

**Cotton and Economic Reforms in India 1991–2006:
Output, Trade and Consumption**

*Dissertation submitted to the Jawaharlal Nehru University
in partial fulfillment of the requirements for
the award of the degree of*
MASTER OF PHILOSOPHY

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July 30, 2007

CERTIFICATE

This is to certify that the dissertation entitled '**Cotton and Economic Reforms in India 1991–2006: Output, Trade and Consumption**' submitted by me in partial fulfillment of the requirements for the award of MASTER OF PHILOSOPHY has not been previously submitted for any other degree of this or any other university.

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For Papa and Ma

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I am solely responsible for any errors that might remain in this work.

Sweta

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In the age of finance capital, all economies committed to the IMF policies aim at ensuring higher returns for global investments. Hence, the economic policies are formulated so as to maintain the rate of inflation at low levels. This is achieved by reducing public expenditure which leads to contraction of effective demand in the economy. In most of the developing economies, such deflationary policies have been imposed by the conditions attached to external debt from international lending agencies. In the process, predominantly agrarian economies have undergone a sea change in terms of their structure and policies. In almost all countries adhering to the 'structural adjustment policies', a deceleration in the overall economic growth has been observed. The trend has been more pronounced for the agricultural output growth as rural development expenditure has been largely targeted by the contractionary fiscal policies. In India also, a drift away from agriculture has been observed since the introduction of the neo-liberal policies in 1991. Although high overall growth rates have been registered in recent years, it is largely due to the boom in the service sector, especially the IT sector. Foreign investments in the service sector may have fuelled economic growth temporarily but such growth is not sustainable merely due to the fact that international capital flows are highly volatile. The post reform performance of the real sectors has been well below that during the 1980s.

The stagnation of the economy during the mid 1960s, which has largely been attributed to the sluggishness in industrial growth, led to a series of discussions and debate on the non-performance of the industrial sector. The theories put forward revolved around either of two basic themes – the level of investment and the performance of the agricultural sector. Chakravarty (1974), K N Raj (1976) and A Vaidyanathan(1977) were prominent among the scholars who emphasized upon the dependence of overall economic growth on agriculture. While Raj stressed on the importance of demand from the agricultural sector for sustaining non-agricultural production, Vaidyanathan focused on the decline in

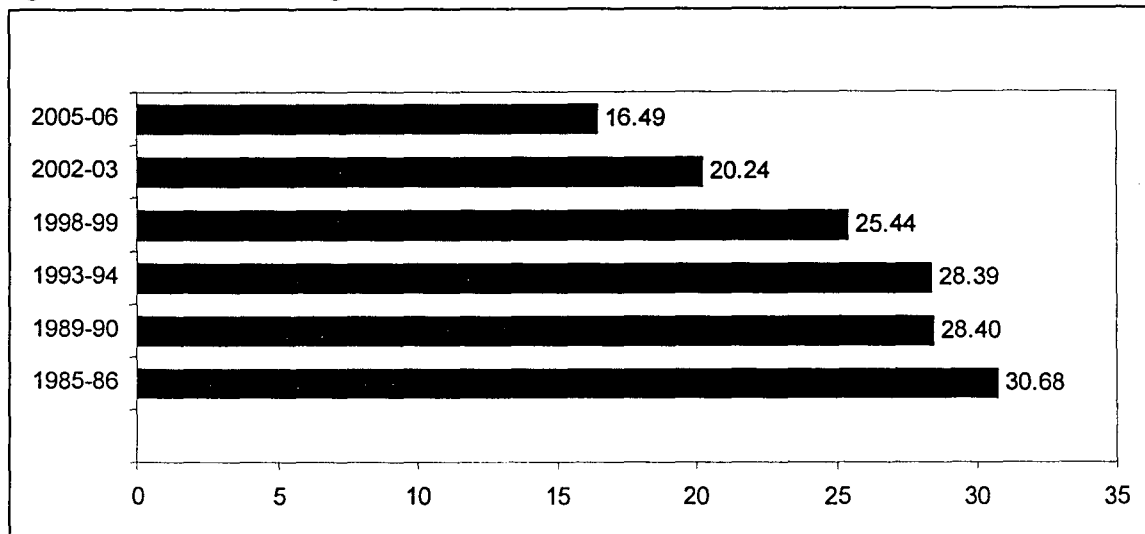
private saving due to fall in real incomes, and the decline in public sector saving due to shortages of essential commodities and rising prices. Three forms of inter-sectoral linkages between agricultural and non-agricultural sectors were identified: first, with the agricultural sector employing more than 70 per cent of the population, demand from the agricultural sector was crucial for sustaining the demand for industrial goods; second, since agricultural commodities comprised a significant share of input costs in many industries and that of wage goods in most of the industries, a rise in agricultural prices was likely to adversely affect industrial production; and third, rise in agricultural prices would imply rise in the share of expenditure on food consumption and therefore a fall in the demand for non-agricultural goods.

All the above theories were based on the assumption of a closed economy as trade in India at that time was constrained by shortages of foreign exchange. If an economy has access to international finance, the possibility of imports exhausts the constraints imposed by rising agricultural prices on industrial performance. The scope for exports on the other hand, eases the limitation imposed by the size of the domestic market. Hence, after the relaxation of trade policies during the reforms of the 1990s, a structural change in the economy has been observed, whereby the dependence of the overall economic growth on agriculture has gradually declined.

During the period 1999-00 to 2004-05, while agricultural GDP had grown at 1.74 per cent, the trend rate of growth of non-agricultural GDP exceeded 7.04 per cent. The economy has been growing at a rate well above 8 per cent, maintaining permissible level of inflation. This implies that agriculture is no more a constraint on the growth of the economy. The share of agricultural sector in total GDP at constant prices has declined from 28.4 per cent in 1993-94 to 19.4 per cent in 2003-04 and further down to 16.5 per cent in 2005-06¹ (figure 1.1).

¹ Statement 10; National Accounts Statistics 2005 & 2007; CSO, Govt. of India.

Figure 1.1 Share of Agriculture in total GDP



Though the dependence of the economy on agriculture may have narrowed, agriculture continues to be an important sector as it still provides livelihood to a majority of the population. Almost 60 per cent of the labour force is employed in the agricultural sector. Fall in agricultural incomes therefore implies a considerable decline in the overall level of demand in the economy. Under such circumstances, if conditions in the world market as well as the domestic trade policies do not favour exports; industrial growth might receive a set-back. During the last decade, apart from a decline in the share of agriculture in total GDP, there has been an absolute decline in agricultural incomes as well. The average annual growth rate of the value of agricultural output has been as low as 0.95 per cent between 1999-00 and 2003-04. Also, the annual average growth rate of the net value added in agriculture between 1994-95 and 1999-00 was 3.5 per cent, which declined to 2.4 per cent between 2000-01 and 2005-06. The net value added as a percentage of the value of output in agriculture at constant prices has remained stagnant at around 76 per cent with in between fluctuations.

The main reasons behind the crisis in the agricultural sector have been declining prices of primary products and the successive cuts in public expenditure on rural development. Another important factor resulting in the slack in the growth rate of agricultural output has been the declining share of public investment in agriculture. As table 1.2 indicates,

the share of the public sector in the total gross capital formation in agriculture at constant prices has declined from 33 per cent in 1993-94 to 21 per cent in 2004-05. The contraction of public expenditure on the other hand has contributed to significant rise in input costs.

Table 1.1 Net Value Added in Agriculture & Allied Activities, at 1999-00 prices

Year	Value of Output	Input	Gross Value Added	Net Value Added	Annual Growth Rate of NVA
1993-94	422167	95879	518046	319821	
1994-95	440551	98529	539080	335480	4.90
1995-96	439006	100668	539674	331664	-1.14
1996-97	476108	101698	577806	367550	10.82
1997-98	468165	105542	573707	355589	-3.25
1998-99	500680	111392	612072	381650	7.33
1999-00	512363	113628	625991	390286	2.26
2000-01	506694	111308	618002	387063	-0.83
2001-02	538386	116645	655031	412295	6.52
2002-03	500370	113877	614247	376032	-8.80
2003-04	549572	119642	669214	418429	11.27
2004-05	550098	121030	671128	416573	-0.44
2005-06	581994	125279	707273	443242	6.40

Source: Statement 54; National Accounts Statistics, various issues; CSO, Government of India.

Figure 1.2 Net Value Added in Agriculture as Percentage of Value of Output

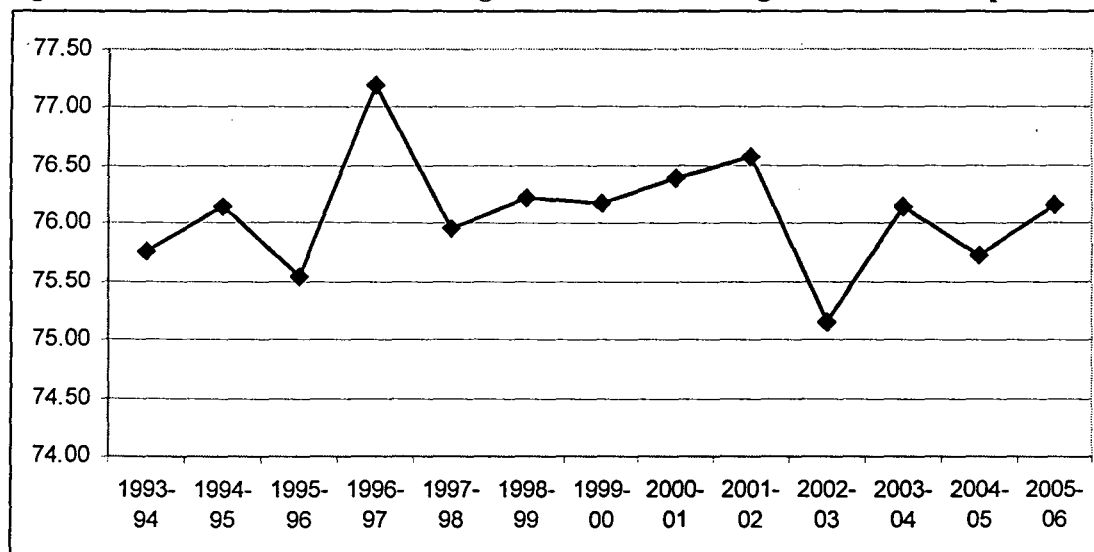


Table 1.2 Gross Capital Formation in Agriculture, at 1993-94 prices (Rs crores)

Year	GCF	Public Sector GCF	Share of Public Sector
1993-94	13523	4467	33.03
1998-99	22864	6613	28.92
1999-00	28152	7714	27.40
2000-01	28210	7234	25.64
2001-02	30217	9333	30.89
2002-03	32533	8686	26.70
2003-04	37743	10591	28.06
2004-05	60234	12648	21.00

Source: Statements 20 & 31; National Accounts Statistics, 2005 & 2007; CSO, Government of India.

This study is aimed at discussing the post liberalisation position of the agricultural sector with focus on the cotton sector. The main aim is to highlight the situation of the cotton cultivators with reference to the exports of raw cotton and the performance of the domestic textile industry.

Textile is one of the most important industries in India. It has a contribution of 6.5 per cent in the total GDP of the registered manufacturing sector and that of 11.2 per cent in the total GDP of the unregistered manufacturing sector². It is also a major source of export earnings. The most important raw material used in the textile industry is cotton – it accounts for more than 60 per cent of the fibre requirement. Cotton has played a vital role in the economy through its contribution to employment generation and export earnings. Cotton is one of the major commercial crops cultivated over an area of about 9 million hectares. It provides livelihood to around 6 million farmers, while another about 40-50 million people are engaged in cotton cultivation, trade and its processing.

In an open economy, domestic prices are dictated by the international price movements. Fluctuations in world prices are reflected in domestic prices in a free trade environment. Since the mid 1990s, the domestic prices of raw cotton have remained depressed in response to falling world prices. In the early 1990s, lured by high world prices of primary products, large areas of arable land were diverted from foodgrain to commercial crop cultivations. However, the international prices soon started falling, leaving the vast

² Statements 60 & 62; National Accounts Statistics, 2007; CSO, Govt. of India.

population of cotton cultivators in debt and despair. The first chapter discusses the trends in world prices of raw cotton and the reasons for the prices to remain depressed for so long. The plight of cotton cultivators in the arena of neo-liberal policies has been discussed at length.

The second chapter focuses on the performance of the textile sector and its implication for cotton cultivators. The growth of the textile industry is being fed by cheaper imports of fibre, yarn and fabric. The domestic demand for raw cotton has therefore declined in recent years, which has worsened the situation of cotton cultivators.

The third chapter addresses the problem of mass income deflation and the demand pattern prevailing in the economy. A declining trend in the overall level of demand is to be marked in the past two decades. Data for different expenditure classes from the NSS reports reveal that the decline in demand is due to the lower consumption in the lower income groups, both for the rural and urban groups.

The study concludes with some suggestions and policy measures that could alleviate the problems faced by the agricultural sector.

World Cotton Scenario and Agricultural Depression in India

2.1 The Background

The cotton plant has been cultivated in India since recorded history, and one of the earliest references to it is in the Rig Veda which dates back to *circa* 3000 B.C. Around 1700, India was the largest producer of cotton textiles in the world with a large domestic market - the population at the death of Akbar is estimated at 100 million, and must have risen further by 1700. It was also the world's largest exporter supplying textiles to Southeast Asia, East and West Africa, the Middle East and Europe. Although India is estimated to have accounted for more than one quarter of the world manufacturing output in 1750,³ the demand abroad for Indian cotton in the eighteenth century was much higher than what all the weavers in the country could manufacture and exports fetched good profits.

By the end of the seventeenth century, almost all the cotton stuffs sold in England came from India, carried in the ships of the East India Company which had been given a monopoly of the Indian trade by an Act of Parliament in 1600. Painted and printed cotton materials became a raging fashion among common people and gentry alike, and was perceived as a threat by the traditional woollen industry. In 1700 an act was passed by Parliament which prohibited the use within England of printed and painted fabrics imported from India, Persia and China. The East India Company continued to trade in Asian textiles but could not sell in England and had to re-export its textile imports mainly to Europe where there was a rising demand. This ban did not fully secure the English market for woollen goods since smuggling continued and to satisfy the agitated wool weavers, another act was passed in 1719 which completely prohibited the selling, buying, wearing or possession of printed, painted, stained and dyed calicoes. However, people's

³ Robert B. Marks (2002). *The Origins of the Modern World: A Global and Ecological Narrative*.

fondness for Indian calicoes benefited the locally produced poor quality mixed cotton-linen fabrics.

An already established market, whose demands could not be met owing to the ban on imports, encouraged efforts at import-substitution. Since the required artisan skills were not of a sufficiently high order to spin a fine and strong thread, this led to the search for mechanical means of spinning and later weaving. Mechanical innovations in cotton spinning, although they started in the 1730s, bore fruit only by the 1770s and provided a strong boost to the nascent cotton spinning industry which came to be located in Lancashire. The ban on the use of cotton fabrics within England was lifted by Parliament in 1774 owing to a petition by Arkwright, saying that since the fabrics were no longer imported but locally made, they would provide employment.

As England could not grow cotton, the raw material was entirely imported. With one manually operated spinning machine, a single worker could spin 8 threads and the number increased to 80 threads within two decades. Such a drastic reduction in labour cost more than offset the higher cost of importing raw cotton, and the output of cotton yarns and cotton fabric increased exponentially, though initially the output of the spinning machines far surpassed weaving by a huge margin. Large exports of cheap machine made cotton yarn and later cloth started, and this was the beginning of the downturn of the Indian textile industry. First, India's European market was taken away by Lancashire goods, and then the Indian domestic market being under colonial control was kept open and flooded with English cotton yarns and cloth manufactures. As a result, large numbers of artisan spinners and weavers were thrown out of employment, the effect being strongest where transport routes were good and allowed the imported goods to penetrate local markets. In addition, the domestic textile industry faced shortages of raw material as certain varieties of raw cotton for the British textile industries were being exported from India.

Under pressure to pay heavy cash taxes and high rents farmers shifted from cultivation of food crops to commercial crops like cotton, increasingly for the export market.

Consequently, the output of foodgrains stagnated and added to the woes of the Indian population. Moreover, the producers of exportables were paid out of the taxes they themselves had paid to the colonial government, while the foreign exchange earnings from their exports (in excess of merchandise imports) were not permitted to flow back to India but were used by England to pay off its deficits with other countries. So the colonized economy did not benefit from any net increase in receipts from abroad as their exports grew. A general situation of depression engulfed the whole of India while the British economy enjoyed the fruits of Industrial Revolution.

The Swadeshi movement had a strong economic component. Gandhiji stressed the importance of using indigenous textiles rather than imported ones, in order to provide employment to our weavers, and the movement for boycott of imported goods gathered momentum. There was a debate between Rabindranath Tagore and Gandhiji on the issue since the poet pointed out that the poor benefited from cheaper imported goods. This debate is relevant to this day as many economists look at the short-run benefit of cheap imports and not the longer run damage to our own production. Further, there was no reason why India could not produce textiles more cheaply than Lancashire once the discriminatory policies of the rulers were given up.

There was an additional element in Gandhiji's economic thinking – that more labour-intensive rather than capital-intensive techniques should be used in order to generate the maximum employment. Handspun yarn had been completely destroyed a century earlier by the huge machine spun yarn imports from England. The nationalist movement for reviving hand-spinning using the spinning wheel, as a potent symbol of opposition to British rule, grew as did weaving cloth (Khaddar) from hand-spun yarn, but hand spinning never assumed great economic importance in the context of the overall textile economy. Handlooms however continued to grow, using local machine-spun yarn since their products could never be imitated by Lancashire. Indian entrepreneurs increasingly substituted for imported cloth by expanding spinning mills whose output led to the expansion of both local handloom cloth output and mill made cloth, the latter growing faster than the former.

Post independence, India continued to be one of the major producers of cotton and cotton textiles. Government support to the textile industry ensured steady domestic demand for raw cotton and therefore stable incomes for cotton cultivators. Direct and indirect subsidies to farmers prevented excessive export orientation of agriculture. In areas like Punjab, cotton was cultivated only on the surplus land available from food crops and it added to the incomes of farmers.

However, the current liberalisation policies have changed the whole face of cotton cultivation in India. Incidences of farmer suicides are highest among the cotton cultivators who are deeply indebted. The reason is quite apparent. With the relaxation of the tariff rates and the scrapping of quota restrictions, the domestic cultivators were exposed to the volatility of the global market all of a sudden as well as to subsidized imports of cotton later on. In years of higher world prices of cotton, farmers diverted their land and resources from staple crops to cotton in hope of higher incomes. As the farmers have little to invest and since the institutional credit system no longer favours farmers, they are forced to go to private money lenders for credit. When world prices crash, farmers are the worst hit and high debt often lead to suicides.

Over the years, most of the developing countries have been forced to open their domestic markets under IMF's structural adjustment programmes. This chapter focuses on the impact of the liberalisation policies on the cotton-growing developing economies. In an open economy, fluctuations in world prices of primary commodities and subsidies in the developed world are a cause of major concern and hence find a mention in this chapter. The Indian experience has been discussed at length to draw attention to the increasing number of suicides among cotton cultivators.

2.2 World Cotton Scenario

Tables 1.1(a) to 1.1(c) give an overview of the world cotton scenario for the five years 2002-03 to 2006-07. China is the largest producer of raw cotton with nearly 7 million

tonne output at the last date, followed by the United States and India both with around 4.7 million tonne, and then Pakistan, Brazil and Uzbekistan. China, USA and India together account for more than 60 per cent of world production and consumption, although the United States has a share of a mere 5 per cent in total world consumption. The data show that the consumption of raw cotton in China is higher than its production by almost two-thirds. Production in India has been growing fast after the set-back of the drought year 2002-03. India's output is sufficient to meet its domestic demand and allow export which is rapidly expanding in recent years. The last country though a substantial producer has a negligible domestic use for cotton and grows it entirely for export.

Owing to the rapid growth of the textile industry in China which caters not only to its large domestic market but also to growing exports, the demand for raw cotton has been growing faster than domestic production even though the latter has registered a high growth rate. Hence, in recent years, China has emerged as the largest importer of cotton in the world while conversely the United States is the largest world exporter. The extent of Chinese imports at 3 million tonne by 2006-07 happens to be exactly matched by the extent of United States exports also at around that figure (though this does not mean that China imports from the US alone). There are a number of Central American and sub-Saharan African countries which, although do not figure among the largest producers of cotton, have a significant share in total world exports.

The domestic pricing policies to protect the farmers in years of falling prices have resulted in increasing stocks in China and United States. China's ending stocks of raw cotton in the 2005-06 was 34.8 per cent of the domestic consumption, while stocks in the US stood at 1,317 metric tonnes, which accounts for 11.2 per cent of world stock. In India the ending stocks in 2005-06 crossed 50 per cent of the domestic consumption. Over the period 2002-03 to 2005-06, stocks in India increased by more than 130 per cent. Increasing stocks imply higher imports as textile manufacturers prefer to get cotton from the international market at cheaper prices. Since the Minimum Support Programme (MSP) does not have a wide coverage, it has added to the woes of the cotton farmers. It also leads to speculation and often worsens the situation of the farmers.

Table 2.1(a): World Raw Cotton Production and Consumption (1000 MT)

Year	Production				Domestic Consumption			
	2002-03	2003-04	2004-05	2005-06	2002-03	2003-04	2004-05	2005-06
China	4,921 (25.6)	4,855 (23.4)	6,314 (24.1)	5,704 (23.0)	6,510 (30.4)	6,967 (32.6)	8,382 (35.4)	9,798 (38.8)
U S A	3,747 (19.5)	3,975 (19.2)	5,062 (19.4)	5,201 (21.0)	1,584 (7.4)	1,364 (6.4)	1,457 (6.1)	1,278 (5.1)
India	2,308 (12.0)	3,048 (14.7)	4,137 (15.8)	4,148 (16.7)	2,896 (13.5)	2,939 (13.8)	3,222 (13.6)	3,592 (14.2)
Pakistan	1,698 (8.8)	1,687 (8.1)	2,426 (9.3)	2,145 (8.6)	2,047 (9.6)	2,090 (9.8)	2,341 (9.9)	2,558 (10.1)
Brazil	847 (4.4)	1,310 (6.3)	1,285 (4.9)	1,023 (4.1)	784 (3.7)	860 (4.0)	914 (3.9)	914 (3.6)
Turkey	910 (4.7)	893 (4.3)	904 (3.5)	773 (3.1)	1,372 (6.4)	1,306 (6.1)	1,546 (6.5)	1,502 (6.0)
World Total	19,215	20,742	26,153	24,808	21,398	21,344	23,693	25,241

Note: Figures in parenthesis indicate percentage of world total production and consumption respectively.

Table 2.1(b): Net Imports of Major Trading Countries (1000 MT)

Year	2002-03	2003-04	2004-05	2005-06
China	681 (10.4)	1,923 (26.0)	1,390 (19.1)	4,199 (43.8)
United States	-2,591 (39.2)	-2,995 (41.4)	-3,143 (41.3)	-3,927 (40.4)
India	-12 (0.2)	-152 (2.1)	-144 (1.9)	-751 (7.7)
Pakistan	190 (2.9)	393 (5.3)	382 (5.3)	361 (3.8)
Brazil	-106 (1.6)	-210 (2.9)	-339 (4.5)	-429 (4.4)
Turkey	493 (7.5)	516 (7.0)	743 (10.2)	737 (7.7)
World Imports	6,556	7,406	7,270	9,580
World Exports	6,602	7,233	7,615	9,725

Note: Figures in parenthesis indicate percentage of world total imports in case of net importers and that of world total exports in case of net exporters.

Table 2.1(c): Ending Stocks of Raw Cotton (1000 MT)

Year	2002-03	2003-04	2004-05	2005-06
China	3,266 (66.4) 33.9	3,257 (67.1) 34.8	2,844 (45.0) 24.2	3,410 (59.8) 29.1
United States	1,172 (31.3) 12.2	751 (18.9) 8.0	1,196 (23.6) 10.2	1,317 (25.3) 11.2
India	781 (33.8) 8.1	911 (29.9) 9.7	1,908 (46.1) 16.3	1,799 (43.4) 15.4
Pakistan	465 (27.4) 4.8	413 (24.5) 4.4	754 (31.1) 6.4	625 (29.1) 5.3
Brazil	627 (74.0) 6.5	1,007 (76.9) 10.7	1,106 (86.1) 9.4	853 (83.4) 7.3
Turkey	297 (32.6) 3.1	322 (36.1) 3.4	390 (43.1) 3.3	370 (47.9) 3.2
World Total	9,627 (50.1)	9,369 (45.2)	11,728 (44.8)	11,713 (47.2)

Note: Figures in parenthesis indicate ending stocks as percentage of domestic production; figures in bold indicate percentage of world ending stocks.

Source (a – c): www.fas.usda.gov

2.2.1 World prices of raw cotton

The world prices of all traded commodities, particularly agricultural commodities keep fluctuating from year to year. World prices are determined by a variety of factors among which the most important are the changing levels of world production and the volume of trade. Since the output of agricultural commodities is affected by unpredictable weather conditions, fluctuations in their prices are even higher than that of other goods. Trade is dominated by a few major players. Even if a country does not produce a large share of world output of a commodity but has a substantial share of its trade, a shortfall or glut in its output affects world prices. Conversely a country may be a large producer, but if it is also a large importer then its domestic output fluctuations will affect the volume of its imports and impact the world prices.

Major exporters and importers thus play the most important role in influencing world prices. The two cases mentioned above are exemplified by USA and China. The United States produced about the same level of cotton output as India in 2006 and was far behind the largest producer, China. But the United States is the largest exporter of raw cotton in the world and exported over three times more than India by 2006 although the latter's exports have grown six-fold since 2003. On the other hand although China is the world's largest producer of raw cotton, its consumption is about 4 million tonnes higher and it is the world's largest importer, as not only does its domestic textile industry cater to the internal market but it also garners an increasing share of world exports of textiles. To keep its textile export momentum going China would demand even larger imports of raw cotton if its domestic raw cotton output declined for any reason. In some ways China is replicating India's situation a century ago, when India was the world's largest producer and importer of raw cotton and cotton yarn (though being a colony, India did not benefit from export earnings which were always appropriated by Britain).

The most frequently used indicator of world cotton price is the 'Cotlook' index. 'The Cotlook A Index is intended to be representative of the level of offering prices on the international raw cotton market. It is an average of the cheapest five quotations from a selection (at present numbering nineteen) of the principal upland cottons traded internationally. Taking the average of the five cheapest quotations is a tried and tested means of identifying those growths which are the most competitive, and which therefore are likely to be traded in most volume. The base quality of the A Index is MIDDLING 1-3/32".⁴

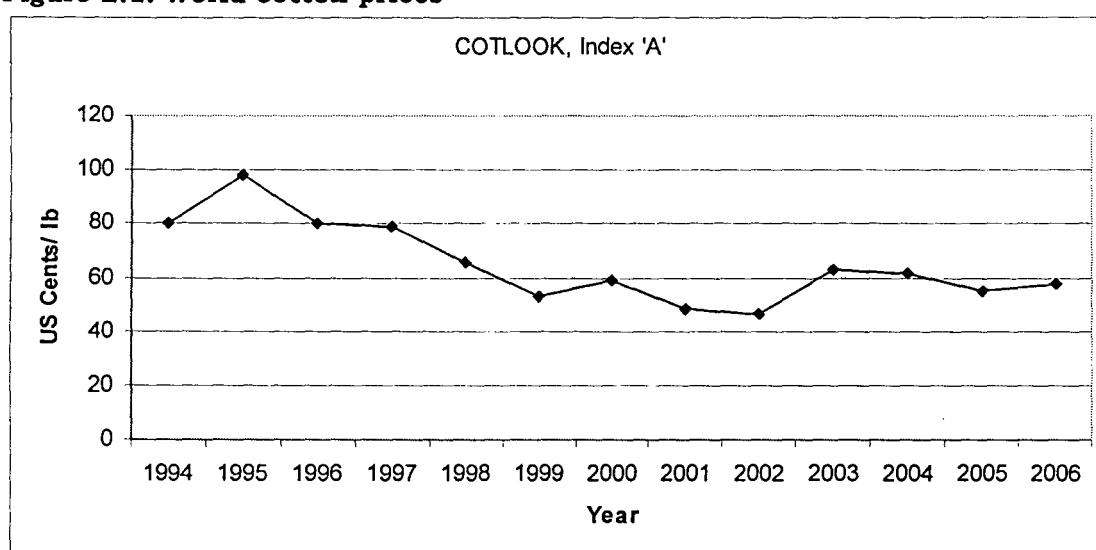
⁴ www.cotlook.com; accessed on 20.04.07.

This practice is a proxy for weighting, which is impractical, owing to the absence of timely data by which it could be calculated. Changes in the selection are made solely to reflect shifts in the cottons most frequently traded.

2.2.2 Trends in world cotton prices

As is the case for most of the primary commodities, cotton prices have remained low for the past 40 years. However, a sharp declining trend has been observed since the mid 1990s. The Cotlook A index dropped from 98.1 US cents/lb in 1995 to a thirty-year low of 46.1 US cents/lb in 2002. Subsequently world production fell short of consumption by 1.9 million tonnes in 2002-03. This pushed up the index to 63.2 US cents/lb in 2003. The declining trend resumed from the following year. The current price level is half of that in the 1960s.

Figure 2.1: World cotton prices



Source: www.faostat.fao.org

According to an ODI working paper (Gillson et.al, 2004), the reasons for the instability in the world cotton prices are: unpredictable fluctuations in production and exports from India, Pakistan and China; reductions in the costs of production; long-term inroads of synthetic fibers; and subsidies granted by key cotton-producing countries.

2.2.3 Subsidies in developed countries

Domestic support to cotton producers in USA, China and the EU has a significant contribution in maintaining world prices at low levels. As the USA is the largest exporter

of cotton, its support policy has a strong bearing on the world market. Also, support in terms of direct payments to cotton producers in the United States accounts for over 50 per cent of total government assistance to cotton producers in the world. In the year 2001-02 alone, subsidies to cotton producers in the United States amounted to US\$ 3.9 billion (Watkins, 2002). The International Cotton Advisory Committee (ICAC)'s World Textile Demand model estimates that withdrawal of American cotton subsidies would raise cotton prices by 11 cents per pound or by 26 per cent.

The 1996 Farm Bill marked an important stage in US subsidy policy by introducing direct payments to producers which were decoupled from production. The Act⁵ aimed to spend US\$47 billion between 1996 and 2002, with US\$35 billion as direct income payments to farmers. Since world prices have been lower than anticipated when the 1996 agricultural law was passed, Congress has had to make additional appropriations to prevent the price received by cotton farmers from falling below the price target of US\$1.59 per kilogram retained in the 1996 and 2002 Farm Laws. By the end of 2000 an additional US\$22 billion was spent topping up farm incomes. An additional US\$11.5 billion was proposed for 2001. The main channels of support under the 1996 Farm Bill were decoupled payments, market price payments, insurance, export subsidies and emergency payments. For decoupled payments, by signing a Production Flexibility Contract (PFC) a farmer who produced a quantity of cotton during a reference period ending in 1995 received in 1996, and in each of the five subsequent years, a payment determined by this. These were designed to compensate cotton producers for the loss of some market price support under the 1996 Farm Bill. In 1999-2000 these payments totaled US\$623 million.

Market price payments, which consist of market assistance loans and loan deficiency payments, are designed to compensate cotton farmers for the difference between the world price and the loan rate (i.e., a support price) when the latter exceeds the former. Cotton loan rates are determined according to a statutory formula that compares domestic and world prices. The minimum loan rate is US\$1.10 per kilogram and the maximum is

⁵ The act encompasses all agriculture including cotton.

US\$1.14 per kilogram. Producers must have their cotton ginned and placed in a Community Credit Corporation (CCC) approved warehouse (FAO, 2004).⁶

An Adjusted World Price (AWP) for cotton is calculated based on Northern European cotton prices adjusted to US base quality and average location. Eligible farmers will take out a loan with the CCC on their cotton at time of ginning, with the value of the loan based on their level of production valued at the loan rate. When the loan is repaid, the loan repayment rate is the lower of the loan rate or the AWP. The difference is made up by the government programme. This guarantees that farmers receive at least the loan rate for their cotton. Under certain circumstances, interest charges on loans and warehouse charges are also met by the government. Eligible producers who do not take out the loan can apply for a loan-deficiency payment which, like the marketing loan, is equal to the difference between the AWP and the loan rate when the AWP is below the loan rate.

Export subsidies are made to cotton exporters and domestic end-users of cotton when domestic US prices exceed North European prices and the world price is within a certain level of the base loan rate. For export-subsidy payments to be made, the US domestic price must exceed the Northern European cotton price by more than US\$0.0275 per kilogram for four consecutive weeks, and, secondly, the AWP must be within 134 percent of the base loan rate. The objective of US export subsidies is to bridge the gap between higher US domestic prices and world prices, so that US exporters maintain their competitiveness. Spending for export subsidies was capped at US\$201 million for the 1996–2002 period, but this level was passed by the end of 1998. In 1999 the US Agricultural Appropriateness Bill was passed which provided an additional US\$200 million in 2000 and US\$430 million through to 2002 for export subsidies.

In 2002, the United States introduced the 2002 Farm Bill, which is expected to be in place for the next six years. As a result government assistance could increase from 32 percent of average farmer income under the 1996 Farm Law to 45 percent under the new

⁶ Cotton placed under a marketing assistance loan may be forfeited to the CCC when the loan expires. Terms of the loan are usually for ten months.

law, since the new law modifies the nature of several types of subsidies (Shurley, 2002). The 2002 Farm Bill replaced the PFC payments with a direct payment. Payments are based on historically planted area and yield rather than actual production. It also allows farmers to select the 1998–2001 period instead of the previous one, if they believe that they will gain in changing the base. Consequently, a farmer who has increased production in recent years receives more than one who has reduced it. Direct payments are independent of market prices and are set at US\$0.15 per kilogram for 2002-03. The Farm Bill also introduced anti-cyclical measures, which are implemented when the effective price is below the target price. The effective price is the direct payment, plus the higher of the national average market price paid to producers or the loan rate. In 2002-03 the loan rate was set at US\$0.52 and the target price was US\$0.724. The 2002 Farm Bill continues to offer the loan deficiency payment – issued when world prices adjusted by quality and location are below the loan rate. It is estimated that total direct income and price support in the US amounted to US\$2 billion in 2002-03.

2.2.4 WTO negotiations

During the Uruguay Round negotiators attempted to separate domestic policies judged to have no direct effect on agricultural trade (green box), from those that did have clear trade and production distorting effects (amber box). Policies in the amber box were subject to a reduction of 20 per cent over 6 years. Direct payments could be moved to the green box provided that they were ‘decoupled’ from production. This provided freedom to increase domestic assistance levels. The restructuring of the EU’s Common Agricultural Policy under the 1992 MacSharry and 2003 reforms moved support from the amber into the blue and green boxes. Green-box support, however, has had a major cost-reducing effect, because the support it provided to farmers allowed them to produce and export more cheaply. In addition to the green box, three other forms of assistance were not affected by the Uruguay Round reduction commitments. These corresponded to (i) developmental objectives in developing countries; (ii) de minimis levels according to which 5 per cent (10 per cent in the case of developing countries) of the contributions in

the amber box were exempt; and (iii) direct payments for production-limiting programmes or the so-called blue box (mainly used by the EU).

Blue-box measures include payments to farmers for reducing production on the basis of pre-determined areas. Blue box subsidies granted by the EU based on pre-determined quantities of seed cotton have trade-distorting effects, since production in Greece and Spain would fall sharply if the subsidies were eliminated. The economic impact of the amber box reductions (aggregate measure of support or AMS) was reduced not only by an increase in green-box subsidies but also by several other considerations. First, because of low international prices in the base period, the support allowances afforded very high levels of assistance. Secondly, the levels of reduction in support from the base period could be achieved by transferring payments to the blue box which was free from reduction commitments, although there is a presumption that blue box policies are more distortionary than green box policies. Thirdly, the commitment to reduce AMS at the aggregate and not the product level means that assistance to specific commodities could be increased. Fourthly, the AMS excluded support provided by protection.

Agricultural markets in most countries have been the object of considerable government controls and other interventions. For instance, it is well known that in the OECD countries such policies result in annual transfers to farmers in the vicinity of \$290 billion, with subsidies of various types making up in some cases 60-80 percent of farmers' revenues. This is why it took so long to bring agriculture under the rules of the General Agreement on Tariffs and Trade (GATT), the international rules framework for merchandise trade of the World Trade Organization (WTO). These interventions have resulted in excess production by many subsidising countries, depressed world prices, and frequent trade disputes. The Uruguay Round (UR) succeeded in finally defining some rules for agricultural trade, quantifying the various trade restrictions, and placing some limits in the use of subsidies, both domestic as well as export related.

Despite its success in bringing agriculture within the WTO, the UR, nevertheless, legitimized a variety of remaining agricultural distortions. These include high tariffs,

tariff escalation, large trade distorting domestic support, vague rules on what constitutes non-trade distorting support, and considerable export subsidies. The current “Doha Development Agenda” or DDA negotiations of the WTO has again highlighted the reluctance of many countries to place strong and binding limits to their agricultural protectionist and other support policies. Agriculture was one of the reasons that the WTO Ministerial Conference in Cancun in September 2003 failed to produce an agreement.

The “cotton issue” became one of the difficult negotiating issues at the WTO Ministerial Conference in Cancun. It was claimed that cotton subsidies, both domestic and export, granted by some countries, led to artificially depressed world market prices and thus negatively impacted negatively on both export earnings as well as production levels in non-subsidising countries. While these types of subsidies are not unique to cotton, they became an issue following the submission of a joint proposal at a special session of the WTO negotiations on agriculture on May 16, 2003. This proposal, by four West African Countries (WACs), Benin, Burkina Faso, Chad and Mali, claimed that the elimination of subsidies to cotton would raise world market prices and make cotton production in the WACs highly profitable. The submission cited that these subsidies led to significant amounts of export earning losses by the four WACs and that the combined direct and indirect negative effects would be close to \$1 billion per year.⁷ On 4 August 2003, in the run up to the Cancun Conference, the four countries made another submission to the same WTO committee (WTO, 2003), essentially reiterating the same claims, and calling for “the establishment in Cancun of a mechanism to phase out support for cotton production with a view to its total elimination”. Other aspects covered in these submissions were the effects of the cotton subsidies on poverty and food insecurity at the farm level and an international mechanism for compensation for the losses.

⁷ The claims made in the proposal were based on studies by Goreux (2003) and ICAC (2002).

2.2.5 Impact on developing countries

China, USA, India and Pakistan account for almost two-third of world cotton production. But there are other developing countries which though have an insignificant share in world cotton trade, their cotton exports account for a large share in their export earnings. For example, cotton accounts for approximately 40 per cent of export earnings in Benin and Burkina Faso and around 30 per cent in Chad, Mali and Uzbekistan. Lima Campos A points out that in the year 2001-02, the total loss in export earnings and in the value of domestic production has been \$ 1.3 billion for India, \$ 640 million in Brazil and more than \$ 1 billion in Argentina.

A number of studies have used multi-region, partial equilibrium, static world trade models to estimate the impact of subsidies in developed countries on the world cotton prices and its consequences to the cotton trading, developing economies. The UNCTAD-FAO ATPSM model, based on official subsidies as notified to the WTO, estimates the impact of subsidies on world cotton prices within a range of 3.1 to 4.8 per cent. Most other models have used the International Cotton Advisory Committee (ICAC) database. The ICAC figures are though not official, data for recent years are available which is not the case with the WTO database for domestic subsidies. According to ICAC (ICAC, 2003), the global total subsidies to cotton averaged US\$4.5 billion per year during 1997-02 of which about 75 percent is accounted for by China and the United States. The share of the United States in the total has increased in recent years, from 30 percent during 1997-99 to 47 percent in 2000-02, while China's share has been falling considerably. The share of the EU subsidies has remained more or less the same, at about 18 percent. The rest, amounting to about 6 percent, is accounted for by Brazil, Egypt, Mexico and Turkey. The ICAC price model suggests that with removal of US subsidies to cotton producers, US production would have gone down enough to pull international prices by 6 cents in 1999-2000 and by 12 cents in 2000-01.⁸

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⁸ Carlos A. Valderrama Becerra, ICAC, 2001

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Goreux (2003) used an extension of the ICAC model to estimate the impact of cotton subsidies on export earnings in West and Central Africa. The results from this model were used by Benin, Chad, Burkina Faso and Mali in their submission to the WTO in which they argued that export subsidies in the cotton sector reduced world prices by 15.2 percent and West and Central African export earnings by US\$250 million for 2001-02. Gilson (2004) estimated the international cotton prices to increase by 18 per cent if the US, the EU and China were to remove subsidies to cotton producers.

Minot and Daniels (2002) used household survey data to estimate the direct and indirect effects on incomes and poverty in Benin, due to falls in received cotton prices. Under the assumption that cotton prices to producers are lower by 10 percent due to world price declines (the transmission assumed is perfect), they estimate that the incidence of poverty among Benin's cotton growers goes up by 5 percentage points (from 37 percent to 42 percent), and among all farmers by 2 percentage points (from 40 percent to 42 percent, or 170 000 people more fall below the poverty line). In the longer term, taking into account indirect effects, they estimate that the impact is even larger. Larger world and producer price declines have much larger impacts.

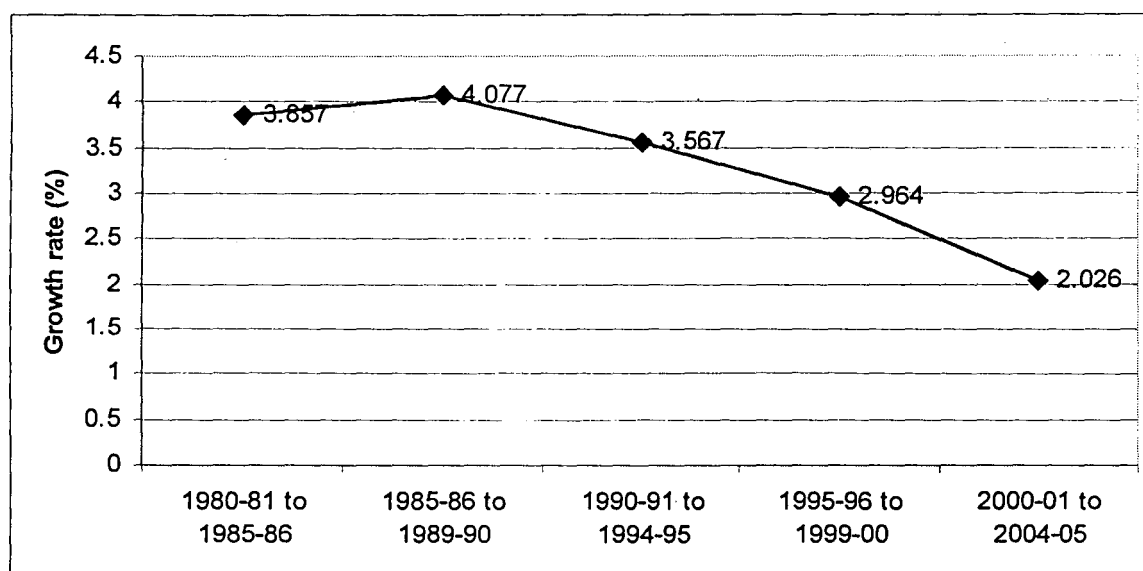
Reeves et al. (2001) found that removal of production and export subsidies by the US and the EU will induce a 20 percent reduction in US cotton production, a 50 percent reduction in US cotton exports, with much higher figures for the EU. They also estimated that if support was not in place, world cotton prices would be 10.7 percent higher compared to their 2001/02 levels. FAPRI (2002) suggests that with the removal of all trade barriers and domestic support, the world cotton price would increase over the baseline scenario by an average of 12.7 percent over the 10-year period. Based largely on FAPRI's data and assumptions, Sumner (2003) estimated that in absence of US subsidies during the period 1999-2002, the world price of cotton would have been almost 13 percent higher. Tokarick (2003) found that multilateral trade liberalization in all agricultural markets (including cotton) is expected to induce a 2.8 percent increase in the world price of cotton. Poonyth et al. (2004) estimated that removal of cotton subsidies would increase the world price of cotton between 3.1 and 4.8 percent, depending on the assumption

regarding the value of demand and supply elasticities. A negligible impact of subsidies on the world price of cotton was found by Shepherd (2004) and Pan et al. (2004).

2.3 The Agricultural Depression in India

The deepest wound of the income-deflating policies since 1991 has been borne by the agricultural sector. A glance at the post-liberalisation performance of the agricultural sector reveals the distress among the rural population. Also, the unprecedented number of farmer suicides in recent years highlights the acuteness of the crisis. The loss of income in rural areas is reflected in the fact that unsold food stocks had mounted to 40 million tonnes despite decline in per capita foodgrain output leading to steep decline in availability (Patnaik, 2003b). In terms of output, the performance of the agricultural sector is disheartening. The compound average (per annum) growth rate of agriculture and allied sectors increased from 3.8 percent in the first half of 1980s to 4 percent in the later half. Thereafter it started declining and reached a low of 2 percent in 2001-05 (figure2.2).

Figure 2.2: Compound average growth rate of agriculture & allied sectors



Source: NAS, 2007; Central statistical Organisation.

2.3.1 Importing the crisis

In the wake of the oil shocks of 1970s, began the era of finance capital. To ensure high returns in real terms, it is in favour of capitalists dealing in finance to promote effective demand-contracting economic policies in potential markets. The agenda is to maintain high levels of real interest rates, minimise fiscal deficit (which implies drastic reductions in government expenditure) and to ensure free flow of finance to markets that ensure highest returns. 'Deflationary economic policies combined with removal of all national barriers to the free movement of finance capital thus forms the core of the policy agenda of finance capital.' (Patnaik, 2003). Since the late 70s, international lending agencies like the IMF have been enforcing deflationary macro-economic policies globally through loans advanced under the 'Structural Adjustment Programmes'. Most of the low income nations of Central America and sub-Saharan Africa were under the ambit of income deflation by the end of the 1980s. Despite evidence of negative growth rates in these countries, other medium-income and even high-income countries have been moving under the trap. With the accelerated process of liberalisation since 1991, India remained no exception.

The balance of payments crisis in 1990-91 provided the required platform to the advocates of neo-liberal policies to justify their agenda. India was forced to seek loan from the IMF under the Structural Adjustment Facility. This saw the advent of the liberalisation policies in the form of (i) substantial reduction of controls on capacity creation, production and prices; (ii) allowing market forces to influence the investment and operational decisions of domestic and foreign economic agents within the domestic tariff area; (iii) allowing international competition and therefore international prices to influence the decision of these agents; (iv) minimizing the role of the state agencies in production and trade; (v) liberalisation of the financial sector (Chandrasekhar and Ghosh, 2002).⁹ The consequences of these policies had a far reaching effect on the agricultural sector. The central government revenue expenditure on rural development declined and public investment in rural infrastructure development was curtailed significantly.

⁹ Chapter 3: Contours of Neoliberal Reform; pp 21-22.

Financial liberalisation implied reduction in priority sector lending which entailed difficulties in credit availability and therefore affected private investment. The public distribution system was also affected. Liberalisation of external trade meant removal of quantitative restrictions and reduction of import tariffs which exposed the domestic market to international competition.

2.3.2 Role of the state in the post-liberalisation period

In accordance with the neo-liberal reform policies, the State's role has been steadily declining since the 1990s. In an attempt to bring down the fiscal deficit, there have been drastic cuts in government expenditure. The capital expenditure to GDP ratio declined from 5.9 percent in 1989-90 to 3.2 percent in 1995-96 and further down to 2.5 percent in 2002-03. The share of developmental expenditure in the central government's total expenditure averaged at 55 percent per annum in the 80s, which reduced to 48.5 percent in the next decade and further came down to average around 43.5 percent annually between 2000-01 and 2005-06.¹⁰ The largest component of reduction in government expenditure has been through cuts in direct budgetary subsidies on food, fertilizer, and exports. All export subsidies were eliminated by 1992 while food subsidies were reduced by increasing the price of food issued through the public distribution system. Curtailing of fertilizer subsidies increased prices and left farms with inadequate supply of fertilizers. The reform policies also include major downsizing of the public sector to reduce its employment and level of economic activity.

These contractionary policies had a deep impact on the agricultural sector as the rural development programmes were the ones to be most affected. There was a sudden slowdown in the development of irrigation and extension facilities and the rural infrastructure development programmes almost came to stagnation. Consequently, farm incomes started declining. The increased in food prices further squeezed down the real incomes of the farmers.

¹⁰ Calculated from data in table 111; Handbook of Statistics on Indian Economy, RBI, 2006.

2.3.3 Impact on cotton cultivation

In an open economy, world prices have a strong influence on the cropping pattern. As prices of certain crops rise, farmers are encouraged to shift to those crops. In hope of high profits farmers often invest beyond their means. To make ends meet they are forced to turn to the credit markets. In most developing countries, the rural credit system is not very sophisticated and fails to meet the needs of the poor farmers. Even the private institutional credit market is at a nascent stage. In such cases private money lenders are the last resort for credit. This has been the case for cotton cultivators in India. During the initial years of reform, international cotton prices were high and rising. This gave a spurt to cotton exports and farmers started diverting land and resources from food crops to cotton cultivation. However, world cotton prices started declining from the mid 90s and the fate of the cotton growers took an about turn.

(i) Shifts in cropping pattern

The average area under total foodgrains cultivation was 126.81 million hectares in the 1980. In the 90s it declined to 123.62 million hectares and further down to 120.24 million hectares between 2000-01 and 2004-05.¹¹

However, the area under commercial crop cultivation increased steadily, especially that for groundnut and cotton. The gross area under cotton cultivation increased from 6.95 million hectares in 1986-87 to 9.12 million hectares in 1996-97, an increase of more than two million hectares. The ratio of area under cotton cultivation to that under foodgrains continued to rise through out the 1990s (table 2.2).

¹¹ Figures represent decadal averages calculated using data from RBI; Handbook of Statistics on Indian Economy, 2006.

Table 2.2: Area under foodgrain & cotton cultivation (million hectares)

Year	Foodgrains	Cotton	Ratio of cotton to foodgrains	5 year average
1985-86	128.02	7.53	0.059	
1986-87	127.20	6.95	0.055	
1987-88	119.69	6.46	0.054	0.057
1988-89	127.67	7.34	0.057	
1989-90	126.77	7.69	0.061	
1990-91	127.84	7.44	0.058	
1991-92	121.87	7.66	0.063	
1992-93	123.15	7.54	0.061	0.061
1993-94	122.75	7.32	0.060	
1994-95	123.86	7.87	0.064	
1995-96	121.01	9.04	0.075	
1996-97	123.58	9.12	0.074	
1997-98	123.85	8.87	0.072	0.073
1998-99	125.17	9.34	0.075	
1999-00	123.11	8.71	0.071	
2000-01	121.05	8.53	0.070	
2001-02	122.77	9.13	0.074	
2002-03	113.87	7.67	0.067	0.070
2003-04	123.33	7.63	0.062	
2004-05	120.16	8.92	0.074	

Source: Calculated from tables 19 & 20, 'Handbook of Statistics on Indian Economy', RBI, 2006.

(ii) Capital intensive production

The shift in the cropping pattern emerged as a consequence of the effort to increase the production of commercial crops which could be sold in the external market. Since the world price of cotton was high in the early 90s when the drive to produce for the international market began, increasing the production further was anticipated as a profitable strategy. Therefore, in hope of higher yields, cotton cultivators were tempted to switch to other hybrid varieties of seeds which promised higher yields. This provided inroads to MNCs in the domestic seed market. The agreement between Monsanto and Maharashtra Hybrid Seeds Company (Mahyco) in May 1998 to form the Mahyco–Monsanto Biotech Limited is a classic example of the commercialisation of the seeds market in India.

Table 2.3 Value of fertilizer input as percentage of value of output

Year	Value of Agricultural Output	Value of Chemical Fertilizer Input	Value of Input Fertilizer as percentage of Value of Output
1993-94	204874	10848	5.29
1998-99	243151	14744	6.06
1999-00	241970	16767	6.93
2000-01	235469	14982	6.36
2001-02	248287	14648	5.90
2002-03	223044	14754	6.61
2003-04	251230	16183	6.44

Source: NAS, CSO, Govt. of India; various issues.

The cultivation of high yielding varieties of seeds involved heavy investments in terms of increased levels of irrigation, use of fertilizers (table 2.3) and pesticides. The seeds were quite expensive themselves and left little resources with the farmers to buy fertilizers and pesticides. Inadequate use of fertilizers, pesticides and irrigation often led to crop failures. Also, in many cases, the seeds turned out to be spurious and resulted in crop failures and left the farmers in deep debt. Even after a good harvest, farmers often failed to fetch back the cost of production due to falling prices.

(iii) The rural credit system

The 1969-1991 growth period of rural banking in India was marked as the phase of social and development banking. It aimed at increasing the supply of formal credit in rural areas at regulated rates of interest. The scheme of differential rate of interest was introduced to provide cheaper loans to the economically underprivileged sections of the rural population. Regional Rural Banks (RRBs) were created to cater exclusively to the needs of the weaker sections within a region. The Integrated Rural Development Programme (IRDP) was introduced in 1980 to direct credit from commercial banks to rural areas at subsidized rates.

Social and development banking came to an end with the Narasimham Committee report in 1991. The report suggested complete removal of controls over the operations of commercial banks based on the argument of increased profitability in a free market. The

reforms, though not in strict coherence with the committee report, set in the declining trend in rural and agricultural credit's growth and distribution. The share of rural branches in total credit of commercial banks declined from 15 percent in March 1990 to 10.4 percent in September 2001. The credit-deposit ratio in rural branches declined from 64 percent to 40 per cent while the incremental credit-deposit ratio declined from 60.4 per cent in 1980s to 34.5 per cent in 1990s (Shetty, 2002). The share of agriculture in total bank credit came down from 15.9 per cent in March 1990 to 9.9 per cent in March 2000. The number of agricultural loan accounts decreased by 17 per cent in 2000 over a period of five years. The share of small and marginal cultivators in total agricultural advances fell from 54.5 per cent in 1990-91 to 48.5 per cent in 1999-2000 (Chavan, 2002). Hence with the reform policies began the retreat of commercial banking from rural India.

(iv) The debt trap and farmer suicides

According to the NSSO report – 'Indebtedness of Farmer Households' (2003), 48.6 per cent of farmer households were reported to be indebted. Indebtedness was estimated to be highest among farmer households in Andhra Pradesh (82.0%), followed by Tamil Nadu (74.5%) and Punjab (65.4%). Going by principal source of income, 57 per cent farmer households were cultivators. Among them 48 per cent were indebted. Households with 1 hectare or less land accounted for 66 per cent of all farmer households. About 45 per cent of them were indebted. More than 50 per cent of indebted farmer households had taken loan for the purpose of capital or current expenditure in farm business. With the weakening of the rural credit system, farmers have been forced to rely upon credit from private moneylenders at high rates of interest. Increased input costs due to higher requirements of fertilizers and insecticides; use of expensive varieties of seeds; and high interest payments; along with volatile output prices has pushed a huge section of the rural population into the debt trap.

The increasing number of farmer suicides in India in the recent years is evidence enough to believe that the agricultural sector is going through a phase of acute crisis. In more

than 80 percent of the cases, the cause of suicide has been cited as high indebtedness. In Maharashtra alone, the number suicide deaths have increased from 1,083 in 1995 to 4,147 in 2004¹². Suicide mortality rate for Andhra Pradesh has risen from 13.6 to 25.6 over this period. For Karnataka it rose from 33.7 to 44.5 and for Kerala from 127.6 to 161.8. The ratio for Maharashtra has increased from 14.7 in 1995 to over 44.1 in 2001 and to a further 57 in 2004 (Mishra, 2005). It has been noted that the number of suicides has been markedly higher in the cotton belt.

The untimely introduction of the reform policies has proved to be fatal for the agricultural sector. The gates of trade had been thrown open at a time when the world prices were about to enter a long period of depression – many world prices continue to fall till date while other prices have risen a little but are still far below 1996 levels. While the fall in domestic prices in response to the international price movements have failed to yield higher incomes for the cultivators, the shift in cropping pattern on the other hand has led to a decline in foodgrain output. Reduced incomes and capital intensive techniques of production, coupled with reduced developmental expenditure of the government have accentuated the credit requirements of the agricultural sector. This in turn has resulted in mounting debts and increasing number of suicidal deaths among cultivators. The phenomenon has been more pronounced in the cotton belt as the international price of raw cotton has been most affected by high agricultural subsidies in the developed countries.

¹² Indian Express; July 1, 2006.

3.1 Trade in Raw Cotton

As discussed in the previous chapter, India is the third largest producer of raw cotton in the world. India's share in the world cotton trade however has been negligible until recently since the domestic demand has been just sufficient to absorb the raw material output. But trade in textiles has played an important role since time immemorial. Since the reforms of the early 1990s, a change in the pattern of trade and domestic consumption by the textile industry has been observed. Freeing of trade has marked a gradual shift in the cropping pattern and modes of production in the agricultural sector. The scope for selling the produce in the international market has encouraged cotton cultivators to pace up production, irrespective of demand from the domestic textile industry. Trade in raw cotton has therefore become an important determinant of the prevailing condition of the cotton cultivators. The focus of this chapter is to study the trends in raw cotton trade after liberalisation, and to investigate the link between the textile industry, trade and domestic production of cotton.

Immediately after independence, import substitution and industrialisation strategies facilitated rapid growth of the domestic textile industry but it faced severe shortages of raw cotton due to loss of acreage. During the Second World War, the need to grow more food and the decline in demand for Indian cotton abroad led to diversion of land under cotton to food grains cultivation. With partition, major cotton growing areas were lost to Pakistan. At the initiative of the government, considerable acreage was recovered by 1956 and by the third plan period India re-emerged as a net exporter of cotton. Though after 1957 there was no significant addition to acreage, production of raw cotton had been ample to suffice the domestic consumption needs. However, since the early 1990s, opening up of the domestic market and the scope for trade has been encouraging cotton cultivation at a larger scale. Incidents of areas under food crops being brought under

cotton cultivation has become a frequent phenomenon. With increase in area as well as a rise in yield, there has been substantial increase in output of cotton. This has become an issue of concern because: first, production has been increasing at a time when demand in the world market has hit near stagnation as may be inferred from rising stocks; second, world prices and therefore domestic prices are depreciating; and third, land is being diverted to cotton cultivation at the cost of falling per capita foodgrain output and availability.

Data at the aggregate level show that in recent years there have been net imports of raw cotton by India. India has always exported its short to medium staple raw cotton and imported long-staple raw cotton. So its export and import of raw cotton are not strictly of the same product. However, the production of short-staple raw cotton has declined, with increase in production of medium and medium-long staple varieties. In 2004-05, the total production of raw cotton in India was 243 lakh bales (170 kgs each), of which 3.15 per cent was short staple, 44.51 per cent was medium and medium-long, 43.74 per cent was long-staple, and 2.46 per cent was long to extra long variety. According to the Annual Report of the Ministry of Textiles, 2006-07, 'the variety wise demand for cotton matches the variety wise production'. Exports of raw cotton from India though they appear to be small in relation to world exports, remains important, especially so for the farmers who take up cotton cultivation solely for the purpose of trade. They are the worst hit in years of falling international prices. In such years, even the domestic buyers prefer to access cheaper cotton from the international market. Also, since in an open economy, domestic prices are largely influenced by the international price movements, producers are doubly cursed by falling domestic prices as well as decline in domestic demand. Under such conditions, contrary to standard theory, domestic prices remain low even in years of lower output.¹³

¹³ With the introduction of new seeds and capital intensive techniques of production in cotton cultivation, volatility of output has increased. Inadequate use of fertilizers and irrigation due to resource constraints, spurious seeds and ignorance often result in crop failures.

Table 3.1 India's Trade in Raw Cotton: 1991 to 2004

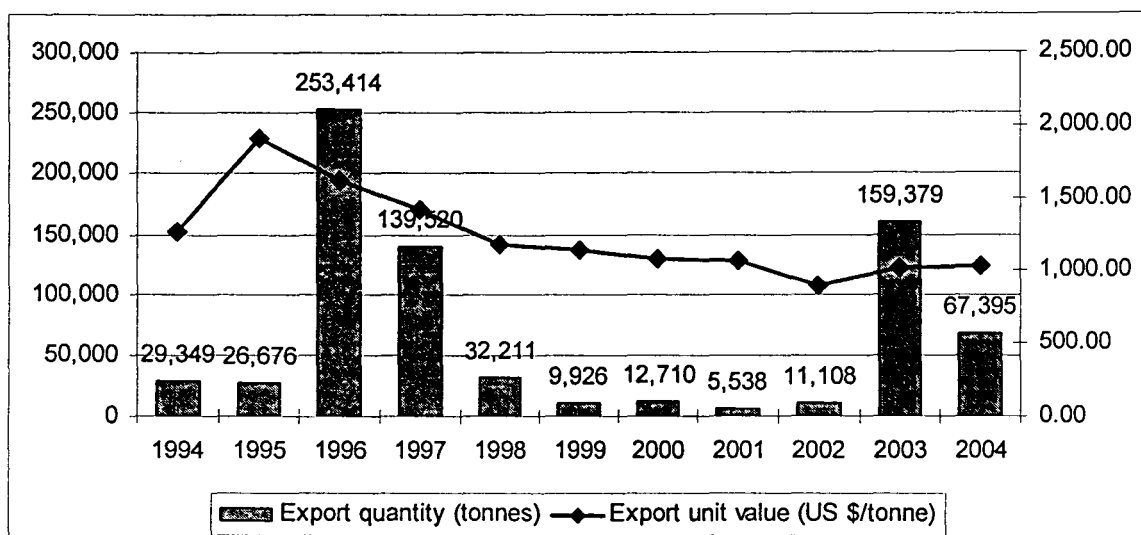
Year	Export quantity (tonnes)	Export value (1000 US \$)	Import quantity (tonnes)	Import value (1000 US \$)	Net Export Quantity (tonnes)	Net Export Value (1000 US \$)
1991	157,909	122,326	974	1,899	156,935	120,427
1992	63,455	68,882	52,606	82,940	10,849	-14,058
1993	192,197	207,063	3,822	5,885	188,375	201,178
1994	29,349	37,415	80,503	162,146	-51,154	-124,731
1995	26,676	50,963	69,451	161,513	-42,775	-110,550
1996	253,414	410,751	2,850	8,795	250,564	401,956
1997	139,520	197,549	8,824	21,316	130,696	176,233
1998	32,211	38,171	55,685	90,306	-23,474	-52,135
1999	9,926	11,312	230,354	289,034	-220,429	-277,722
2000	12,710	13,725	210,589	262,246	-197,879	-248,521
2001	5,538	5,942	383,964	454,800	-378,426	-448,858
2002	11,108	9,851	230,801	252,985	-219,693	-243,134
2003	159,379	163,047	241,787	333,282	-82,408	-170,235
2004	67,395	69,558	171,168	239,278	-103,773	-169,720

Source: www.faostat.fao.org; accessed on 07.02.2007.

3.1.1 Exports of raw cotton

Exports of raw cotton have fluctuated from year to year in synchronisation with the world prices. The export unit value of raw cotton showed a positive trend till 1995. Since then it has been gradually falling with some year to year fluctuations and the trend continues to date. However in several years, export quantities have shown increases even with falling export unit value. Between 2001 and 2002, exports of raw cotton doubled while the export unit value decreased from US\$1073/tonne to US\$ 887/tonne. This phenomenon can largely be attributed to distress selling. It is evident from the fact that though the domestic production in the 2002-03 cotton-year (September – October) was lower than the previous year, exports in 2003 increased by almost 15 times over the previous year, reaching a new peak after 1996.

Figure 3.1 Export unit value and the quantum of exports of raw cotton from India



Source: www.faostat.fao.org; accessed on 07.02.2007.

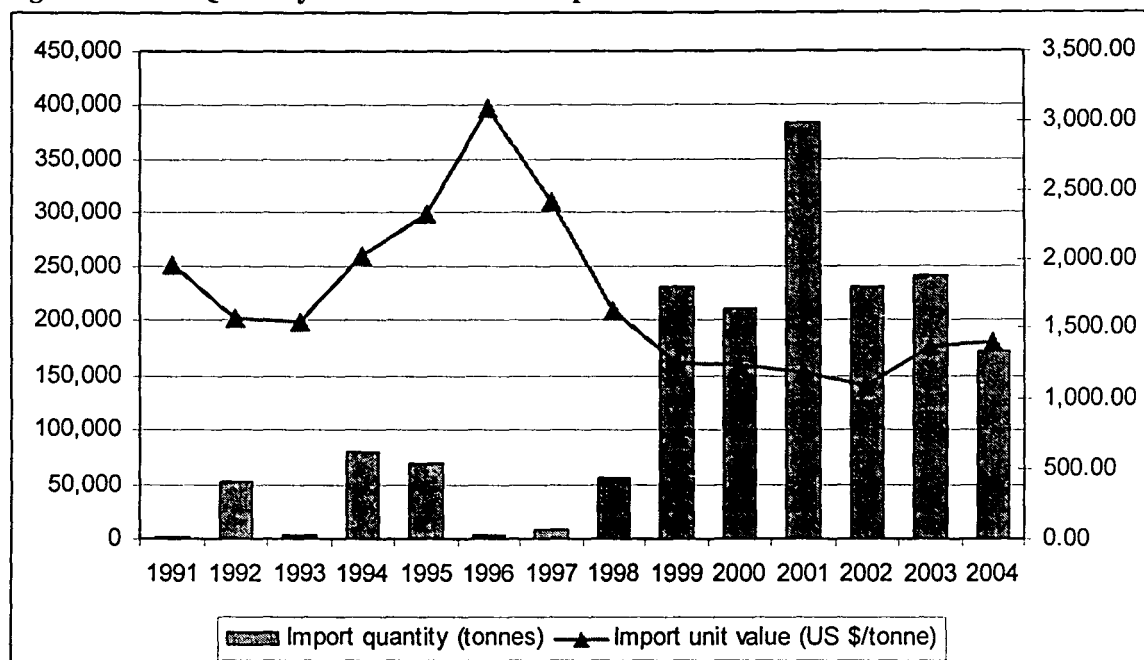
3.1.2 Imports of raw cotton

India had been self sufficient in cotton production but since liberalisation a rise in the import volume of raw cotton has been observed. In fact imports have been higher than exports during 1994 and 1995 and from 1998 onwards, imports of raw cotton has been observed to be increasing at a higher rate. On the face it appears that increased consumption of the domestic textile industry is the obvious reason for increased imports. But the possibility of the domestic produce being substituted by cheaper imports can not be ruled out. A comparative study of the production, trade, and domestic consumption of raw cotton is required to assess the trend. This question has been addressed in the next section of this chapter.

From figure 3.2 it can be seen that after 1997 in particular, import quantum showed high though fluctuating growth while the unit value of imports have been declining. Increased imports with declining import unit value is an indication of 'dumping' as almost half of India's raw cotton imports are from the US (table 3.3). The import peak in 2001 predates the big drought of 2002-03, so insufficient domestic output cannot be the explanation for rising imports. As discussed in the earlier chapter, high agricultural subsidies in the US

have been encouraging excessive production of cotton. Since the US textile industry is relatively small, more than three-fourth¹⁴ of the cotton produce of the US is released in the world market at prices considerably lower than the producer price.

Figure 3.2 Quantity and unit value of imports of raw cotton



Source: www.faostat.fao.org; accessed on 07.02.2007.

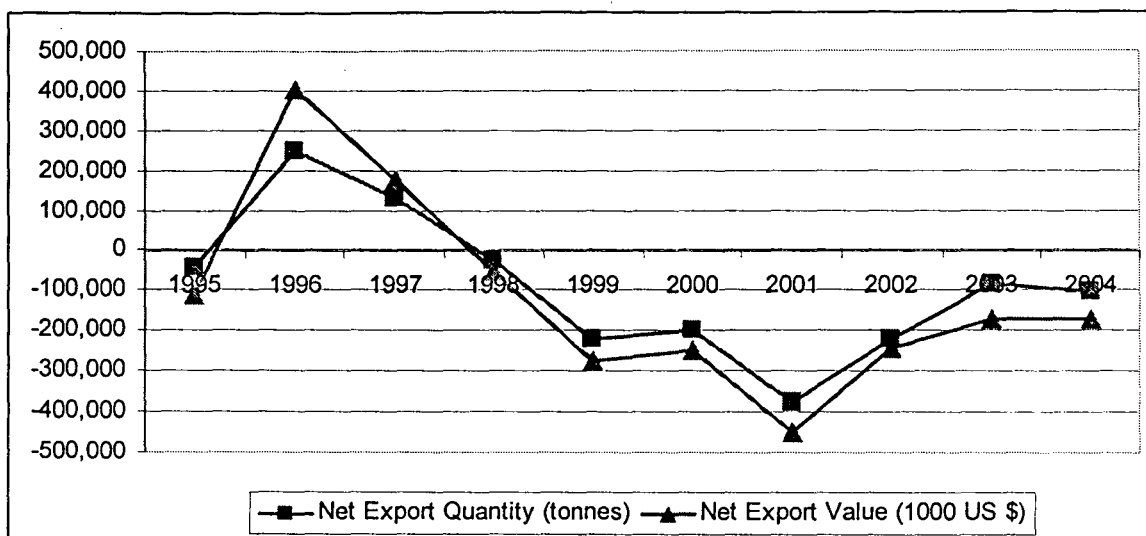
Table 3.2 Import of raw cotton by India from the United States

Year	Imports from USA	Total import of raw cotton	Percentage of Imports from USA
2003-04	118.81	241.98	49.10
2004-05	64.41	176.39	36.52
2005-06	44.83	82.68	54.22

Source: Office of the Textile Commissioner, Mumbai.

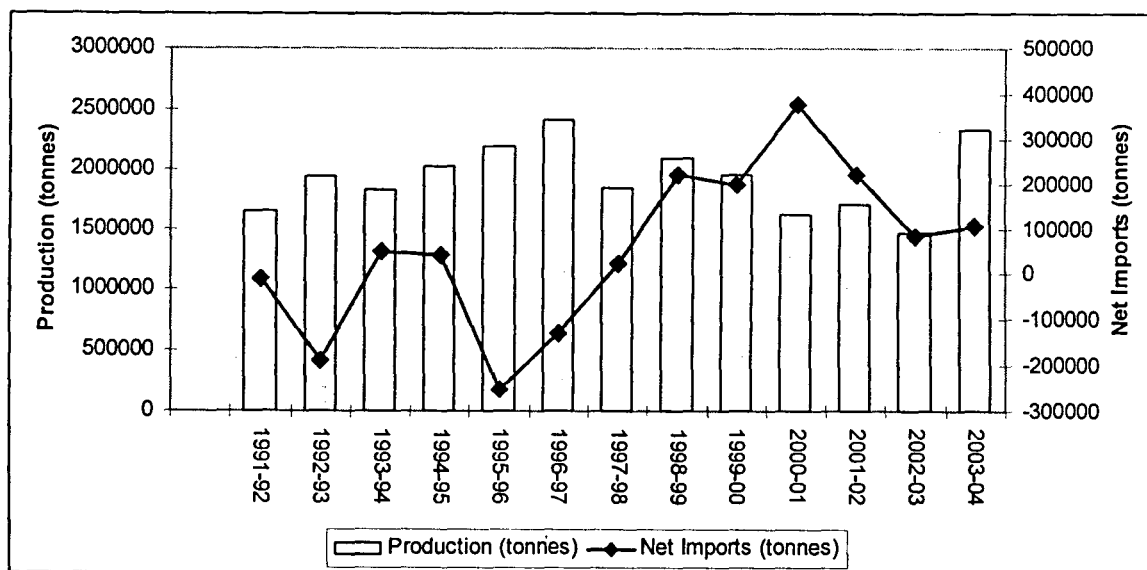
¹⁴ From tables 1.1(a) and 1.1(d) in chapter 1.

Figure 3.3 Value and quantum of net exports of raw cotton



Source: www.faostat.fao.org; accessed on 07.02.2007.

Figure 3.4 Domestic Production and Net Import of Raw Cotton



Source: Handbook of Statistics on Indian Economy, 2006; RBI, Govt. of India & www.faostat.fao.org as on 07.02.2007.

3.1.3 Net trade and its impact on domestic cotton producers

After the reforms of the early 1990s, the scope for trade lured cotton producers to expand cultivation on a very large scale. Even though trade liberalisation stimulated higher production, the incomes of cotton producers and exporters did not improve as the demand and price levels remained low in the international market. In fact, India's exports of raw cotton have been steadily declining after a peak of 253 thousand tonnes in 1996. Exports remained depressed between 1998 and 2002 when the lowest levels of exports were recorded. Over the same period, imports of raw cotton rose dramatically and reached a peak level of 384 thousand tonnes in 2001. Recent years have seen negative net exports. Though imports have increased in these years, the primary reason for the decline in net exports has been the severe fluctuations in the volume of exports of raw cotton. This has been a direct consequence of the volatility of world cotton prices. In absence of any sort of protection, the domestic cotton producers fail to compete in the world market. In India, the domestic pricing policy has remained de-linked from trade and tariff policies. Hence when world prices fall, there exists no mechanism to revise the tariff structure and this is reflected in the falling domestic prices.

3.2 The Textile Industry and Domestic Consumption of Raw Cotton

Textile industry in India has a complex structure with mill production in the organised sector, and the decentralised sector comprising the khadi, handloom and powerloom units. Cotton is the most important fibre used in the Indian textile industry. Cotton yarn accounts for about 73 per cent of total yarn production while cotton cloth has a share of approximately 45 per cent in total cloth production. Until recently, India had been self sufficient in raw cotton production. But in the past few years, domestic consumption has surpassed production and the excess of consumption is met through imports. The issue of concern is that though the volume of imports has increased to meet the demand, the cotton stock figure has remained positive and in fact, has increased in several years. An enquiry into the trend and pattern of domestic consumption of raw cotton requires an understanding of the Indian textile industry. This section of the chapter attempts to

highlight the specific features of the domestic textile industry and to establish the relevance of its performance for the cotton cultivators, and for the Indian economy as a whole.

3.2.1 Textile Policies and the Structure of the Indian textile industry

Cotton mills in India primarily grew up to supply the demand for coarse yarn to handloom weavers in India and China. The growth of weaving mills remained insignificant as they faced stiff competition from the handlooms. Coarse handloom cloth was considered to be more durable than the finer mill varieties and mills could not replicate the multi-coloured handloom sarees as they did not have bleaching and dyeing facilities. Also, handloom had an edge over mills because of low-cost capital and availability of family labour. In 1886, an excise duty of 3.5 per cent was imposed on Indian mill-made cloth to offset the duty of 3.5 per cent imposed on imported cotton piece-goods, which again favoured handloom production. Even when duties were imposed on the imports of cotton piece-goods, imports of yarn were not subject to any duty. Since the imports of yarn which were generally of higher counts and were used in handloom weaving, handloom weaving enjoyed some fiscal protection both against foreign cloth and against Indian mill-made cloth. From 1925, the abolition of the countervailing excise duty on mill-made piece-goods and the imposition of a duty of 5 per cent on cotton yarn scrapped off the relative advantage of the handlooms over mills. During the Second World War, the rise in per capita income due to the rise in the demand for agricultural commodities led to increased demand for textiles. Though the output of handlooms increased substantially, the growth of mill production occurred simultaneously.¹⁵

By independence the domestic mill sector had already substituted imports almost completely and subsequently growth depended on the growth of the domestic market. After independence, the mill sector accounted for the largest share of production and

¹⁵ Bagchi, A. K. (1972): *Private Investment in India 1900-1939*; Chapter 7: The Development of the Cotton – Mill Industry; pp. 219 – 261.

exports of cotton textiles. However, since the mid 1950s, the growth of the mill sector took a downturn. This had been partly a result of the outdated nature of already installed machinery and partly a result of the government's policies to protect the handloom sector. In 1949, excise duty was imposed on mill cloth production and from 1950, the reservation policy was implemented which allowed certain varieties of cotton fabric, sarees and dhotis to be manufactured exclusively by the handloom and small-scale powerloom units. In addition, a cess was levied on mill-made cloth in order to finance the development of the decentralised sector. These policies favouring the handloom sector, repelled mill owners from investing in renovating and up-grading the existing technology in mills.

In 1985, the Expert Committee on the Textile Industry pointed out that the reasons for sickness of the mill sector were: managerial incompetence, lack of technical competence and motivated personnel, excess labour, incorrect product-mix, poor marketing, obsolete machinery, inadequate maintenance, and poor labour relations. In fact, it was the reluctance of large business groups who owed the mill, to innovate and to invest in R&D that led to the decline of the mill sector. Before the 1980s, due to the existence of external barrier to entry, business groups expanded by employing diversification into new areas, often completely unrelated to existing activities. This led to inadequate investment in renovation and modernization of 'older' companies that were therefore characterized by low levels of productivity (Chandrasekhar, 2003). Increasing sickness in the mill sector pressurised the government intervene and to take over the sick mills. However indiscriminate take over of sick mills did not solve the problem of unutilised excess capacities and gradually, the textile sector started retreating away from mill production. Over the years, the share of the mill sector in total cloth production has declined sharply, from 74.2 per cent in 1955 to 21.5 per cent in 1989, and further down to a mere 3.4 per cent in 2004-05.

The powerloom sector flourished in the decentralised sector; first under government protection in the form of fiscal concessions until 1985; and later, advantages of cheap and unorganised labour, and low requirements of both fixed and working capital, along with

increase in demand due to decline in mill production fuelled unauthorised growth of powerlooms. Soon unprecedented growth of the powerlooms was identified as a potential threat to the handloom sector. In 1985, the government abolished the distinction between mills and powerlooms and registration was made compulsory for all powerlooms. Since the powerlooms use cone and beam yarn, they had to pay excise duty at the same rate as mills. Only hank yarn, used by the handloom sector, is exempt from excise duty. The powerloom sector had to pay compound rates of excise levy on its cloth, which varied according to the number of looms in the unit. This resulted in frequent fragmentation, transfers, and idle capacity in powerlooms. A large number of powerlooms were closed down due to decline in income after the reversal of the government policies. The major problem in the powerloom sector has been that due to the absence of labour legislation, labourers work for extremely long hours for low wages under poor conditions and they have little or no job security. In spite of the adverse conditions, the powerloom sector has managed to grow and has emerged as the dominant player in the Indian textile industry. In 2004-05, the decentralised sector accounted for 84 per cent of total cloth production and 71.6 per cent of cotton textile production.

Handloom has been under the ambit of government's protection since long before independence; partly because of its role in the struggle for independence, and partly because of its employment potential for the rural masses. Both the 'reservation policy' and restrictions imposed on the expansion of the mill sector were aimed at promoting the development of the handloom sector. But problems of availability of yarn at reasonable prices, marketing of products, credit availability, under-utilisation of capacity, and competition from powerlooms, continued to plague the handloom sector. Though the production of yarn increased substantially, handloom weavers could hardly benefit as yarn prices rose due to increased exports after liberalisation. Consequently, there was a rise in cost of production in the handloom sector and weavers suffered from loss of income and employment and a large number of weaver suicides were reported from all over the nation. The persistence of the problem is reflected in the decline in production of the handloom sector in recent years. Between 2000-01 and 2004-05, the production of cloth by the handloom sector has declined by nearly 24 per cent.

Apart from the structural shift of the textile industry from organised to decentralised production, there has been a gradual shift towards production of blended & synthetic yarn and cloth. In 1995-96, 27 per cent of the total cloth production was of 100 per cent non-cotton cloth. The figure dramatically rose to 41 per cent in 2004-05. However, there has been a slowdown in the growth rate of 100 per cent non-cotton cloth production which came down from 14 per cent to 2 per cent in the same period.

3.2.2 Post reform performance of the textile industry

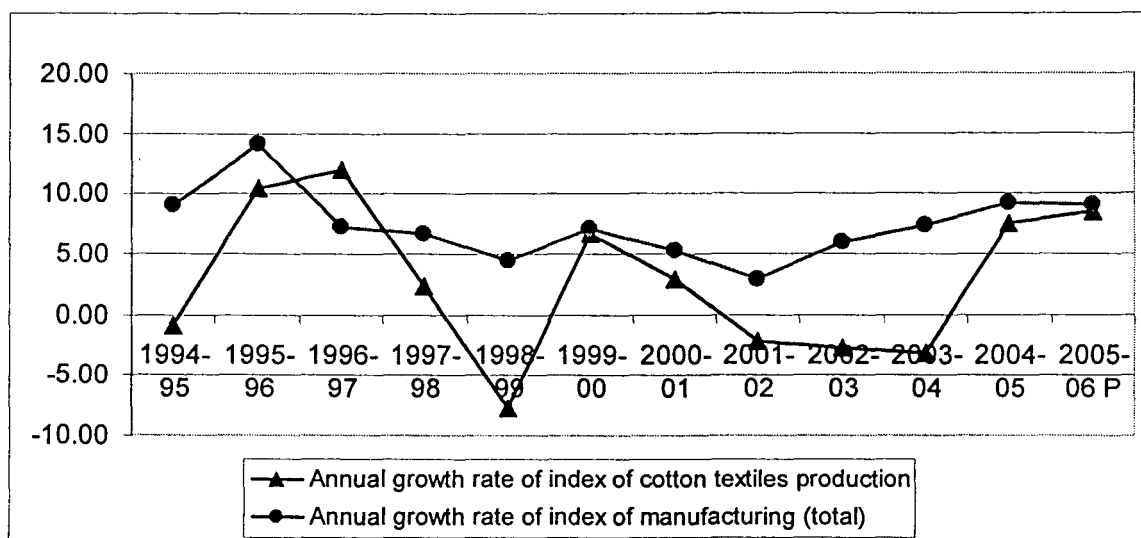
Textile has been one of the oldest industries in India and since its inception, has remained a crucial part of Indian industry with significant contribution to industrial GDP and export earnings. To date, the textile sector accounts for about 4 per cent of total GDP, 14 per cent of total industrial output, and about 17 per cent of gross export earnings. According to ASI 2003-04 figures, textiles employ 21 per cent of the total workforce. With a contribution of 12 per cent to world production of textile fibres and yarns, the Indian textile industry has a marked presence in world textile productions as well.

Since the 1990s, the textile sector which accounts for a large share in India's export earning, has been under tremendous pressure to survive through the competition induced by the reform policies. Unfortunately, the textile sector failed to reduce its production costs which has been a necessity in order to compete in the international market and to compete with cheaper imports in the domestic market. Though the absolute volume of textile exports rose in consecutive years, the annual growth rate of cotton yarns, fabrics and made-ups exhibited a negative trend. Exports of readymade garments has increased but with severe year to year fluctuations. Trade in textiles is discussed in detail in the next sub-section. Here we focus on the domestic production of textiles.

The annual growth rate of index of cotton textiles production has been continually declining since 1997-98, and it registered negative growth rates for three consecutive years: from 2001-02 to 2003-04. It gained momentum in the following year but remained

below the growth rate of index of manufacturing (figure 3.5). The share cotton textiles in total domestic product from manufacturing, has declined from 6.34 per cent in 1998-99 to 4.25 per cent 2003-04.

Figure 3.5 Annual growth rate of index of cotton textiles production (at 1993-94 prices)



Source: Office of the Textile Commissioner, Mumbai.

The production of cotton cloth marginally increased from 18,900 million sq metres in 1995-96 to 18,989 million sq metres in 1999-2000, which gives an average annual growth rate of a mere 0.09 per cent. This has been a drastic fall given that the production of cotton cloth grew at an average rate of 4 per cent per annum between 1991-92 and 1994-95. Production measured in million square metres, declined from 19,992 in 1997-98 to 19,300 in 2002-03 and further to 18,040 in the following year. On the other hand, the production of spun cotton yarn measured in million kilograms increased from 1,450 in 1991-92 to 1,894 in 1995-96 and to 2,148 by 1996-97 with significant increase in exports. Thereafter production of cotton yarn stagnated and even declined in some of the years. The 10.6 per cent average annual growth rate of 100 per cent non-cotton yarn production during the 1990s came down to 6.9 per cent between 2000-01 and 2005-06 while that of blended yarn declined from 20 per cent to (-) 1.5 per cent during the same period. The performance of the blended and 100 per cent non-cotton cloth production has been relatively better in comparison to production of cotton cloth.

Table 3.3 Sector-wise total cloth production (million. sq. metre.)

Year	Mill Sector	Handloom Sector	Decentralised Powerloom Sector	Decentralised Hosiery Sector	All Sectors
2000-01	1670 (4.21)	7506 (18.92)	23803 (59.99)	6696 (16.88)	39675
2001-02	1546 (3.74)	7585 (18.33)	25192 (60.86)	7067 (17.07)	41390
2002-03	1496 (3.62)	5980 (14.48)	25954 (62.83)	7881 (19.08)	41311
2003-04	1434 (3.44)	5493 (13.17)	26947 (64.59)	7847 (18.81)	41721
2004-05	1526 (3.42)	5722 (12.81)	28325 (63.39)	9112 (20.39)	44685
2005-06(P)	1656 (3.39)	6108 (12.51)	30626 (62.75)	10418 (21.34)	48808

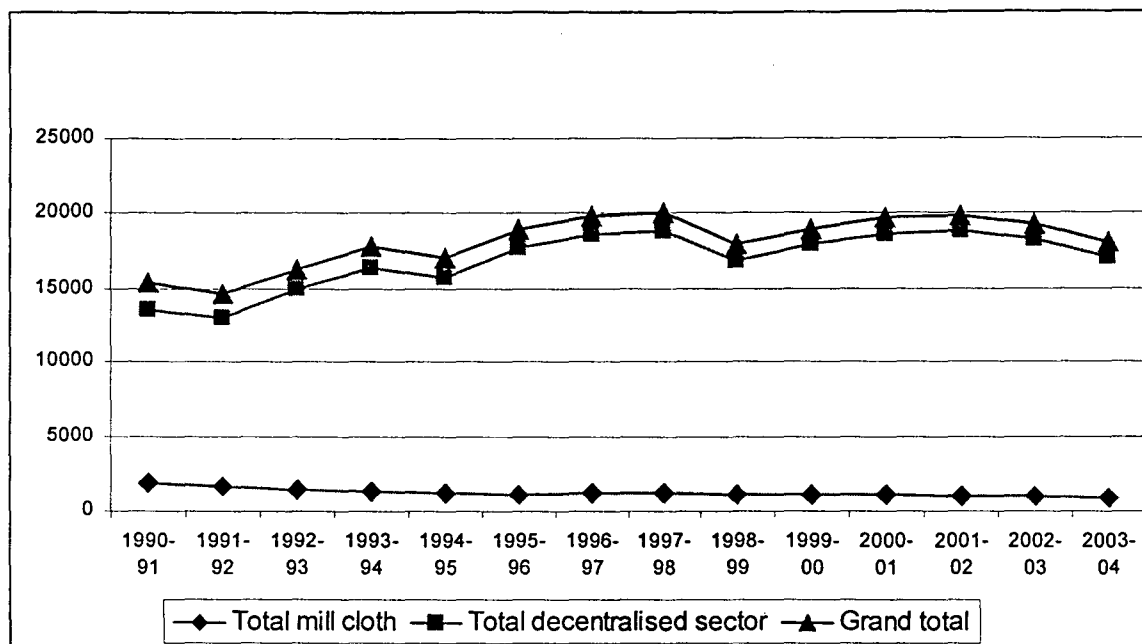
Note: Figures in parenthesis are percentage share in total.
Source: Office of the Textile Commissioner, Mumbai.

Table 3.4 Sector-wise cotton cloth production

Year	Mill Sector	Handloom Sector	Decentralised Powerloom Sector	Decentralised Hosiery Sector	All Sectors
2000-01	1106 (5.61)	6577 (33.36)	6584 (33.39)	5451 (27.64)	19718
2001-02	1036 (5.24)	6698 (33.88)	6473 (32.74)	5562 (28.13)	19769
2002-03	1019 (5.28)	5098 (26.41)	6761 (35.03)	6422 (33.27)	19300
2003-04	969 (5.37)	4519 (25.05)	6370 (35.31)	6182 (34.27)	18040
2004-05	1072 (5.19)	4792 (23.20)	7361 (35.64)	7430 (35.97)	20655
2005-06(P)	1193 (5.00)	5236 (21.93)	8821 (36.95)	8624 (36.12)	23873

Note: Figures in parenthesis are percentage share in total. Office of the Textile Commissioner, Mumbai.

Figure 3.6 Production of Cotton Cloth (million square metres)



Source: Handbook of Statistics on Indian Economy, 2006; RBI, Govt. of India.

3.2.3 Trade in textiles

Historically, textiles have been the one of the most import trade items for India. Cotton textiles from India had a huge market share abroad, particularly in Europe and it was one of the most important profit earners for the East India Company. Unfortunately the textile industry started losing share in world exports with the ban imposed on imports of Indian items by Britain in 1719, and unfair competition with British manufactures in other international markets. On the other hand, Indian markets were flooded with British textiles.

During the First World War, the shipment of low-quality piecegoods from Britain was curtailed owing to shortage of shipping space. In 1917, the import duty on cotton piecegoods was raised from 3.5 per cent to 7.5 per cent. In the meanwhile, Japanese cotton invaded the Indian market which hastened the process of displacement of Manchester piecegoods. Soon Japanese mill products eroded Indian yarn exports to the Chinese market. Due to budgetary difficulties, the Government of India was coaxed to impose a general rate of import duty of 11 per cent in 1921. Between 1927 and 1932, the tariff

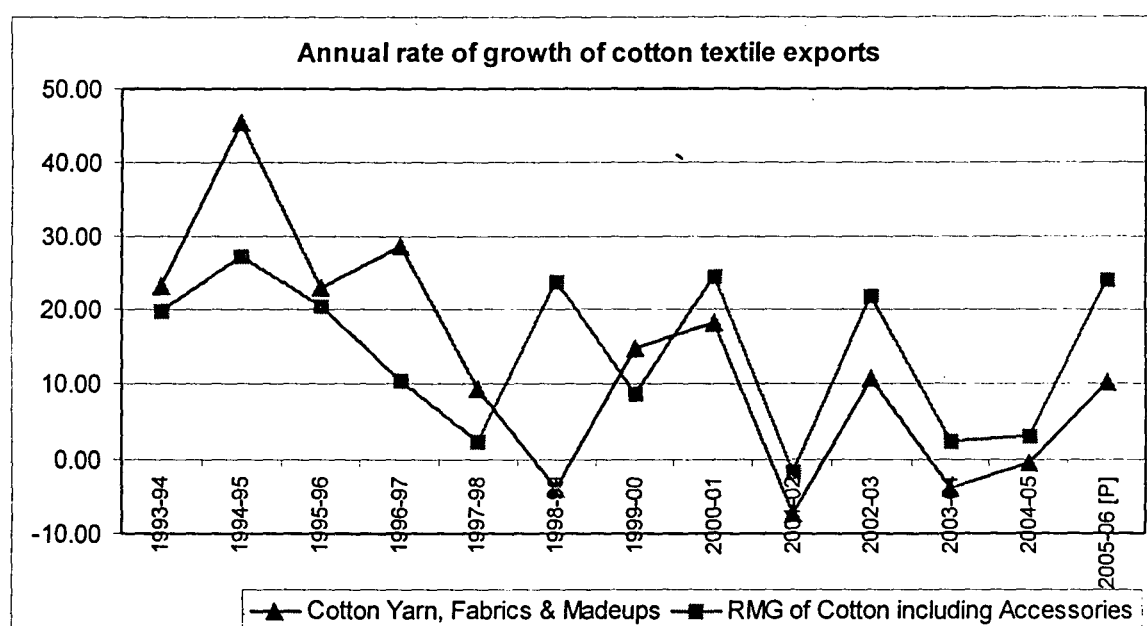
rates were continually revised and increased in order to protect the domestic textile industry from imports of Japanese piecegoods, until Japan boycotted Indian raw cotton in 1933. Trade was restored in July 1934 with the Indo-Japan Protocol which was revised in April 1937. Throughout this period, imports of British piecegoods which were more expensive, received preferential treatment. The Bombay-Lancashire Pact of 1939 ensured increased use of Indian cotton by British mills but also facilitated imports of British goods, subject to some quantitative restrictions. Till independence, export of textile items from India was limited to yarns of coarser variety which too was almost insignificant.

After Independence, export of cotton fabrics picked up with the devaluation of the Rupee in 1949 and the Korean War boom. However, under the import substitution policy, exports received no special encouragement until the trade balance showed mounting deficits. Thereafter, from 1959, export promotion measures in the form of 'import entitlement scheme' were introduced, especially for export of textiles. During the Third Five Year Plan a new set of such measures were introduced, which apart from extensive application of the import entitlement scheme, offered exemptions from sales tax on final sales and refunds of excise duty and import customs on inputs; direct tax concessions; cash subsidies; and railway freight concessions. In spite of the export promotion measures, no significant growth of textile exports was noted until the late 1960s. With devaluation of the rupee during the 1970s, exports of cotton fabric reached a peak in 1976-77, declined thereafter and again increased in the late 1980s. Meanwhile, exports of readymade garments continued to grow throughout the 1970s and 1980s.

In the pre-reform period, textiles accounted for as large as 30 per cent of the total export earnings. During the eighth plan period, the figure averaged 28 per cent, but it gradually started declining from 1998-99 onwards and reached 16.8 per cent in 2004-05. Although exports of yarn, fabric and made-ups in million US Dollars, rose from 797.6 in 1988-89 to 1537.1 in 1993-94 and further to 3264.3 in 1997-98, the average annual growth rate of exports of yarn, fabric and made-ups was 19.7 per cent between 1991-92 and 1995-96, which came down to 2.17 per cent between the years 1996-97 and 2000-01. A significant rise in imports of both cotton yarn and fabric has been noted in recent years. Import of

cotton yarn has increased from 2,829 tonnes in 2002-03 to 4,457 tonnes in 2005-06, of which 1,972 tonnes came from Pakistan. The unit value of total imports of cotton yarn has declined from Rs.180.52/kg to Rs.126.72/kg over the same period. At the same time, import of cotton fabric has nearly trebled from 51,378 thousand square metres to 1,41,558 thousand square metres. This is due to the rising amount of cheaper imports from China: the value of 21,569 thousand square metres of cotton fabric imports from China stood at Rs. 2206.2 million during 2003-04, which rose to 80,988 thousand square metres in 2005-06, valued at Rs. 5701.9 million. It is to be noted that the unit value of imports of cotton fabric from China has decreased from Rs.102.28/sqm to Rs.70/sqm.¹⁶

Figure 3.7 Annual growth rates of exports of cotton yarn, fabrics, made-ups & RMG



Source: Handbook of Statistics on Indian Economy, 2007; RBI, Govt. of India.

The above data reflect the fact that while the industry is becoming increasingly dependent on imports of yarn and fabric, it is the ready-made garments segment which has managed to make up for the loss of export earnings. However, with the expanding share of South-East Asian economies in the world textile market, even ready-made garments exports are facing stiff competition. The average annual growth rate of exports of ready-made

¹⁶ The value and quantity figures for imports of cotton yarn and fabric are from the 'Office of the Textile Commissioner' report, 2007.

garments (in terms of value, million US \$) was 18 per cent between 1988-89 and 1994-95; 5.9 per cent between 1995-96 and 1999-2000; and 3.6 per cent between 2000-01 and 2004-05.

3.3 The Textile Industry and Cotton Cultivators

Indian textiles have always been internationally competitive due to its cost advantages. With the reforms of the 1990s the scope for trade in textiles expanded further. In the meanwhile, the domestic market for textile and textile products was shrinking, following the deflationary macroeconomic policies adopted by the government. Gradually, there was a shift in production of textiles towards manufacturing for the external market. This had an adverse implication for the cotton cultivators: To remain internationally competitive, textiles were forced to maintain low costs of production, which included low wages and low raw material costs. This encouraged import of cheaper cotton from countries like the US, which could afford to sell raw cotton at a much lower price in the world market by providing high subsidies to their cotton cultivators. Also, imports of cotton yarn have increased in recent years, which have an adverse impact on the domestic consumption of raw cotton. Imports of cheaper yarn could have benefited the weaving segment of the industry but on the contrary, there has been rise in the volume of fabric imports as well. To summarize, although the domestic consumption of raw cotton has been lower than the domestic production, imports have surpassed exports. As should be the case under the given circumstances, stocks have been piling up each year.

Table 3.6 summarises the production, trade, and consumption of raw cotton for five years, from 2001-02 to 2005-06. As indicated by the figures, imports have exceeded exports even in years in which domestic production of cotton has been higher than the consumption. Particularly in 2004-05, domestic production has been higher than domestic consumption by 815.5 million kgs; the export figure stood at a mere 155.4 million kgs while imports reached 206.9 million kgs; and stocks increased by 867 million kgs. The figures establish the fact that with falling prices, both international and domestic, along with demand deceleration, cotton cultivators in India are in deep distress.

Table 3.5 Raw cotton balance sheet (million kgs)

Year	Domestic Production	Net Exports	Domestic Consumption	Closing Stock
2001-02	2686	-420.92 (-15.67)	2919.92 (108.71)	680 (25.32)
2002-03	2312	-286.11 (-12.38)	2870.11 (124.14)	408 (17.65)
2003-04	3043	83.3 (2.74)	3010.7 (98.94)	357 (11.73)
2004-05	4131	-51.48 (-1.25)	3315.51 (80.26)	1224 (29.63)
2005-06(P)	4148	731 (17.62)	3689 (88.93)	952 (22.95)

Note: Figures in parenthesis indicate percentage of production.

Source: Office of the Textile Commissioner, Mumbai.

4.1 Income Deflation in the Agricultural Sector

That the economy is into a phase of agricultural depression is no more a question. Falling agricultural incomes and the changing pattern of rural expenditure are self-explanatory factors. Though it might appear to be a digression from the theme of 'cotton', declining rural income is an issue of concern for the manufacturing sector and the whole economy as well. Demand deflation in the economy is apparent from the fact that despite a fall in foodgrain output, there has been unprecedented rise in foodgrain stocks and exports, resulting in falling per capita foodgrain availability. As Patnaik (2002) notes, while annual net output per capita fell by 4.5 kg between 1989-90 and 2000-01, the net availability per capita has fallen by 14.5 kg.¹⁷ Since consumption of cereals and other food items, which has a very low income elasticity, account for the major share of the expenditure of lower income groups, rising debt and falling incomes lead to decreased demand for industrial mass consumption goods. On the other hand, decreased demand for industrial goods leads to fall in industrial prices, which in turn implies lower profits or lower wages or both. In case wages are rigid, industrial profits get squeezed and therefore investments are adversely affected. But if the loss due to fall in prices is to be borne by the industrial workers through a cut in their wages, demand is likely to fall further. Even if prices remain rigid in the event of fall in demand, the situation will be aggravated due to fall in real wages.

In an open economy, world price movements have a direct impact on domestic prices. Since international prices for primary products have remained depressed since the time full-fledged liberalisation policies were adopted, it has led to massive income deflation in the agricultural sector. As discussed earlier, commercialisation of agriculture, capital-

¹⁷ Patnaik emphasizes on the fact that the build-up of high foodgrain stocks has resulted from rising 'issue prices' for both 'above poverty line' (APL) and 'below poverty line' (BPL) population. The issue prices have been raised more than the procurement prices in an attempt to reduce food subsidies.

intensive modes of production and the decline in public expenditure has further contributed to the decline in incomes. The mass income deflation in turn has resulted in the contraction of overall demand in the economy. The purpose of this chapter is to focus on the changing pattern of consumption due to the contraction of aggregate consumption expenditure across all expenditure classes among the rural as well as the urban population. The focus is on the demand for food and industrial products of mass consumption like clothing.

4.2 Household Consumption Expenditure

There has been a marked shift in the pattern of household consumption expenditure. The aggregate data from CSO indicate that the share of food in private final consumption expenditure at current expenditure has decreased from 50.6 per cent in 1993-94 to 33.5 per cent in 2005-06, while that of clothing has been squeezed from 6.1 per cent to 4.5 per cent over the same period. However, the total private final consumption expenditure in the domestic market (at 1993-94 prices) has increased from Rs.574772 crores to Rs.964865 crores during the period 1993-94 to 2003-04.¹⁸ But the aggregate figures are quite misleading because the rise in private consumption expenditure is solely accounted for by the richest 5 per cent of the population. A study of the data at the household level would reveal that growth has been highly skewed against the lower income groups.

4.2.1 Data

The present analysis is based on the NSSO reports on 'Level and Pattern of Household Consumption Expenditure'. The study refers to the last three quinquennial surveys which includes the 50th round (July 1993 - June 1994), the 55th round (July 1999 – June 2000), and the 61st round (July 2004 – June 2005). In all the rounds of the survey, the sample has been divided into twelve classes according to the groups' monthly per capita consumption expenditure (MPCE). However the expenditure classes have been adjusted in each successive round. To study the change in the pattern of real consumption,

¹⁸ Statements 14 and 15, National Accounts Statistics, CSO, Government of India: various issues.

expenditure in each category has been deflated using the Consumer Price Index for Agricultural Labourers [CPI(AL)] in case of rural households. For urban households, both Consumer Price Index for Urban Non-Manual Employees [CPI(UNME)] and Consumer Price index for Industrial Workers [CPI(IW)] have been used as deflators. With base 1993-94, the CPI(AL) for 1999-2000 is 157.4 and for 2004-05 is 174.4; the CPI(UNME) for 1999-2000 is 163 and that for 2004-05 is 201.8; and the CPI(IW) for 1999-2000 is 165.8 and for 2004-05 is 201.3. The table below shows the consumption expenditure classes for the 50th, 55th, and the 61st rounds, as specified by the NSSO reports.

It is to be noted that the 55th NSS round data are not comparable with the 50th and the 61st rounds. This is because the 55th round is based on mixed reference period (365 days for infrequently purchased items and 30 days for the rest), while the other two rounds, like all preceding rounds, are based on uniform 30 days reference period. The 55th round overestimates the expenditure compared to other rounds. Though the 55th round data shows considerable improvement, it is possible that the improvement was much less or never actually took place. In fact, it could even be the case that the real expenditure during the 55th round fell below that during the 50th round. There is no easy way to adjust the 55th round data to make it comparable with other rounds. However, for certain items of consumption like clothing and durables, data based on both 30 days reference period and 365 days reference periods are available in the 61st round reports. The present analysis therefore includes comparison of MPCE on clothing during the 50th and the 61st rounds based on 30 days recall period, while that during the 55th and the 61st rounds is based on 365 days recall period.

The total monthly expenditure of each expenditure class for both rural and urban households has been tabulated along with the monthly expenditure on clothing. The monthly expenditure on food has also been included as it accounts for a major share in the total expenditure of all classes, especially so for the lower and the middle income groups.

Table 4.1 MPCE Classes in the 50th, 55th and 61st rounds of NSS

MPCE Class	50th Round		55th Round		61st Round	
	Rural	Urban	Rural	Urban	Rural	Urban
I	0-120	0-160	0-225	0-300	0-235	0-335
II	120-140	160-190	225-255	300-350	235-270	335-395
III	140-165	190-230	255-300	350-425	270-320	395-485
IV	165-190	230-265	300-340	425-500	320-365	485-580
V	190-210	265-310	340-380	500-575	365-410	580-675
VI	210-235	310-355	380-420	575-665	410-455	675-790
VII	235-265	355-410	420-470	665-775	455-510	790-930
VIII	265-300	410-490	470-525	775-915	510-580	930-1100
IX	300-355	490-605	525-615	915-1120	580-690	1100-1380
X	355-455	605-825	615-775	1120-1500	690-890	1380-1880
XI	455-560	825-1055	775-950	1500-1925	890-1155	1880-2540
XII	560 & more	1055 & more	950 & more	1925 & more	1155 & more	2540 & more

4.2.2 Trends in real consumption expenditure

Rural Expenditure:

For rural areas the deflator used is the Consumer Price Index for Agricultural Labourers. From table 4.2 we can see that the rural monthly expenditure on food has been lower during the 61st round than that during the 50th round for all MPCE classes, except for the lowest three MPCE classes. The average rural monthly expenditure on food has declined from Rs.177.77 to Rs.176.38 over the decade. The total MPCE figures show that the overall expenditure for the lowest 8 MPCE classes in the 61st round has been marginally higher than that during the 50th round, but significantly higher for the top 4 MPCE classes. However, given the fact that the lowest 8 MPCE classes comprise 70 per cent of the rural population, the increase in total expenditure in the 61st round has largely been due to the rise in incomes of the richest 30 per cent only.

The data indicates that there has been a slight rise in the rural spending on clothing for the lower expenditure classes starting from very low levels, but the average real expenditure on clothing has decreased from Rs.15.12 during the 50th round to Rs.14.52 during the 61st round at constant prices. It implies that the overall demand for textile products in the rural sector has declined over the decade.

Table 4.2 Rural MPCE at 1993-94 prices (in Rupees)

MPC E Class	Food			Clothing			Total		
	50th Round	55th Round	61st Round	50th Round	55 th Round	61st Round	50th Round	55th Round	61st Round
I	73.12	81.73	78.31	0.92	8.84	1.36	100.37	121.33	114.41
II	95.78	102.63	97.74	1.32	11.41	2.16	130.68	153.63	145.53
III	111.57	116.87	112.85	2.16	13.03	3.27	152.89	177.06	170.09
IV	128.62	132.17	127.18	2.92	15.24	4.62	177.55	203.96	196.33
V	143.09	148.34	142.26	4.17	16.42	6.15	200.01	229.24	222.32
VI	156.4	162.13	155.92	5.87	18.24	7.73	222.1	254.07	247.74
VII	173.18	177.67	170.11	7.61	20.1	10.05	249.45	283.03	276.12
VIII	189.89	194.71	187.25	10.72	22.07	12.53	281.52	315.59	311.5
IX	212.99	217.21	209.71	16.13	24.92	16.67	324.94	359.99	361.47
X	245.92	251.05	239.62	27.65	29.27	25.53	398.3	435.83	444.38
XI	285.41	295.9	285.56	47.17	34.81	36.35	500.27	541.03	573.36
XII	370.49	395.24	377.94	98.52	50.00	78.23	872.39	854.36	1121.89
All	177.77	183.48	176.38	15.12	21.14	14.52	281.4	308.87	320.4

Figure 4.1 Rural MPCE on food (at 1993-94 prices)

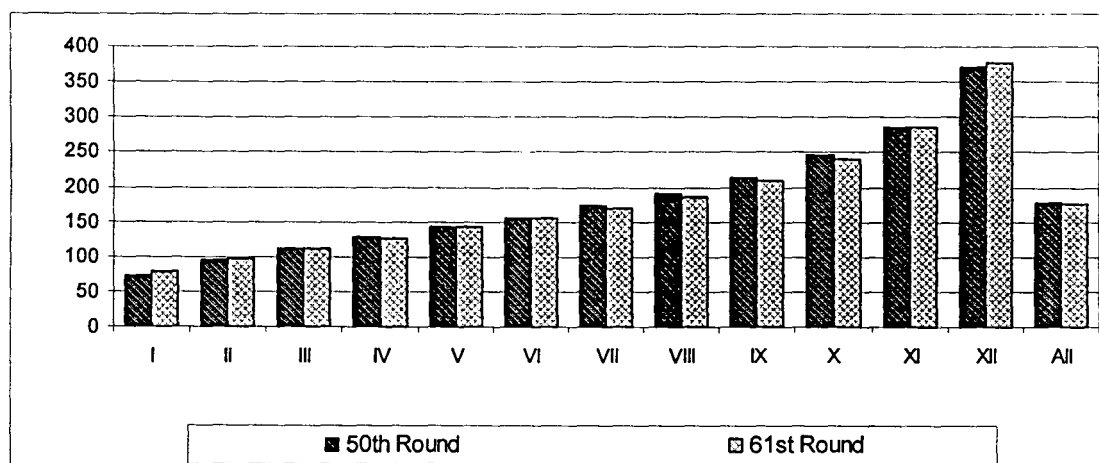


Figure 4.2 Rural MPCE on clothing (at 1993-94 prices)

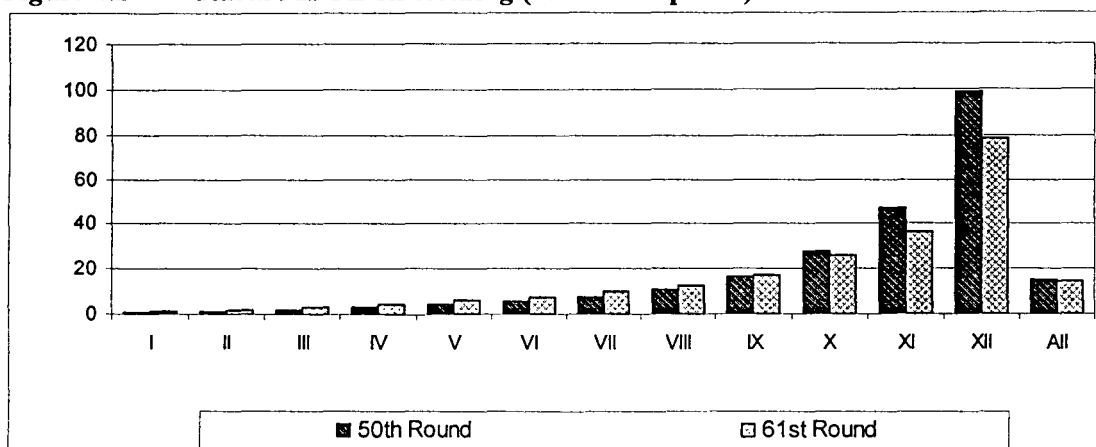
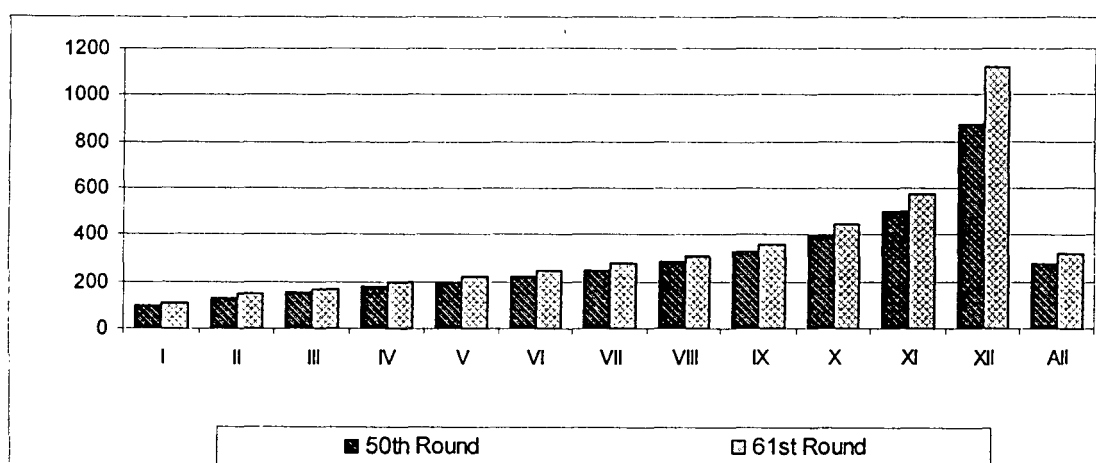


Figure 4.3 Total Rural MPCE (at 1993-94 prices)



Urban Expenditure:

The price index used as deflator is the Consumer Price Index for Urban Non-manual Employees. The Consumer Price Index for Industrial Workers has also been used and the results are virtually identical. We find that the urban situation is even worse than the rural. The expenditure on food of the urban population has declined drastically from the 50th round to that during the 61st round for all MPCE classes. The average urban expenditure on food has declined from Rs.250 to Rs.222. The total expenditure during the 61st round is higher compared to the 50th round but the increase in the total expenditure of

the lower MPCE classes is only marginal in comparison to the rise in the expenditure of the highest expenditure class.

Table 4.3 Urban MPCE at 1993-94 prices (in Rupees), using CPI(UNME)

MPC E Class	Food			Clothing			Total		
	50th Round	55th Round	61st Round	50th Round	55 th Round	61st Round	50th Round	55th Round	61st Round
I	94.37	101.02	89.89	0.84	10.9	1.7	132.84	156.91	138.58
II	123.49	128.02	115.12	1.61	13.82	2.73	175.52	200.69	182.42
III	146.59	147.49	131.3	2.7	15.95	5.56	210.8	238.74	218.69
IV	167.81	170.74	151.41	3.78	18.74	7.09	247.51	284.61	264.24
V	189.62	189.61	171.64	6.13	21.63	7.53	286.84	329.58	310.12
VI	212.98	213.96	189.51	7.77	24.72	12.25	331.57	379.52	361.83
VII	236.22	238.17	211.28	11.93	28.31	14.96	380.72	440.9	425.17
VIII	265.99	267.25	234.25	17.47	32.64	18.89	447.58	515.66	502.61
IX	303.2	305.59	270.05	26	38.63	23.78	543.46	619.43	607.73
X	364.84	358.12	317.42	41.17	46.85	36.59	698.33	789.07	790.09
XI	443.38	427.53	380.82	63.1	60.6	49.07	923.38	1038.13	1068.98
XII	563.01	598.22	497.52	131.44	94.15	111.5	1643.06	1886.06	2098.93
All	250.32	252.05	221.71	21.43	31.75	20.86	458.04	524.49	521.49

Table 4.4 Urban MPCE at 1993-94 prices (in Rupees), using CPI(IW)

MPC E Class	Food			Clothing			Total		
	50th Round	55th Round	61st Round	50th Round	55 th Round	61st Round	50th Round	55th Round	61st Round
I	94.37	99.31	90.11	0.84	10.71	1.71	132.84	154.26	138.93
II	123.49	125.86	115.40	1.61	13.58	2.73	175.52	197.30	182.88
III	146.59	145.00	131.63	2.7	15.68	5.58	210.8	234.70	219.23
IV	167.81	167.86	151.78	3.78	18.43	7.11	247.51	279.81	264.90
V	189.62	186.41	172.07	6.13	21.27	7.55	286.84	324.02	310.89
VI	212.98	210.34	189.99	7.77	24.30	12.29	331.57	373.11	362.73
VII	236.22	234.15	211.81	11.93	27.83	15.00	380.72	433.46	426.23
VIII	265.99	262.73	234.83	17.47	32.09	18.94	447.58	506.95	503.86
IX	303.2	300.43	270.73	26	37.98	23.84	543.46	608.97	609.23
X	364.84	352.07	318.21	41.17	46.06	36.68	698.33	775.75	792.06
XI	443.38	420.31	381.76	63.1	59.58	49.20	923.38	1020.60	1071.64
XII	563.01	588.12	498.75	131.44	92.56	111.77	1643.06	1854.20	2104.14
All	250.32	247.79	222.26	21.43	31.22	20.91	458.04	515.63	522.78

The average urban per capita expenditure on clothing shows a slight decline from Rs.21.43 during the 50th round to Rs.20.91 during the 61st round, although there has been a rise in expenditure on clothing for the lowest 8 MPCE classes. The fall in the average expenditure on clothing is accounted for by the highest four MPCE classes. The decline in textile product consumption has been sharpest for the highest MPCE class: from Rs.131.44 to Rs.111.77.

Figure 4.4 Urban MPCE on food (at 1993-94 prices)

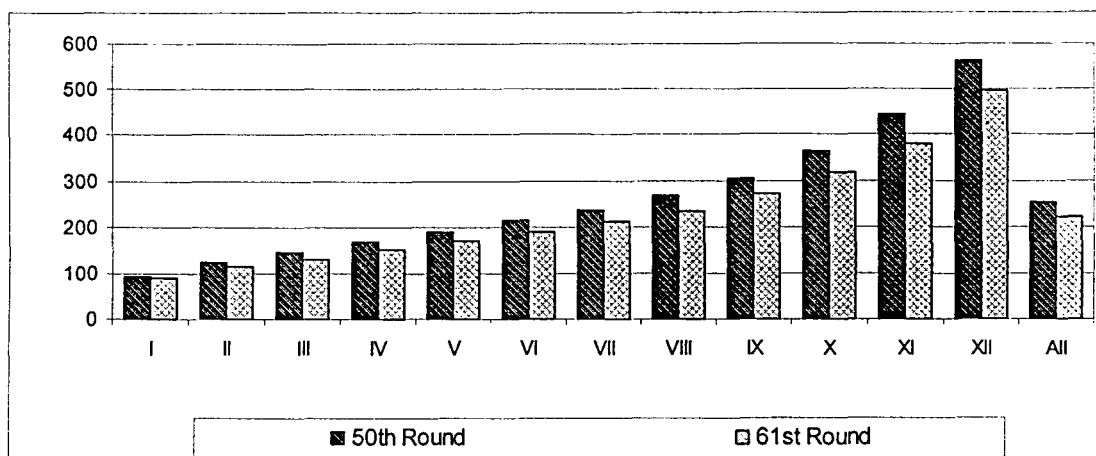


Figure 4.5 Urban MPCE on clothing (at 1993-94 prices)

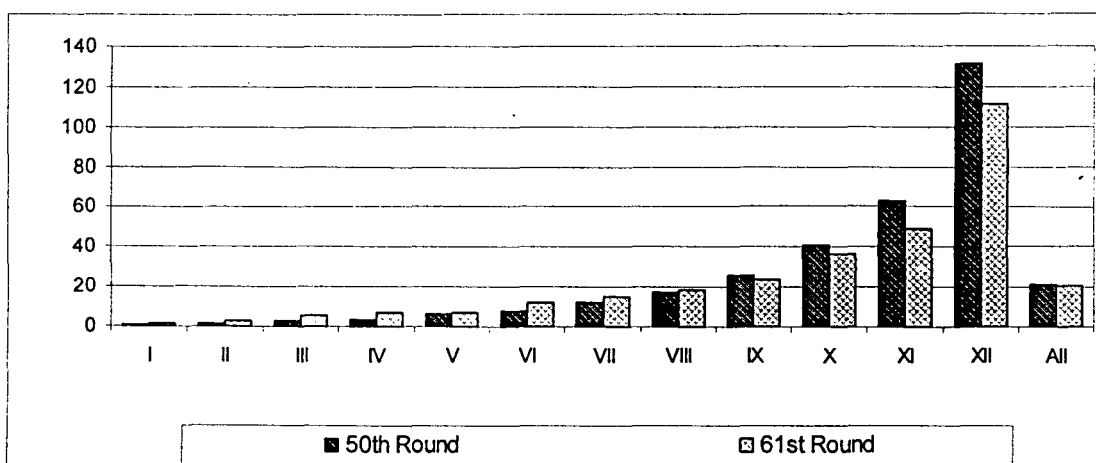
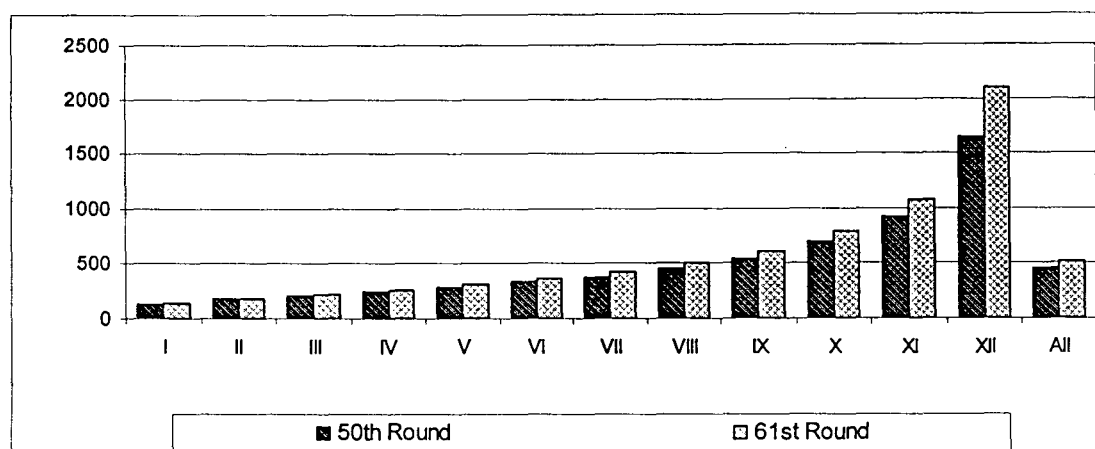


Figure 4.6 Total Urban MPCE (at 1993-94 prices)



MPCE on clothing based on 365 days recall period:

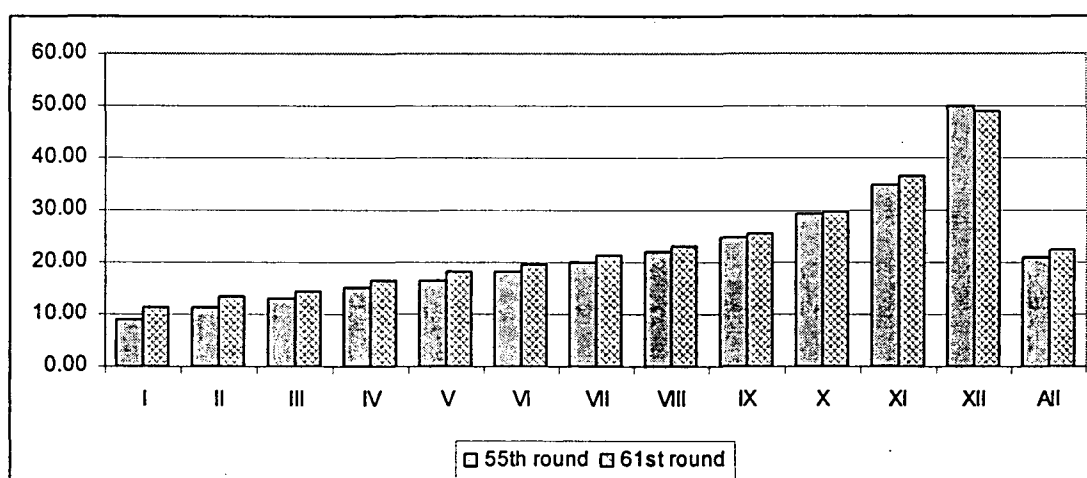
Table 4.5 shows the per capita expenditure data on clothing for the 55th round and the 61st round based on the 365 days reference period. It can be seen that the average expenditure on clothing has marginally increased for the rural sector, but has declined for the urban sector during the 61st round as compared to the 55th round. For the 61st round, comparing the expenditure on clothing based on the 30 days recall period and that based on the 365 days recall period, it is to be observed that the later is much higher for both the rural and the urban population. The estimation based on the 30 days recall period shows that the consumption of textile products has declined between the 50th and 61st rounds for both the rural and urban sectors. It can therefore be said that from 1993-94 to 2004-05, the expenditure on clothing in the rural sector has almost stagnated while that for the urban sector has declined.

A general price index like the CPIAL or the CPI (IW) which we are applying here following the prevailing practice, need not capture the real situation as regards price rise of specific items correctly and may underestimate it in the Indian context. India has seen both rise in food prices to the consumer as PDS issue prices were raised in the 1990s, and steep rise in yarn prices owing to exports, raising domestic cloth price to rise. It is likely that our Tables are overestimating real expenditure for ideally we need to deflate by a food price index and by an index of textile prices respectively.

Table 4.5 MPCE on clothing based on 365 days recall period (at 1993-94 prices)

MPCE Class	RURAL		URBAN	
	55th round	61st round	55th round	61st round
I	8.84	11.37	10.90	12.03
II	11.41	13.44	13.82	14.63
III	13.03	14.59	15.95	16.63
IV	15.24	16.54	18.74	19.10
V	16.42	18.35	21.63	21.34
VI	18.24	19.68	24.72	23.97
VII	20.10	21.25	28.31	27.60
VIII	22.07	23.18	32.64	31.21
IX	24.92	25.54	38.63	36.75
X	29.27	29.79	46.85	45.75
XI	34.81	36.55	60.60	58.36
XII	50.00	48.97	94.15	83.83
All	21.14	22.39	31.75	30.65

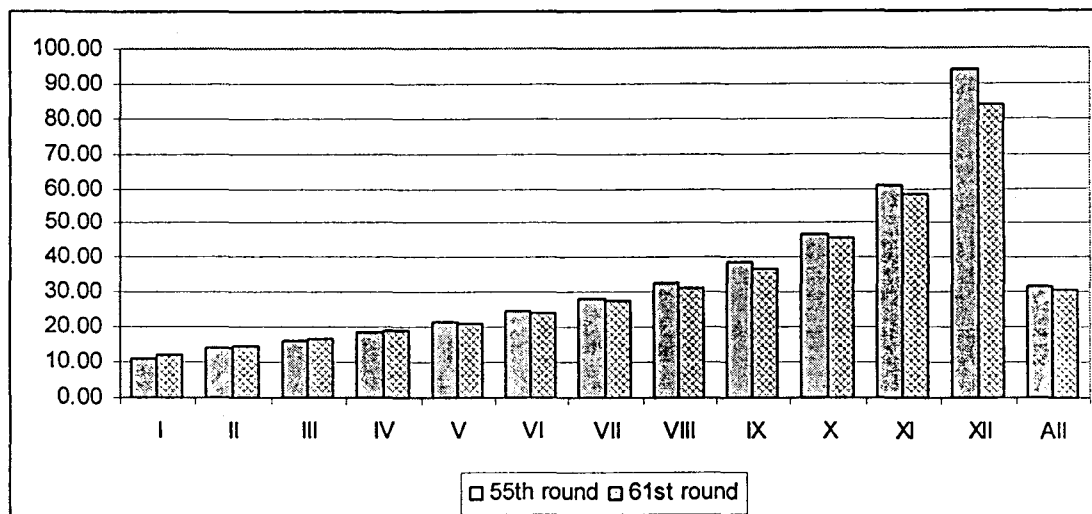
Figure 4.7 Rural MPCE on clothing based on 365 days recall (at 1993-94 prices)



The above results indicate that there has been a rise in the total monthly expenditure for both the rural and the urban population. But the rise in total expenditure is largely accounted for by the highest four MPCE classes. The increase has been largest in the highest MPCE class which represents only 5 per cent of the rural population. Despite a rise in total expenditure, the monthly expenditure on food and clothing has decreased for rural as well as the urban sector; that is, apart from a fall in the absolute value of food consumption, there has been a decline in the share of food and clothing in total expenditure. The share of food and clothing in total consumption expenditure has been

curtailed by the increasing requirement of expenditures on health, fuel, transport and education.

Figure 4.8 Urban MPCE on clothing based on 365 days recall (at 1993-94 prices)



This has been a direct consequence of the deflationary economic policies of the neo-liberal regime. Cuts in government expenditure and privatization have led to the decline of public provisioning of utilities and services, thereby forcing purchases at higher prices from private suppliers. The share of expenditure on education services in total government final consumption expenditure has decreased from 21.9 per cent in 1993-94 to 16.4 per cent in 2002-03, which slightly increased to 17.2 per cent in 2004-05. Similarly, the expenditure on transport and communication has reduced from 4.1 per cent in 1993-94 to 1.7 per cent in 2004-05, while that on health has only marginally improved from 6.4 per cent to 6.6 per cent over the same period. In contrast, the expenditure on public administration and defence has leaped from 56.1 per cent in 1993-94 to 59.7 per cent in 2004-05¹⁹.

¹⁹ Statement 36, National Accounts Statistics, CSO, Govt. of India: 'Government Final Consumption Expenditure by Purpose', various issues.

4.3 Mass Income Deflation and Poverty

From the above discussion on falling per capita food consumption in rural as well as urban sectors, it is clearly evident that there has been a loss in purchasing power of the majority of the population. The increase in the volume of exports of foodgrains along with addition to stocks even in years of falling output, indicate that there is acute shortage of demand and that the economy is into a phase of mass income deflation. The sectoral distribution of GDP indicates that in the past decade the share of agriculture has declined considerably and the share of manufacturing and mining & quarrying has nearly stagnated (except for the occasional spurt in the years 1995-96 and 1996-97) while the services sector has come to command the largest share in the total GDP. Throughout the 1990s, the primary and the secondary sectors have registered low growth rates. The tertiary sector on the other hand has been growing fast. Higher growth rate of the secondary sector in the triennium 1999-00 to 2002-03 has been due to the boom in the construction industry.

Table 4.6 Annual average growth rates of sectoral GDP (at 1999-2000 prices)

Year	AAGR in Primary Sector	AAGR in Secondary Sector	AAGR in Tertiary Sector
1991-92 to 1993-94	2.6	3.27	5.85
1994-95 to 1996-97	4.67	9.6	7.85
1997-98 to 1999-00	2.38	4.03	8.86
1999-00 to 2002-03	3.19	9.3	10.39
2002-03 to 2005-06	8.64	14.68	13.75

Note: Primary sector includes agriculture, forestry & fishing and mining & quarrying; secondary sector includes manufacturing, electricity, gas & water supply and construction; tertiary sector includes trade, hotel & restaurant, transport, storage & communication, financing, insurance, real estate & business services and community, social & personal services.

Source: Derived from NAS, CSO, various issues.

This pattern of development has resulted in decline in employment and loss of incomes for the majority of the population. The real per capita NNP at factor cost has increased from Rs7690 in 1993-94 to Rs11799 in 2003-04 (at 1993-94 prices), but the rise has been largely due to the increase in 'operating surplus' (which includes profits & dividends, interest and rent) and 'mixed incomes' (of the self employed). From table 4.4 it can be

seen that the compensation to employees averaged at 18.4 per cent in the agricultural sector and 37 per cent in the overall economy during the period 1998-99 to 2004-05. This means higher capitalist incomes, and therefore higher demand for luxury goods, as the capitalists' demand for mass consumption goods is already satiated. It is therefore essential for the compensation to employees to rise for the expansion of the market for mass consumption goods.

Table 4.7 Compensation to employees as percentage of sector NDP

Year	Agriculture	Manufacturing (Organised)	Manufacturing (unorganised)	All Sectors
1998-99	17.70	39.18	26.66	35.82
1999-00	17.86	40.15	27.63	36.87
2000-01	18.50	45.35	27.39	38.33
2001-02	18.46	45.93	28.98	37.90
2002-03	19.27	41.26	28.92	37.57
2003-04	18.25	37.62	26.00	36.18
2004-05	18.73	37.62	26.00	36.62

Falling employment and mass income deflation is reflected in the decline in nutrition and rise in poverty. The official poverty estimations which are de-linked from the nutrition norm, overtly underestimate the poverty level. Estimates based on the 61st Round, 2004-5 nutrition data shows that 87 percent of rural population is below the RDA of 2400 calories, nearly 70 percent is unable to access 2200 calories, and these figures are up by over 12 and 11 percentage points respectively from the 1993-4 figures.²⁰

²⁰ Patnaik, Utsa (2007). 'The Question of Employment and Livelihood in Labour-surplus Economies'; Presented at a seminar on "Making Growth Inclusive with special reference to employment generation", June 28-29, 2007, CESP, JNU, New Delhi

Table 4.8 Poverty Estimate, 2004-05: All India - Rural

<i>Direct Estimate</i>				
Levels of Calorie Intake per day	2400	2200	2100	1800
Required Monthly per capita expenditure in 2004-5 to access nutrition level, Rs	795	575	515	342
Percent of persons below specified nutrition level, 2004-5	87.0	69.5	60.5	25.0
Percent of Persons below specified nutrition level in 1993-94	74.5	58.5	49.5	20.0
<i>Official Estimate</i>				
Official Poverty Line,	<u>1993-4</u>			<u>2004-5</u>
Rupees	206			356
Percent of persons below OPL	37.3			28.5
Calorie Intake at OPL	1980			1820

Source: Patnaik, 2007.

The initial motivation for undertaking this study was to understand the background to the cotton cultivation-linked agrarian distress and suicides which started in the late 1990s and continue to date. This issue raises a wide range of questions. In the process of exploring the questions, we have briefly discussed the background of public policy changes in the economic reforms period which have particularly affected agriculture and contributed to depression. The trends in external trade environment which again became very important for cotton cultivators from the late 1980s, has been explored both in the first and the subsequent chapters, while the structural changes in the domestic textile industry as they affected the demand for cotton have been investigated. Finally we have looked at the evidence on decline in per capita real expenditure on basic necessities which confirm the diagnosis of agrarian depression.

The problems in the agricultural sector which began in the early 1990s with the initiation of the new reform policies, has led to a prolonged and pervasive agrarian depression, and culminated in a crisis situation in particular regions where additionally producers have faced external price volatility in an increasingly unprotected environment. The preceding discussion identifies three main causes which have led to the agrarian depression. First, since the liberalisation of the economy, domestic prices have increasingly become responsive to international price movements. World prices of almost all primary commodities have remained depressed since 1993-94 due to the direct and indirect subsidies provided by the EU and the United States to their agricultural sectors. The impact of this on the less developed economies which are open for trade has been low domestic prices of agricultural products even in years of low domestic output. Second, the possibility of trade has encouraged farmers to divert their land resources from the cultivation of food crops to commercial crops which they expect, would fetch extra income from sales in the international market. The shift towards commercial crops has serious implications because when the crops fail to generate adequate income, the

cultivators do not even have their own produce to fall back on to meet their food requirements. Often the market prices are so low that they do not cover the costs of production and farmers are forced to take loans to meet the production costs and their consumption needs. In the event of falling prices in consecutive years, cultivators have to take fresh loans to pay back previous debts and in the process they are caught in the debt-trap. Third, decline in public expenditure has put a halt to rural development programmes, which in turn has put a stop to the growth and expansion of rural infrastructure and the public provision for other basic amenities. This has resulted in the increase of input costs as well as costs of utilities and essential services.

To summarise, falling agricultural incomes has been a consequence of falling agricultural prices, shift in cropping pattern and the decline in public expenditure.

The situation of crisis is more prominent in the cotton sector as the world prices, and therefore the domestic prices of cotton have been falling as a trend although individual years may see a rise. The area under cotton cultivation has increased by almost 1.5 million hectares between 1991-92 and 2001-02 while yield has increased from 805 kg/hectare to 937 kg/hectare over the same period. The dramatic rise in acreage under cotton cultivation points at diversion of arable land away from foodgrain production as the total cultivable land has remained almost constant. Due to the higher world demand for long-staple cotton there has been a tendency towards substituting the native short-staple variety by high-yielding and long staple varieties which are more prone to pests and diseases and often result in crop failure. The cultivation of the transgenic variety is highly capital-intensive due to higher requirements of irrigation, fertilizers, insecticides and pesticides. High input costs and low market prices have led to mounting debts among cotton cultivators.

The performance of the cotton textile industry has failed to keep pace with the massive increase in raw cotton production. The share of cotton textiles in GDP of total manufacturing has declined from 6.34 per cent in 1998-99 to 4.25 per cent in 2003-04. The cotton textile sector, since 2000-01 has registered negative growth rates in three

consecutive years. The average annual growth rate of the index of cotton textile production (with base 1993-94) has been a mere 2.6 per cent over the decade 1994-95 to 2004-05. There has been a decline in the domestic consumption of raw cotton in recent years. At the same time, the imports of raw cotton, cotton yarns and fabrics have been on the rise. This has been a result of the disparity between cotton cultivation and the different sectors of cotton textiles, that is, spinning, weaving and the ready-made garments sectors. The decline in domestic consumption of raw cotton together with the fall in international demand, has contributed to the worsening of the situation of the cotton cultivators.

Loss of employment and mass income deflation has caused a change in the pattern of private consumption. There has been a marked fall in the demand for mass consumption goods. Not only has the share of consumption expenditure spent on food and clothing declined significantly, more so among the lower expenditure classes, but there has been an absolute decline in real expenditure. The phenomenon has been prominent in the rural as well as the urban sectors. However, the fall in total expenditure of the urban sector has been relatively even while the expenditures of lower and middle income groups in the rural sector has declined drastically. For almost 70 per cent of the rural population, there has been a decline in expenditure on food and clothing. Consequently, there has been a decline in the domestic demand for textile products.

The main cause of the mass income deflation has been the cut in public expenditure. In their commitment to the neo-liberal policy of maintaining low rates of inflation, the government is inclined to squeeze down the budget deficit. Since there has been little development in expanding the volume of tax receipts, the only other way of decreasing the budget deficit is to cut public expenditure. The decline in rural developmental expenditure has stalled infrastructure development projects, which includes irrigation and extension facilities for the farmers. The public rural credit system has almost collapsed and so has the Minimum Support Programmes. On the other hand, the flawed Public Distribution System (PDS) has limited the scope of public provision for food. The 'above poverty line' and 'below poverty line' discrimination has more than often excluded the

needy as the demarcation is itself flawed. The public provision for other basic services like health, education and transport has also been narrowed down. This has resulted in the decline of real incomes of the rural population who are already trying hard to cope with falling agricultural prices.

Although a structural shift in the economy has been noticed in recent years, where agricultural growth has ceased to be a constraint on industrial performance, the agricultural sector commands a strong influence over the demand for mass consumption goods. As Sastry et. al. (2003)²¹ have noted from the input-output tables available for the Indian economy during 1968-69, one unit rise in agricultural output was likely to raise demand for industrial goods by 0.087 units, which increased to 0.297 units during 1993-94. Following the trend, this demand dependence is likely to rise further. Therefore, a fall in aggregate demand in the agricultural sector can pose a serious constraint to industrial production.

The depression in the agricultural sector calls for the revival of rural development and employment generation programmes in order to ensure stable incomes for the agricultural sector and cottage industries like the handloom which is the second largest source of employment in the rural sector. There is an urgent need for stepping up the pace of 'food for work' programmes and for expanding the scope of basic public amenities like health and education. For over 85 per cent of both the rural and urban population, the expenditure on clothing has declined. If incomes of the rural and urban poor are to rise, there will be an expansion of the domestic market for mass consumption goods and thereby provide a boost to the textile industry.

²¹ Sastry, D.V.S., et. al. (2003). "Sectoral Linkages and Growth Prospects: Reflections on the Indian Economy", *Economic and Political Weekly*, June 14. pp. 2390 – 2397.

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