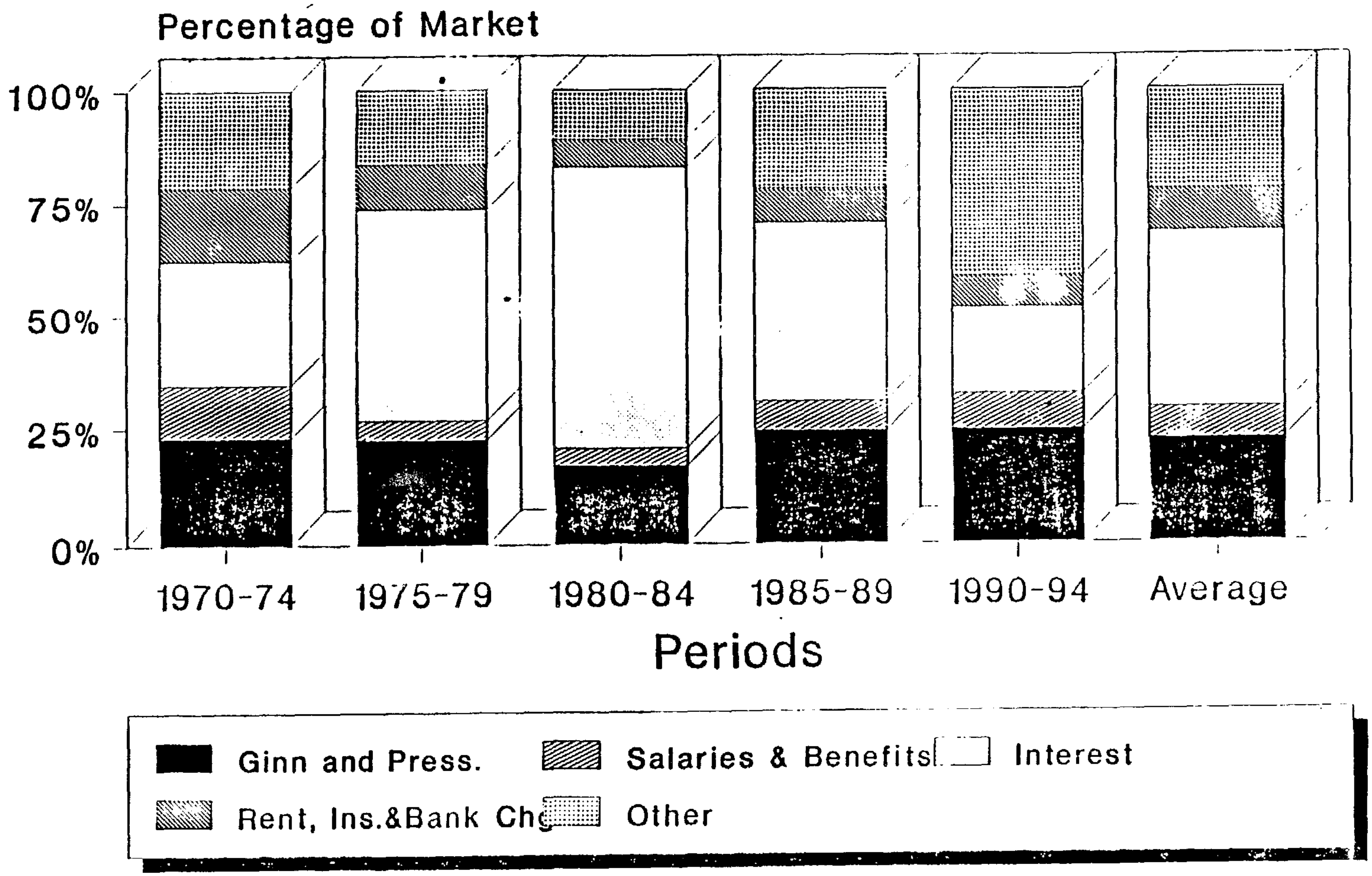
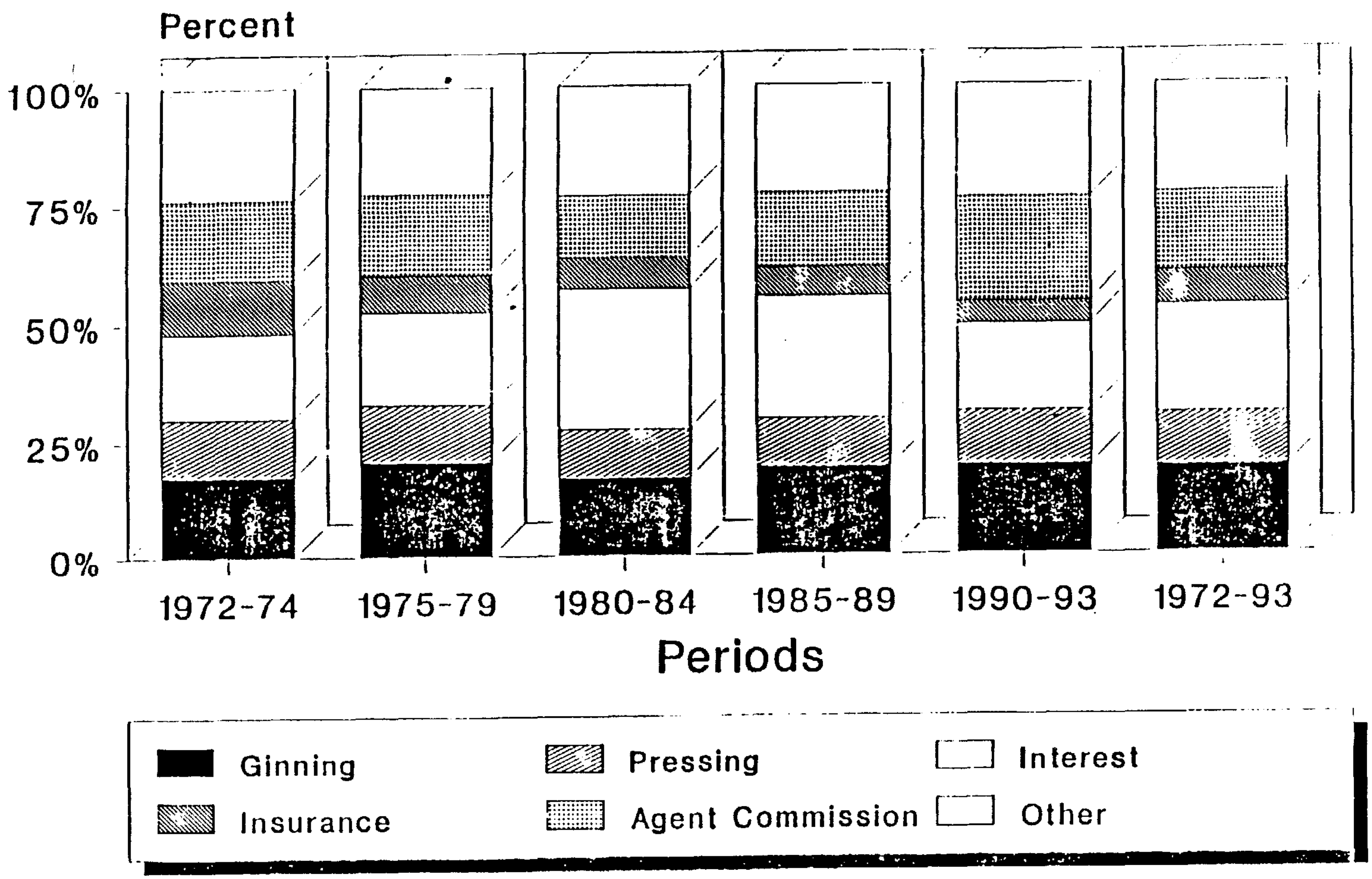


Fig V.3b Structure of Marketing Cost
Maharashtra Federation



1972-73 to 1993-94) was 22.74 per cent. Although during 1980-84 period, it also went up to 23 per cent, it was still way below that of CCI. Two reasons for this are as follows: a) CCI had been getting funds at 18 per cent while MF used to get (at least up to 1985-86) funds at 13.5 per cent. Secondly, CCI used to import cotton in earlier years based on the crop forecasts. Crop forecasts have been quite notorious in case of cotton. In the absence of any reliable crop estimates, CCI used to play safe and import lot of cotton in several years. If domestic production turned out to be satisfactory, imported cotton was difficult to unload on profitable basis, as domestic prices in most of the years were below import parity prices. So CCI would remain saddled with lot of unsold stocks leading to its increased interest burden.

Third, the component of 'other costs' is quite a mixed bag. It has fluctuated widely in case of CCI ranging from 10.95 per cent during 1980-84 to 41.9 per cent during 1990-94. It includes the corporate income tax that CCI has been lately paying on its profits. In case of MF, other costs include the salaries and other benefits of the staff. These have retained their relative share in total marketing costs over 1972-93 period with in a narrow band of 22.83 per cent during 1975-79 to 24.29 per cent during 1990-93 period, with an average of 23.4 for the entire period covered in the study.

V.5 <u>Are marketing costs of parastatals comparable to those of private trade or other marketing cooperatives?</u>

In the previous chapter, it was shown that the farmers' share in sale price of the private trader hovered around 85 per cent in most of the years in most of the regions. This finding was supported by a review of various micro-level studies on marketing margins in cotton trading conducted over time in different parts of the country by several researchers. We would avoid repeating those results here, but nevertheless reiterate that the margins of CCI and Maharashtra Federation are also broadly within the same range as that of private trade. But these is one important difference: private trade makes profits and prospers with in the same marketing margins, while parastatals have often gone to losses, Maharashtra Federation is still running negative balance in PFF. If the state exchequer has to finance the losses, it is neither good economics nor commendable commercial policy.

In many other cotton growing states, there are several cooperatives functioning. Gujarat is one of the leading states in that direction. Gujarat State Cooperative Cotton Marketing Federation is next perhaps only to Maharashtra Federation in terms of cotton transaction. It is worth having a look at the costing details of this organisation (see Annex Table-5.5). First, it may be noted that farmers' share in the selling price

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of the Cooperative is above 90 per cent, which is quite high compared to that of either CCI or MF, or even private trade. Unfortunately, the data does not have details on physical quantities handled, and thus we can't analyse issues relating to say scale economies, etc. Nevertheless, it is valuable in so far as it gives the marketing margins, and structure of costs. An examination of different components of cost reveals that interest cost, which was very high in case of CCI and MF, is within limits, and so are the other costs. It does not receive any hidden subsidy in terms of concessional interest rate on its working capital. In fact it has paid 6 per cent dividend to Gujarat government on its investment in the share capital. Gujarat Cooperative has never gone into losses, and has always given above 90 per cent of its receipts to the farmer. With this track record, it speaks quite well in terms of its commercial viability as well as economic efficiency.

How it has been able to achieve all this when in its neighbouring state, MF is still reeling under accumulated losses? Answer presumably lies in its flexible approach and minimum political interference, as also its competition with private trade. Compared to the ginning and pressing charges, say in Maharashtra under the monopoly procurement scheme, Gujarat Cooperative has paid almost half to two-third, although in both states ginning and pressing charges are fixed by the Directorate of Agriculture. But still, Gujarat specifies a range of these charges, which are lower than those announced by the Directorate of agriculture in Maharashtra. In case of salaries too, Gujarat Cooperative works out at half the cost compared to the staff in either MF or CCI. In case of MF, the commission of Chief Agent is very high, almost 5 to six times the rate at which Gujarat Cooperative can perform the same functions. Thus, in brief, component by component, Gujarat Cooperative saves much more on marketing costs than CCI or MF. The savings in cost are reflected in higher share of the farmer in gross receipts of the Cooperative, which has remained above 90 per cent.

What do we conclude on the cost of operations of CCI and MF, the two parastatals that this study focusses on? That they are no better placed in terms of giving a higher share of their receipts to the farmer than what the private trade has given or what Gujarat Cooperative has rendered. Whenever, they have tried to give a higher price to the farmer, they are saddled with large stocks, raising the interest burden, and thereby dragging them in red. MF is still having accumulated losses, while CCI has turned the corner since late 1980s.

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CHAPTER-VI
LESSONS FOR REFORMS

The setting for economic policy making in India has changed dramatically in the 1990s as compared to the previous four decades of planning era. At the macro level, there have been vast changes: the exchange rate of the rupee which used to be over valued, now responds quickly to changes in the market for foreign exchange, tariff rates have been reduced from a peak rate of 300 percent in 1990-91 to 50% in 1995-96, non-tariff restrictions have been reduced substantially for imports, there has been liberalization of the industrial licensing regime and India has signed the GATT agreement which aims at opening up of the economy to international trade in a time bound fashion. All this requires examination of options for policy in different sectors. The policies in an open economy would need to be different from a regulated economy in order to achieve the full benefits of such liberalization. It is important to anticipate what changes in policy are needed and assess their likely impact in different sectors of the economy.

Even in a small sector like cotton, new options have emerged-- from a chronic deficit situation India has emerged surplus in cotton in the 1990s. Therefore, policies which aim at controlling exports in order to address the interests of the textile industry alone would not be appropriate. Policies which insulate the Indian farmer from the world markets would not be appropriate. Similarly, policies which insulate one region of the country from another and do not allow competition also seem out of place. This study is an attempt to examine the implications of the past interventions by the government in the marketing of cotton. The specific interventions addressed in this study are the Cotton Corporation of India and the Maharashtra Cotton Growers' Cooperative Marketing Federation which implements the Monopoly Procurement Scheme for Cotton in the state.

In the previous chapters, we have examined the structure of cotton economy in India, evolution of government interventions in cotton marketing, and benefits and costs of such interventions. Performance of Cotton Corporation of India (CCI) and Maharashtra Federation was evaluated in terms of their success in achieving the objectives set out for them was analyzed. To recap, the broad objectives of the interventions were,

(a) reduce price instability in cotton,
(b) supply raw material to the public sector textile mills and
(c) improve the cotton producer's share in the final price

These goals were sought to be achieved through canalization of imports, regulation of exports, price support and purchase/sale of cotton in the domestic market. In the case of Maharashtra, purchase of cotton became the sole right of the Federation with the movement of cotton between the state and other states becoming regulated. Both CCI and Maharashtra Federation have developed infrastructure for purchasing and

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selling of cotton both in the domestic market as well as internationally.

The analysis presented in this study clearly shows that price instability was higher ~~lower~~ in the domestic markets than in international markets for cotton (lint). This suggests that insulating Indian cotton producers or consumers from the world markets by canalization and export controls did not lead to higher price stability. There was also no clear reduction in the price instability in the domestic markets since the setting up of CCI, if we analyze the data for inter year variation in prices or the intra-year variation in prices. Thus, CCI's operations were not enough to reduce price variability to the levels seen in the period before the intervention.

Price variation in cotton in Maharashtra was found to be lower than in other neighboring states since the setting up of Maharashtra Federation but this was achieved by subsidies to the Federation.

On this score, the state interventions have not succeeded in achieving their objective, even if they have partially achieved the objective, the effort would not be sustainable without recourse to subsidies.

The role of CCI as a supplier of raw material to the public sector mills appears to be limited. It is only one of the suppliers of cotton to the public sector mills along with the private traders. The initial expectations with regard to this role for CCI have been revised. This suggests that CCI needs to operate only commercial basis in supplying cotton to public sector or other consumers.

The objective of providing a fair price to the farmers has had mixed results. While the share of farmers in the final price for their produce is comparable for CCI or Maharashtra Federation with the private trade, the cooperatives in Gujarat have been more successful than the former two organizations. Cotton prices have fallen until 1990s in relation to the all commodities WPI while they have also fallen in relation to the cotton mill cloth WPI, indicating that the interventions did not "protect" cotton farmers' interests. More importantly, insulation of Indian cotton economy from the international markets did not prove to be to the farmer's advantage. The nominal protection coefficient for cotton for the period of 1970-1995 was generally less than unity.

With the rise in exports, the state agencies have been able to improve their earnings as the bulk of the export quotas were allocated to such agencies. While in the case of Maharashtra Federation and the cooperatives, the higher incomes would be passed on to the farmers, in the case of CCI such mechanisms are not clear. The cost of marketing of CCI and Maharashtra Federation do not show any economies of scale indicating that bulk operations by these agencies have not led to any improved efficiency. Part of the reason for this may lie in the fact that these agencies either have monopolistic powers (as in the case of maharshtra Federation) or the losses are met by another agency (in the case of CCI until recently).

Therefore, even in the case of providing a fair price to the producer, the state interventions have not been fully successful.

In all the three major areas, the state interventions have not been successful in meeting their objectives fully. This leads to two important questions: First, should the monopoly procurement scheme in Maharashtra be abolished? Second, what should be the role of CCI in the changed scenario for economic policies of the 1990s?

On the first question, this study has shown that the monopoly scheme has succeeded in providing greater stability in cotton prices only at a cost to the exchequer. Further, the cooperatives in Gujarat have been more successful in getting a better share to the farmer in the final produce than the Federation. There appear to be strong diseconomies of scale in the operation of the Federation indicating that the Federation has no particular advantages of size. On all these counts, the monopoly nature of the scheme can hot be justified. The Maharashtra Federation should function as a commercial organization in competition with other agencies. The monopoly scheme should be abolished.

On the second question, the study has shown that CCI's role first as a canalizing agent and as a supplier of cotton to public sector mills has diminished or disappeared. Its operations are now more on commercial basis. However, CCI's benefits from the export quotas allocated to it by the government. Thus, true efficiency of the agency can not be assessed. CCI's efforts to improve productivity in cotton cultivation and processing are important initiatives. But, they are not the main functions of the marketing agency. If the input improvement programs can be commercially viable, then CCI would have to undertake such activities. Otherwise, this activity would be duplicating the efforts of other government agencies.

These results suggest that in the cotton sector, policies of the government both at the central and state level would have to undergo major changes. It is clear that there should be greater integration of the domestic market with the world market. There should be greater competition in cotton trade. There is enormous potential for improvements in cotton yield in the country. Improvements in the productivity of cotton would further strengthen India's comparative advantage in cotton production vis-vis other countries. If cotton prices are to be controlled in order to safeguard the interests of the textile industry, then it does not make economic sense to do so at the cost of Indian farmer. Perhaps, there should be an income subsidy to the textile industry-- in the handlooms, powerlooms or the mill sector.

The main recommendations of this study are listed below.

The Main Recommendations

1. As market reforms proceed, one expects that controls which insulate the economy from the world economy would diminish. Accordingly, in order to fully exploit India's relative efficiency in cotton production, it is necessary to establish its role as a reliable supplier of cotton. It is also necessary to remove the factors that restrain efficient operations of the marketing agencies. In this direction, following steps are suggested:

- A minimum annual export quota of 100,0000 bales of cotton (one million) should be announced irrespective of crop size. This is less than 10% of the crop output in the recent years. Alternatively, 10% of the average of cotton output in the last two years may be taken as the minimum export for any given year. If there are shortages, imports should be allowed with a reasonable level of duty. The minimum exports provides the basis for India's emergence as a reliable source of cotton in the world markets. Over time, the minimum level of exports can be removed. Minimum export prices also should be abolished as has been done recently.

- The quotas should be allocated increasingly to the private sector as it has been the experience that the private trade has been more successful in meeting the quotas allocated than CCI or other state agencies. Finally, there should be no allocation of quotas. Preferential treatment to CCI and Marketing Federations should be eliminated. Exports would have to be undertaken on the basis of commercial viability.

- Imports should continue to be under OGL with a reasonable level of duty of say, 5 to 10%.

- Cotton Trade should be brought outside the purview of Essential Commodities Act. This will also mean that stocking limits for traders should be eliminated.

- Selective credit controls on cotton trade should be abolished.

- Futures trading is a better option than price controls. The option to allow futures trading in cotton should be re examined.

2. The monopoly purchasing scheme also appears inefficient in serving farmers' interests. The state purchase scheme should be run in competition with the private trade.

3. The CCI's role should be purely to act as a marketing agency on commercial lines. If input improvement is commercially viable, CCI should undertake such activities. It would have to continue to undertake price support operations depending on government's policy in this regard.

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The study has not addressed the problems relating to the textile sector. Clearly, policies relating to these would also have implications to the cotton sector. However, the need to support handlooms and cheap cloth for the poor should not be met by providing disincentives to another single sector such as cotton. Doing so only distorts allocation of resources in this sector in favor of other enterprises which may not be the best use of productive resources in the economy.

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Table II.1 Shares of Different Sectors in Fabric Production (%)

Year	Mill	Handloom	Powerloom	Total
1988-89	17.93	33.39	48.68	100.00
1989-90	16.64	32.63	50.73	100.00
1990-91	14.32	32.63	53.05	100.00
1991-92	13.65	33.60	52.76	100.00
1992-93	10.50	34.97	54.53	100.00
1993-94	9.40	36.31	54.29	100.00
1994-95	8.84	35.64	55.52	100.00

Source: Handbook on Textile Industry, ICMF, 1995

Table II.2 Exports of Textile Products

Year	Foreign Exchange Earnings Rs Crore
1970	130
1971	126
1972	174
1973	265
1974	373
1975	310
1976	596
1977	606
1978	592
1979	737
1980	853
1981	958
1982	920
1983	963
1984	1132
1985	1522
1986	1654
1987	2667
1988	2993
1989	3758
1990	5090
1991	7089
1992	10323
1993	13840
1994	18127
Average Annual Growth Rate(%)	
1970 to 1979	25.26
1980 to 1989	18.85
1990 to 1994	37.08

Table II.3 Area, Production and Yield of Cotton (lint) for
Major Producing Countries (Five year averages)

	Production (Thous M Tonnes)		Area (Million Hectares)		Yield (Kg/Ha)	
	1946-50	1991-95	1946-50	1991-95	1946-50	1991-95
USA	2609.4	3670.2	8603.7	4904.4	303.3	748.3
Brazil	291.6	580.2	1950.7	1568.6	149.5	369.9
China	169.8	4719.4	2347.0	5995.2	72.3	787.2
Egypt	311.4	328.2	552.9	379.0	563.2	866.0
India	543.6	2192.8	5139.8	7558.6	105.8	290.1
Pakistan	181.9	1859.8	1224.8	2849.2	148.5	652.7
Mexico	118.7	86.4	395.9	118.4	299.8	729.7
Central Asia	519.9	2320.0	1456.2	2957.0	357.0	784.6
Other	570.1	3361.2	4603.5	6510.4	123.8	516.3
Total	5316.4	19118.2	26274.7	32840.8	202.3	582.1

Source: From Gillham and others (1995)

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Table II.4 Distribution of Cotton Output
by Staple Length (%)

Period	Superior Long	Long	Superior Medium	Medium	Short
1968-70	0	25	50	5	20
1973-75	25	9	43	10	13
1986-88	30	9	50	2	9
1990-91	30	10	49	1	10
1991-92	30	6	52	1	11
1992-93	29	8	50	1	12

Note: Superior long is 27mm or above. long is 24.5-26mm, Superior medium is 22-24mm, medium is 20-21.5mm and short is 19mm and below.
Data: Chaudhary, S (1995) and East India Cotton Association

Table II.5 Trends in Area, Production, Yield and Irrigated Area Under Cotton

YEAR	Area Thousand Hectares	Production Thousand Bales(170kg)	Yield KG/HA	Irigated Area %
1952	6556	3277	85.0	9.1
1953	6359	3194	85.4	8.5
1954	6987	3944	96.0	8.4
1955	7546	4250	95.7	9.8
1956	8086	3998	84.1	10.0
1957	8019	4924	104.4	11.0
1958	8014	4744	100.6	12.7
1959	7964	4665	99.6	12.5
1960	7295	3515	81.9	12.9
1961	7609	5314	118.7	12.7
1962	7974	4850	103.4	13.0
1963	7774	5293	115.7	14.1
1964	8221	5439	112.5	15.3
1965	8271	5678	116.7	15.5
1966	7942	4819	103.2	15.9
1967	7836	5035	109.2	16.1
1968	7995	5521	117.4	16.7
1969	7636	5144	114.5	16.5
1970	7731	5255	115.6	16.4
1971	7604	4499	100.6	17.3
1972	7800	6950	151.5	20.3
1973	7679	5735	127.0	21.0
1974	7574	6309	141.6	22.1
1975	7562	7156	160.9	22.9
1976	7350	5950	137.6	23.5
1977	6890	5839	144.1	24.6
1978	7870	7243	156.5	26.2
1979	8120	7958	166.6	27.2
1980	8130	7648	159.9	27.5
1981	7820	7010	152.4	27.3
1982	8060	7884	166.3	27.7
1983	7870	7534	162.7	29.0
1984	7720	6387	140.6	29.9
1985	7380	8507	196.0	28.5
1986	7530	8727	197.0	30.2
1987	6950	6905	168.9	31.1
1988	6460	6382	167.9	31.5
1989	7340	6744	156.2	32.8
1990	7700	11422	252.2	34.5
1991	7440	9842	224.9	35.0
1992	7700	9714	214.5	NA
1993	7540	11403	257.1	NA
1994	7340	10712	248.1	NA
1995	7.54	11580	261.1	NA

Source: Handbook of Textile Industry, ICMF, Bombay

Table II.6 Exports of Major Exporting Countries
(Thousand Metric Tons)

	1992-93	1993-94	1994-95	Average
China	149	166	45	120
USA	1132	1494	2068	1565
India	243	71	7	107
Pakistan	256	69	37	121
Uzbekistan	1300	1288	1150	1246
Brazil	24	1	50	25
Turkmanistan	350	390	340	360
Australia	371	367	280	339
Egypt	18	117	67	67
Sudan	58	89	76	74
Mali	140	106	127	124
Greece	120	175	237	177
World	5537	5884	6344	5922

Source: Cotton International, 1995

Table II.7 Exports of Cotton by Staple and Agencies (hundred thousand bales)

	<------ Staple cotton--->			<--- Short staple---->			<--------Total--------------->			
Year	CCI	Other Public	Private	CCI	Other Public	Private	CCI	Other Public	Private	A
1988-89	0.09	0.00	0.11	0.01	0.00	0.56	0.10	0.00	0.67	0.77
1989-90	6.14	5.47	1.00	0.07	0.00	1.03	6.21	5.47	2.03	13.71
1990-91	2.46	4.45	3.92	0.00	0.00	1.06	2.46	4.45	4.98	11.89
1991-92	0.02	0.01	0.00	0.00	0.00	0.74	0.02	0.01	0.74	0.77
1992-93	3.65	3.63	0.00	0.00	0.00	0.50	3.65	3.63	0.50	7.7[illegible]
1993-94	1.46	1.64	0.00	0.00	0.00	0.77	1.46	1.64	0.77	3.87
Average	2.30	2.53	0.84	0.01	0.00	0.78	2.32	2.53	1.62	6.47

Data: Cotton Annual, 1993-94 and East India Cotton Association reports

Table IV.1 Purchases of Cotton by CCI and Maharashtra Federation (million bales

Year	Cotton Output	Purchases by CCI and Maharashtra Federation	Purchases as % of Output
1972	6.95	0.52	7.44
1973	5.74	1.55	26.97
1974	6.31	0.31	4.91
1975	7.16	1.80	25.18
1976	5.95	0.97	16.24
1977	5.84	1.35	23.03
1978	7.24	0.67	9.21
1979	7.96	2.01	25.20
1980	7.65	2.85	37.31
1981	7.01	2.46	35.09
1982	7.88	2.58	32.68
1983	7.53	2.73	36.27
1984	6.39	1.32	20.58
1985	8.51	2.37	27.84
1986	8.73	4.47	51.25
1987	6.91	2.08	30.14
1988	6.38	1.85	29.03
1989	8.74	3.51	40.17
1990	11.42	2.60	22.79
1991	9.84	2.31	23.47
1992	9.71	1.67	17.22
1993	11.40	2.19	19.18
1994	10.71	1.78	16.58

Note: Year 1972=1971-72 etc.
Source: Cotton Annual, 1993-94, East India Cotton Association Reports

Table IV.2 Average Purchase Price Vs. Support Price for CCI Purchases

Variety	1988-89 Average Purchase Price (1) (Rs/Qtl)	1988-89 Support Price (2) (Rs/Qtl)	Percent of (1) over (2)	1989-90 Average Purchase Price (3) (Rs/Qtl)	1989-90 Support Price (4) (Rs/Qtl)	Percent of (3) over (4)	1990-91 Average Purchase Price (5) (Rs/Qtl)	1990-91 Support Price (6) (Rs/Qtl)	Percent of (5) over (6)	TE 1990-91 Average Price(7)	TE 1990-91 Average Support Price (8)	TE 1990-91 Percent of (7) over (8)
Punjab												
J-34	681	485	40.41	708	555	27.57	920	605	52.07	770	548	40.36
F-414	734	500	46.80	765	570	34.21	945	620	52.42	815	563	44.62
Haryana												
J-34	694	485	43.09	697	555	25.59	915	605	51.24	769	548	40.18
F-414	727	500	45.40	725	570	27.19	915	620	47.58	789	563	40.06
Rajasthan												
J-34	664	485	36.91	689	555	24.14	890	605	47.11	748	548	36.3[illegible]
Agatti	724	500	44.80	730	570	28.07	910	620	46.77	788	563	39.88
MP												
H-4	827	680	21.62	805	690	16.67	945	750	26.00	859	707	21.56
1007	723	585	23.59	734	640	14.69	870	695	25.18	776	640	21.20
Y-1				731	565	29.38	858	615	39.51	795	590	34.66
AP												
H-4	826	600	37.67	784	690	13.62	925	750	23.33	845	680	24.26
JKHY-1	789	600	31.50	746	690	8.12	830	750	10.67	788	680	15.93
MCU-5	894	620	44.19	878	710	23.66	950	770	23.38	907	700	29.62
Karnataka												
DCH-32	1144	665	72.03	907	755	20.13	1355	820	65.24	1135	747	52.05
Gujarat												
S-6	861	615	40.00	855	705	21.28	1030	765	34.64	915	695	31.70

Data: Various Issues of Reports of Commission on Agricultural Costs
and Prices; the average purchase price is from the annual reports of CCI

Table IV 3 Return over Cost of Production: Cotton

Year	CCI States Weighted C2 (1)	Support Price (2)	Percent of (1) over (2)	Maharashtra Cost C2 (3)	Guarenteed Price(4)	Percent of (3) over (4)
	<--------Rs/Qtl------>			<--------Rs/Qtl------>		
1981-82	365	478	30.86	489	498	1.88
1982-83	412	395	-4.22	574	488	-14.96
1983-84	428	501	17.09	448	561	25.26
1984-85	373	479	28.41	-	-	-
1985-86	349	497	42.36	-	-	-
1986-87	461	491	6.50	581	518	-10.87
1987-88	538	487	-9.47	559	520	-7.02
1988-89	580	547	-5.62	-	-	-
1989-90	525	605	15.29	-	-	-
1991-92	739	620	-16.06	-	-	-
1992-93	804	695	-13.52	-	-	-

Note:
Cost C2 is from CACP Reports for various states.
Weights for different states for aggregating cost C2 are their respective shares in the purchases by CCI in that year.
The support prices are also aggregated for comparison using the same weights as for C2, weights are also adjusted for the proportion of different varieties grown in the state.

Table IV.4 Raw Cotton Production.
Imports and Exports

(LAKH BALES 170 KG)

	Imports	Exports	Production
1957	6.37	3.12	47.07
1962	8.56	3.48	46.37
1967	8.28	2.59	50.35
1968	8.24	2.44	55.21
1969	4.54	2.01	51.44
1970	9.64	2.19	52.55
1971	9.10	2.00	44.99
1972	7.90	2.47	65.64
1973	4.68	1.84	54.17
1974	1.88	3.66	63.00
1975	1.15	0.97	71.56
1976	1.66	4.27	61.01
1977	5.78	0.39	58.39
1978	6.61	0.10	72.43
1979	0.27	1.77	79.58
1980	0.00	5.52	76.48
1981	0.00	6.98	70.10
1982	0.50	3.78	78.84
1983	0.00	6.81	75.34
1984	0.00	3.54	63.87
1985	0.75	1.79	85.06
1986	0.00	4.50	87.27
1987	0.00	13.82	69.05
1988	3.00	0.43	63.82
1989	2.32	0.96	87.44
1990	0.00	13.71	114.22
1991	0.00	11.90	97.59
1992	3.00	0.77	98.56
1993	1.15	13.77	115.83
1994	3.00	3.90	107.10

Source: Indian Cotton Annual, 1993-94,
East India Cotton Association, Bombay

Table IV.5 Price Received by the Farmers: Maharashtra and Neighbouring States for Kapas

Year	Maharashtra Final Price Realised (Rs/Qtl)	Gujarat Wholesale Price (Rs/Qtl)	AP Wholesale Price (Rs/Qtl)	Gujarat Price as % of Maharashtra Price	AP Price as % of Maharashtra Price
1972-73	266.36	NA	271.36	NA	101.88
1973-74	368.24	NA	347.00	NA	94.23
1974-75	298.50	337.28	282.62	112.99	94.68
1975-76	355.31	369.16	249.35	103.90	70.18
1976-77	514.47	548.57	394.99	106.63	76.78
1977-78	420.95	474.00	253.61	112.60	60.25
1978-79	352.92	422.85	156.06	119.81	44.22
1979-80	387.24	408.57	288.00	105.51	74.37
1980-81	532.04	579.33	NA	108.89	NA
1981-82	438.15	500.00	NA	114.12	NA
1982-83	469.15	481.60	365.87	102.65	77.99
1983-84	606.18	563.00	594.73	92.88	98.11
1984-85	479.90	555.16	469.09	115.68	97.75
1985-86	349.98	501.25	408.40	143.22	116.69
1986-87	680.19	557.50	461.90	81.96	67.91
1987-88	870.47	990.00	773.40	113.73	88.85
1988-89	773.34	705.50	686.15	91.23	88.73
1989-90	796.98	820.80	686.80	102.99	86.18
1990-91	1016.97	683.21	928.80	67.18	91.33
1991-92	1158.21	1014.16	1078.80	87.56	93.14
1992-93	951.48	NA	NA	NA	NA
1993-94					
1994-95					
Averages					
1972-73 to					
1973-74	317.30	NA	309.18	NA	97.44
1974-75 to					
1978-79	388.43	430.37	267.33	110.80	68.82
1979-80 to	(22.42)	-	(-13.54)		
1983-84	486.55	506.50	249.72	104.10	51.32
1984-85 to	(25.26)	(17.69)	(-6.59)		
1988-89	630.78	661.88	559.79	104.93	88.75
1989-90 to	(29.64)	(30.68)	(124.17)		
1992-93	980.91	629.54	673.60	64.18	68.67
	(55.51)	(-4.89)	(20.33)		

Note: Figures within brackets are percent changes over the previous period

Table IV.6 Nominal Protection Coefficients of Cotton in India
Under Exportable Hypothesis

Year	Punjab		Maharashtra		Gujarat		Andhra Pradesh	
	Official Exchange Rate	Shadow Exchange Rate	Official Exchange Rate	Shadow Exchange Rate	Official Exchange Rate	Shadow Exchange Rate	Official Exchange Rate	Shadow Exchange Rate
1980-81	0.85	0.70	1.05	0.86	1.11	0.89	0.73	0.60
1981-82	1.33	1.08	1.24	0.98	1.26	1.00	0.77	0.64
1982-83	0.99	0.80	1.00	0.83	0.99	0.81	0.74	0.62
1983-84	0.81	0.66	0.90	0.73	0.88	0.72	0.60	0.49
1984-85	0.97	0.78	1.08	0.86	0.88	0.71	0.50	0.41
1985-86	0.95	0.76	1.04	0.88	1.10	0.88	0.58	0.48
1986-87	0.95	0.77	1 07	0.85	0 98	0.78	0.76	0 64
1987-88	1.30	1.08	1.11	0.89	1.21	1.07	0.79	0.63
1988-89	1.23	0.99	1.52	1.13	1.42	1.13	0.59	0.48
1989-90	0.86	0.70	1.15	0.90	1.01	0.82	0.44	0.36
1990-91	0.86	0.72	0.96	0.78	0.94	0.77	0.46	0.37
1991-92	1.18	1.03	1.16	0.98	1.50	1.26	0.71	0.58
1992-93	0.83	0.80	0.63	0.62	0.92	0.90	0.61	0.53
Average	1.01	0.84	1.07	0.87	1.09	0.9	0.64	0.53

Note:
The shadow exchange rate is assumed to be 20% above the official rate for all the years upto 1991-92. For 1992-93, the market exchange rate is the shadow rate

Table IV.7. Nominal Protection Coeffients for Cotton at All India Level

	Importable Hypothesis		Exportable Hypothesis	
	At Official Exchange Rate	At Shadow Exchange Rate	At Official Exchange Rate	At Shadow Exchange Rate
1980-81	0.77	0.64	0.89	0.73
1981-82	0.94	0.76	1.13	0.92
1982-83	0.82	0.67	0.92	0.75
1983-84	0.68	0.56	0.74	0.61
1984-85	0.74	0.60	0.83	0.67
1985-86	0.79	0.65	0.92	0.75
1986-87	0.81	0.66	0.91	0.74
1987-88	0.92	0.76	1.10	0.91
1988-89	0.76	0.61	1.13	0.89
1989-90	0.59	0.49	0.82	0.66
1990-91	0.60	0.50	0.77	0.64
1991-92	0.83	0.70	1.19	1.00
1992-93	0.59	0.55	0.79	0.74
1993-94	0.80	0.80	1.07	1.07
1994-95	0.81	0.81	1.01	1.01

Note:
The shadow exchange rate is assumed to be 20% above the Official rate upto 1991-92 and it is the market rate after 1991-92

	Units	1970-71	1971-72	1972-73	1973-74	1974 75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
Bales Purchased	Lakhs	0 11	5.17	3.86	3 10	0 33	1.46	5.35	6 67	10 36	11 14	11 83
Value of purchases	**Rs Crores**	**1.03**	**48 28**	**48.16**	55 13	4 81	26 82	119 89	136 58	189 90	216 38	316 73
Opening stock	Lakh Bales	0 00	0.06	4 34	2 51	1 78	0 95	0 05	1 58	2 76	7 76	5 13
Value of opening stock	Rs Crores	0.00	0.45	40.32	26 02	22 73	9 71	2 32	27 66	44 06	127 31	94 58
Bales purchased + Opening stock	Lakhs	0.11	5.23	8.20	5 61	2 11	2 41	5 40	8 25	13 12	18 90	16 96
I) Value of purchases+ Opening stock	Rs Crore	1.03	48.73	88.48	81 15	27 54	36 53	122 21	164 24	234 05	343 69	411 31
II) Total Marketing Costs	**Rs Crore**	**0.05**	**3.22**	**6.90**	5 96	1 41	3.32	12.65	25 24	35 47	61 92	66 87
a) Ginning & Pressing	Rs Crore	0.00	1.65	1.87	1.60	0 13	0 88	3 56	5 13	7 76	9 35	11 94
b)Salaries+other benefits	Rs Crore	0.01	0.09	0 25	0 52	0 31	0 36	0 24	0 70	1 00	1 33	1 81
c)Interest	Rs Crore	0 01	0.60	2.73	1 79	0 43	0 82	5 27	14 27	20 04	34 62	40 77
d)'Rent insurance & bank Charges	Rs Crore	0.01	0.34	0 85	0 85	0 36	0 38	2 06	2 04	2 87	4 07	[illegible]
e)Other costs	**Rs Crore**	**0.02**	**0.54**	**1.20**	1 20	0 18	0 88	1.52	3 10	3 80	12 55	8 07
III) gross total receipts	Rs Crore	1.09	51.13	101.90	90 58	31 24	[illegible]	136.74	182 88	259 93	390 24	478 78
Purchases + Expenses + Opening stock (I+II)	Rs Crore	1.08	51.95	95.38	87 11	28 95	39.85	134 86	189 48	[illegible]	405 61	478 68
Profits	Rs Crore	0.01	-0.82	6.52	3.47	2 29	4.16	1.88	-6 60	-9 59	-15 37	0 10
Share of farmer in CCI's gross receipts	Percent	94.5	95	86 8	89 5	88	83	89	89 8	90	88	[illegible]

Note.
Item III includes seed and other income;
Item IIe includes purchase tax (1% of purchase), selling and distrib tion expenses
rates and taxes, legal and professional fees,
tax on profits

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Annex Table 5 1 Marketing of Cotton by Cotton Corporation of India

	Units	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Bales Purchased	Lakhs	10 55	9 71	5 25	6 69	15 74	8 23	6 48	4 36	10 10	12 11	11 23	9 62	9 39	7 61
Value of purchases	Rs Crores	258 25	218 09	161 37	187 27	378 96	213 37	297 81	192 30	450 41	540 29	764 89	555 58	643 27	966 85
Opening stock	Lakh Bales	3 12	6 30	3 90	0 39	1 79	6 96	0 31	0 28	1 88	4 30	3 24	4 28	5 73	2 41
Value of opening stock	Rs Crores	92 68	142 49	53 10	14 68	43.70	111 35	7 20	12 35	89 43	230 54	165 82	254 14	282 72	163 59
Bales purchased + Opening stock	Lakhs	13 67	16 01	9.15	7 08	17.53	15 19	6 79	4 64	11 98	16 41	14 47	13 90	15 12	10 02
I) Value of purchases+ Opening stock	Rs Crore	350 93	360 58	244 47	201.95	422.60	324 72	315 01	204 65	539 84	770 83	930 71	809 72	925 99	1132 54
II) Total Marketing Costs	Rs Crore	67 37	72.20	48.81	43.35	78.63	65 77	57 55	25 06	61.72	94 52	104 40	116 40	150 81	78 17
a) Ginning & Pressing	Rs Crore	12 40	10.90	6.28	8 22	24 32	11.68	9 87	6 46	17.54	23.53	27 07	24 46	28 02	23 54
b)Salaries+other benefits	Rs Crore	1.84	2 00	2 47	2 55	2 59	3 36	3 35	2 17	5 60	5 24	6 00	6 77	7 94	13 12
c)Interest	Rs Crore	43 09	45 82	32.36	24 83	35 69	30 99	21 68	9 67	18 73	22 40	23 47	30 02	22 59	7 70
d)Rent insurance & bank Charges	Rs Crore	4 38	4 73	2 56	2 79	6 38	4 55	4 18	2 03	5 35	8 48	8 12	5 94	7 31	5 73
e)Other costs	Rs Crore	5 66	8 75	5.24	4 96	9 65	15 19	18 47	4 73	14 50	34 87	39 74	49 21	64 95	28 08
III gross total receipts	Rs Crore	383 35	400 95	281.76	233.78	482 56	390 29	359 96	237 96	625 61	923 70	1061 00	955 97	1113 01	1239 10
Purchases + Expenses + Opening stock (I+II)	Rs Crore	418 30	432.78	293 38	245.30	501 23	390 49	362 56	229.71	601.56	865 35	1034 47	926 12	1076 80	[illegible]
Profits	Rs Crore	-34.95	-31 83	-11.62	-11.52	-18.67	-0.20	-2 60	8 25	24.05	58 35	26 53	29 85	36 21	28 33
Share of farmer in CCI's gross receipts	Percent	91	90	86 7	86 3	87 5	83	82 2	86	86	83 4	87 7	84 7	83 20	91 40

Note
Item III includes seed and other income;
Item IIe includes purchase tax (1% of purchase), selling and distributi
rates and taxes, legal and professional fees,
tax on profits

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Annex Table 5.2. Operations of Maharashtra Federation in Cotton

Item	Units	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
Bales Pressed	Lakhs	11.48	1.88	17.66	8.20	8.14	1.54	9.74	17.36	12.61
I. Gross Total Receipts	Rs Crore	173.71	40.62	329.18	174.32	231.72	37.54	201.14	402.29	403.11
II. Total Marketing Costs	Rs Crore	19.73	4.90	57.54	21.32	20.94	4.79	31.49	58.34	57.08
a. Ginning Charges	Rs Crore	3.99	0.83	8.82	4.55	4.63	1.00	6.13	11.01	9.11
b. Pressing Charges	Rs Crore	3.13	0.56	5.88	2.70	2.68	0.55	3.49	7.17	5.58
c. Bank Interest	Rs Crore	3.32	0.68	13.34	2.01	2.19	1.02	8.98	16.32	16.36
d. Insurance	Rs Crore	1.95	0.71	5.26	1.49	1.64	0.38	2.65	4.65	4.25
e. Chief Agent's Commission	Rs Crore	4.00	0.89	7.25	3.78	5.19	0.84	4.80	6.28	7.03
f. Other expenses	Rs Crore	3.34	1.23	16.99	6.79	4.61	1.00	5.44	12.91	14.75
IIIa. Payments to Cultivator	Rs Crore	148.92	32.93	292.28	143.00	185.76	32.30	173.95	347.19	343.44
(1) at Guarenteed Price	Rs Crore	133.67	24.95	291.63	113.10	110.75	25.64	171.24	339.56	326.96
(2) as Bonus	Rs Crore	15.25	7.98	3.28	29.90	75.01	6.66	2.71	7.63	19.72
(3) less Contribution to CFF	Rs Crore	0.00	0.00	2.63	0.00	0.00	0.00	0.00	0.00	3.24
IIIb. Payments to Cultivator net of government Contribution	Rs Crore	148.92	32.93	279.43	143.00	185.76	32.30	173.95	347.19	343.44
IVa. Payments to Cultivators as % of gross receipts	%	85.73	81.07	88.79	82.03	80.17	86.04	86.48	86.30	85.20
IVb. Government Contributions	Rs Crore	0.00	0.00	12.85	0.00	0.00	0.00	0.00	0.00	0.00
IVc. Net Payments to Cultivators as % of gross receipts	%	85.73	81.07	84.89	82.03	80.17	86.04	86.48	86.30	85.20
Va. Amount credited to PFF	Rs Crore	5.05	2.75	-19.98	9.97	25.00	0.39	-4.96	-3.20	-0.10
Vb. Balance in PFF	Rs Crore	5.05	7.80	-12.18	2.21	22.79	23.18	18.22	15.02	14.92
VI. Kapas Value at Final Price	Rs Crore	153.98	35.72	271.64	153.00	210.78	32.75	169.65	343.95	346.63
Marketing Cost as % of I	%	11.36	12.06	17.48	12.23	9.04	12.76	15.66	14.50	14.16

Annex Table 5.2. Operations of Maharashtra Federation in Cotton

Item	Units	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94
Bales Pressed	Lakhs	14.84	18.18	7.69	17.85	29.88	12.48	12.58	11.77	20.92	13.55	10.69	19.94	13.36
I Gross Total Receipts	Rs Crore	408.20	503.58	285.93	512.29	682.26	493.70	605.87	519.73	949.86	766.35	712.84	1101.22	1104.48
II Total Marketing Costs	Rs Crore	69.22	81.72	44.00	97.08	174.50	69.26	73.40	77.92	145.70	97.18	115.15	200.17	139.23
a. Ginning Charges	Rs Crore	11.36	15.06	7.39	16.34	31.53	14.38	13.88	13.81	28.27	20.72	18.17	39.62	28.16
b Pressing Charges	Rs Crore	6.75	8.88	4.21	11.76	18.06	7.43	7.35	7.50	16.09	12.01	11.07	22.47	16.57
c Bank Interest	Rs Crore	23.13	21.91	10.63	33.27	68.53	16.19	12.74	13.72	44.26	14.63	24.42	48.70	17.94
d. Insurance	Rs Crore	4.83	5.64	2.51	5.88	11.36	3.55	5.54	4.40	8.61	4.99	5.27	9.80	6.43
e. Chief Agent's Commission	Rs Crore	8.09	7.94	9.78	9.84	11.83	11.50	15.90	17.10	18.46	20.86	30.19	34.08	32.29
f. Other expenses	Rs Crore	15.06	22.29	9.48	19.99	33.19	16.21	17.99	21.39	30.01	23.97	26.03	45.50	37.84
IIIa Payments to Cultivator	Rs Crore	382.16	430.38	230.90	477.61	790.22	388.89	468.30	402.97	747.32	603.90	537.50	860.53	917.18
(1) at Guarenteed Price	Rs Crore	385.26	438.82	224.14	492.38	814.65	323.15	318.03	325.66	659.36	463.49	405.30	839.95	651.84
(2) as Bonus	Rs Crore	0.73	4.53	13.33	0.00	0.00	75.43	159.77	87.01	107.76	154.36	144.31	45.78	284.84
(3) less Contribution to CFF	Rs Crore	3.83	12.97	6.55	14.28	24.43	9.69	9.50	9.70	19.80	13.90	12.10	25.20	19.50
IIIb Payments to Cultivator net of government Contribution	Rs Crore	371.88	421.75	230.90	426.21	506.55	388.89	468.30	402.97	747.32	603.90	537.50	860.53	917.18
IVa. Payments to Cultivators as % of gross receipts	%	93.62	85.46	80.75	93.23	115.82	78.77	77.29	77.53	78.68	78.80	75.40	78.14	83.04
IVb. Government Contributions	Rs Crore	10.28	8.63	0.00	51.40	283.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IVc. Net Payments to Cultivators as % of gross receipts	%	91.10	83.75	80.75	83.20	74.25	78.77	77.29	77.53	78.68	78.80	75.40	78.14	83.04
Va. Amount credited to PFF	Rs Crore	-47.08	-21.60	4.44	-77.17	-308.10	25.21	53.62	29.00	35.20	51.45	48.10	15.26	31.65
Vb Balance in PFF	Rs Crore	-32.16	-53.76	-49.32	-126.49	-434.59	-409.19	-355.56	-326.56	-290.60	-239.18	-191.08	-175.82	144.17
VI. Kapas Value at Final Price	Rs Crore	339.00	423.86	241.93	415.21	507.76	424.44	532.47	441.81	804.26	669.17	597.69	901.00	968.20
Marketing Cost as % of I	%	16.96	16.23	15.39	18.95	25.58	14.03	12.11	14.99	15.34	12.68	16.15	18.18	12.61

Annex Table 5.1a Economies of Scale in CCI's Operations

Year	Bales Purchased Lakhs	Cost per Bale Real Proc+open ST	Cost per Bale Real Procurement
1970-71	0.11	136.38	136.38
1971-72	5.17	162.02	163.90
1972-73	3.86	195.69	415.71
1973-74	3.10	208.31	376.98
1974-75	0.33	104.41	667.61
1975-76	1.46	218.67	360.95
1976-77	5.35	366.03	369.45
1977-78	6.67	449.91	556.49
1978-79	10.36	397.57	503.49
1979-80	11.14	409.52	694.79
1980-81	11.83	423.96	607.80
1981-82	10.55	492.83	638.58
1982-83	9.71	429.49	708.16
1983-84	5.25	476.92	831.21
1984-85	6.69	510.24	539.99
1985-86	15.74	358.84	399.64
1986-87	8.23	325.55	600.86
1987-88	6.48	588.59	616.75
1988-89	4.36	350.71	373.23
1989-90	10.10	310.36	368.13
1990-91	12.11	314.75	426.51
1991-92	11.23	346.87	446.95
1992-93	9.62	365.68	528.38
1993-94	9.39	402.19	647.61
1994-95	7.61	283.69	373.53

Annex Table 5. 4b Scale Economies in Operations of Maharashtra Federation

Year	Bales Pressed Lakhs	Marketing cost Per Bale (REAL) Rs
1972-73	11.48	114.71
1973-74	1.88	24.02
1974-75	17.66	224.77
1975-76	8.20	84.60
1976-77	8.14	81.80
1977-78	1.54	17.61
1978-79	9.74	115.77
1979-80	17.36	182.31
1980-81	12.61	153.44
1981-82	14.84	173.05
1982-83	18.18	194.57
1983-84	7.69	98.14
1984-85	17.85	202.25
1985-86	29.88	349.00
1986-87	12.48	130.19
1987-88	12.58	127.43
1988-89	11.77	126.49
1989-90	20.92	219.43
1990-91	13.55	132.76
1991-92	10.69	138.40
1992-93	19.94	218.53
1993-94	13.36	140.35

5.4A.

Annex Table 5.~~2~~. Structure of Marketing Cost of CCI (%)

	1970-71/ 1970-74	1975-76/ 1975-79	1980-81/ 1980-84	1985-86/ 1985-89	1990-91/ 1990-94	1970-71/ Average
a) Ginning & Pressing	22.88	22.39	16.63	24.01	24.11	22.00
b)Salaries+other benefits	11.43	4.10	3.83	6.39	7.83	6.71
c)Interest	27.75	47.06	62.37	39.82	19.36	39.27
d)'Rent insurance & bank Charges	16.53	10.10	6.22	7.81	6.81	9.49
e)Other costs	21.41	16.36	10.95	21.97	41.90	22.52
Total	100.00	100.00	100.00	100.00	100.00	100.00

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Annex Table ~~5.5b~~ 5.4b .Structure of Marketing Cost of Maharashtra Federation (%)

	1972-74	1975-79	1980-84	1985-89	1990-93	1972-93
a. Ginning Charges	17.50	20.53	16.89	18.97	19.28	18.71
b. Pressing Charges	12.50	12.06	10.42	10.35	11.27	11.22
c. Bank Interest	17.96	19.53	29.46	25.60	18.37	22.74
d. Insurance	11.17	7.83	6.62	6.15	4.81	7.08
e. Chief Agent's Commission	17.01	17.21	13.22	15.93	21.98	16.85
f. Other expenses	23.85	22.83	23.40	23.00	24.29	23.40
Total	100.00	100.00	100.00	100.00	100.00	100.00

Annex Table 5.5 Marketing Operations by Gujarat State Cooperative Marketing Federation
(All values other than indicated are in Rs Crore)

Item	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Ia. Opening Stock	1.32	0	6.45	1.5	0.1	0.54	2.84	NA	16.01	24.39	20.65	15.18
Ib. Purchases	36.14	64.12	90.29	56.03	44.22	18.64	68.03	NA	110.29	75.24	97.63	102.54
Total	37.46	64.12	96.74	57.53	44.32	19.18	70.87	NA	126.3	99.63	118.28	117.72
II. Marketing Costs												
a. Ginning & Pressing	0.45	0.52	1.35	0.07	0.12	0.14	0.99	NA	0.94	0.54	0.8	1.31
b. Salaries & benifits	0.15	0.14	0.16	0.17	0.17	0.08	0.22	NA	0.36	0.34	0.36	0.43
c. Bank Charges	0.03	0.05	0.17	0.01	0.01	0.04	0.1	NA	0.13	0.06	0.02	0.03
d. Interest	0.96	2.19	4.84	4.26	1.24	0.72	1.99	NA	2.61	3.88	3.3	2.58
e. Contribution to PSF	0	0	0	0.19	0	0	0.5	NA	2.2	0.22	2.22	0
f. Miscellaneous	2.47	1.96	4.52	1.41	0.81	0.36	2.49	NA	3.38	1.46	5.99	2.02
Total	4.06	4.86	11.04	6.11	2.35	1.34	6.29	NA	9.62	6.5	12.69	6.37
IIIa. Gross Receipts	38.92	57.75	83.03	59.32	44.03	16.16	64.93	NA	109.22	82.29	115.58	100.01
IIIb. Interest	1.41	1.16	0.25	1.78	1.25	0.8	1.58	NA	1.86	2.6	0.38	1.6
IIIc. Reimbursement from Government for Price Support	0	3.22	22.28	2.01	0.15	0	0	NA	0	0	0	0
IIId Other income	1.31	0.47	0.81	0.52	0.77	0.82	0.41	NA	0.85	1.15	0.4	1.38
IIIe Closing Stock	0	6.45	1.5	0.1	0.55	2.84	10.34	NA	24.4	20.64	15.18	21.42
Total	41.64	69.05	107.87	63.73	46.75	20.62	77.26	NA	136.33	106.68	131.54	124.41
IV. Total Cost I+II	41.52	68.98	107.78	63.64	46.67	20.52	77.16	NA	135.92	106.13	130.97	124.09
V. Profit	0.12	0.07	0.09	0.09	0.08	0.1	0.1	NA	0.41	0.55	0.57	0.32
VI. % Share of Farmer	89.96	92.86	89.68	90.27	94.80	93.02	91.73	NA	92.64	93.39	89.92	94.62

Source: Annual Reports of Gujarat State Cooperative Marketing Federation.
Note:
1. Gujarat Federation has been distributing fertilisers since 1984. It gets fertilisers from state government and distributes the same to members at subsidised rates. Fertiliser purchase and sale are included in Items IIf and IIIa above. The values are as below:

	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Fertiliser Purchase & stock	-	NA	2.76	1.92	3.78	2.99	8.94		10.38	11.02	14.78	23.19
Fertiliser Sale & Stock	-	NA	2.8	1.86	3.85	3.04	9.13		10.59	11.2	14.98	23.38