

Price Volatility in the Cotton Yarn Industry: Lessons from India

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Tackling Commodity Price Volatility

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Acronyms

Bt. Cotton	<i>Bacillus thuringiensis</i> Cotton
CENVAT	Central Value-Added tax
IDBI	Industrial Development Bank of India
IFCI	Industrial Finance Corporation of India
MCX	Multi-Commodity Exchange of India
MFA	Multi-Fibre Agreement
NGO	non-governmental organization
NHDC	National Handloom Development Corporation
SIDBI	Small Industries Development Bank of India
TMC	Technology Mission on Cotton
TUFS	Technology Upgradation Fund Scheme

1.0 Introduction

This paper discusses the impacts of cotton yarn price volatility on handloom weavers, and the public and private interventions that have been employed to address them. Efforts to date have been sporadic and disjointed, with the issues associated with cotton yarn price volatility often marginalized by policy-makers more focused on interventions in the cotton sector. Interventions to date have included pricing controls, technological improvements, decentralization in the spinning sector, vertical integration and micro-level yarn stock maintenance schemes. The failure of these interventions to make a significant impact points to the need for a more integrated approach to tackling cotton yarn price volatility.

This case study has been divided into four parts. In Section 2, the paper will look into the importance of the cotton industry to India, and will then move on to describe both the value chain and the cotton and cotton yarn price volatility that affects each actor along it. Section 3 will focus on national and local interventions that have been initiated to address this volatility, and their varying degrees of success and failure. The paper will conclude with a set of recommendations for policy-makers.

2.0 Dependence and volatility in India's cotton yarn industry

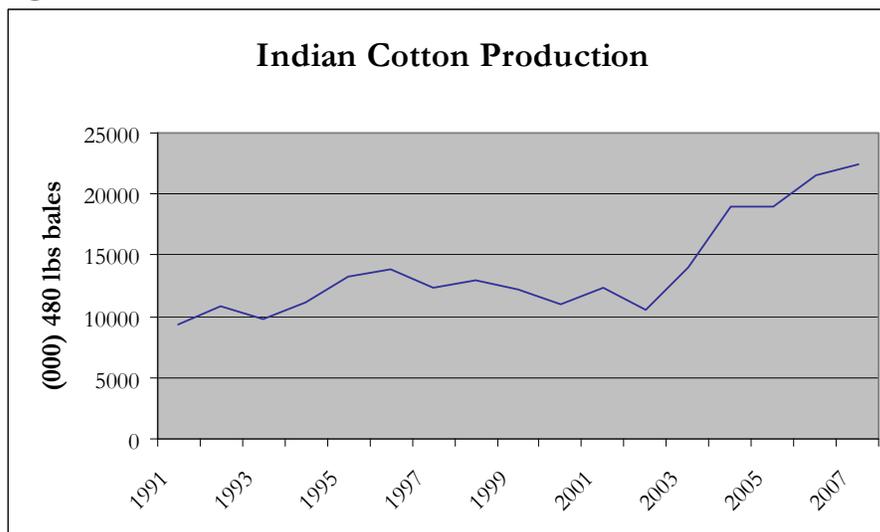
There are currently 6.5 million handloom weavers in India. The presence of this enormous workforce, second only in size to that of agriculture,¹ points to the continued importance of the sector to Indian society, despite the pressures of modernization and globalization. With low import levels and an additional 4.8 million power loom weavers spread throughout the country,² Indian cotton cultivation and yarn spinning have both by necessity grown to be large industries. This section introduces India's cotton and weaving industries, and examines the nature and impact of cotton and cotton yarn price volatility on handloom weavers.

2.1 Cotton and cotton yarn in India

India in the world cotton market

India's cotton yarn industry depends almost entirely on the country's farmers. These cotton farmers have elevated India into the top ranks of global cotton producers, and in recent years have dramatically expanded cultivation—in the past 15 years alone, cotton production has more than doubled (see Figure 1).³ In 2007, India eclipsed the United States to become the world's second largest producer of cotton, behind only China.⁴ With imports typically hovering at around 0–5 per cent of production,⁵ cotton yarn spinners have not had to draw on international trade to meet their demand.

Figure 1: Indian Cotton Production, 1991–2007



Source: National Cotton Council of America (2007)

¹ Ministry of Textiles (undated) *Guidelines for implementation of integrated handloom cluster development programme*, Office of the Development Commissioner for Handlooms, Government of India, New Delhi, http://handlooms.nic.in/hl_sch_ihcdp.pdf accessed in 2007.

² Ministry of Textiles (2005) "Compendium of Textile Statistics," Government of India, New Delhi

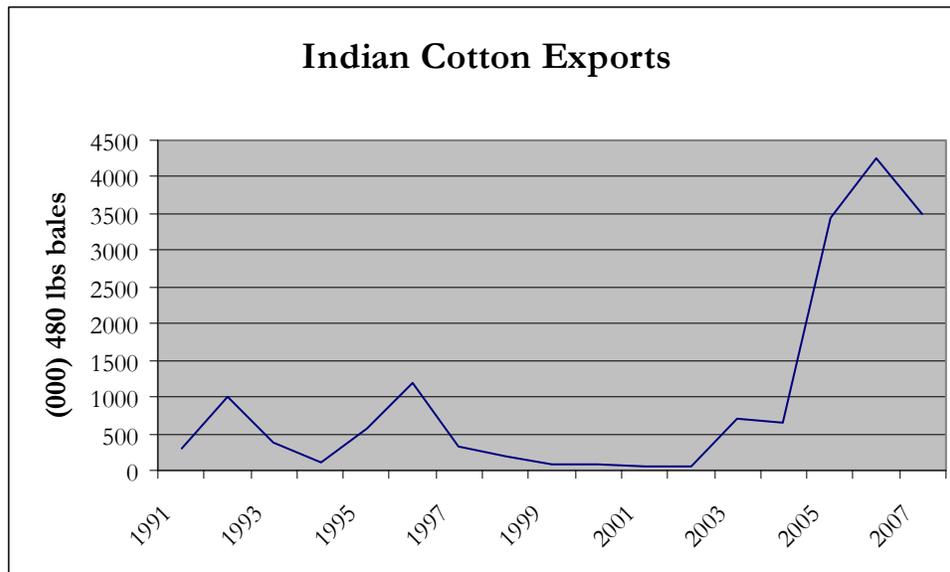
³ National Cotton Council of America (2007) *Rankings*, <http://www.cotton.org/econ/cropinfo/cropdata/rankings.cfm> accessed in 2007.

⁴ *ibid.*

⁵ The period 1999–2002 proves to be an exception to this. During those four years, imports were 13 per cent, 14 per cent, 19 per cent and 11 per cent of production. Source: National Cotton Council of America (2007) *Rankings*, <http://www.cotton.org/econ/cropinfo/cropdata/rankings.cfm> accessed in 2007.

Globalization and the dismantling of the Multi-Fibre Agreement (MFA) (see Box 1) have in part driven this expansion in cotton cultivation. With the end of the MFA in January 2005, India began looking to external markets; exports ballooned from 660,000 bales⁶ in 2004 to 4,250,000 bales in 2006 (see Figure 2).⁷ On the strength of this growth, India quickly became the world's third largest exporter of cotton.⁸

Figure 2: Indian Cotton Exports, 1991–2007



Source: National Cotton Council of America (2007)

Box 1: The Multi-Fibre Agreement, 1974–2005

The Multi Fibre Agreement was established in 1974 as a means of governing the world trade of textiles and clothing. Applied to the only major manufacturing industry operating outside of the rules of the General Agreement on Tariffs and Trade (GATT), the MFA imposed extensive quotas on the textiles and clothing imported from developing countries to developed countries. In this labour-intensive industry, developing countries were seen to have a cost advantage due to their low wages, and the MFA was an attempt to protect developed-country industry against cheaper products from abroad. The economic results for these exporting countries, according to the World Bank, were disastrous: the Bank estimates that the MFA cost the developing world 27 million jobs and US\$40 billion per year in lost exports.⁹

During the Uruguay round of the GATT (from September 1986 to April 1994), it was decided that the MFA quotas be dismantled over the next 10 years and that the textile industry be brought under the jurisdiction of the World Trade Organization (WTO). In keeping with this timetable, on January 1, 2005, the MFA ceased to be.

⁶ A bale is a unit representing 480 lbs of cotton.

⁷ National Cotton Council of America (2007) *Rankings*, <http://www.cotton.org/econ/cropinfo/cropdata/rankings.cfm> accessed in 2007.

⁸ *ibid.*

⁹ Cited in Oxfam (2004) “Stitched Up” *Oxfam Briefing Paper 60*, Oxford.

The end of the MFA does increase access to export markets for developing country clothing and textile products. Within this context of freer trade, India's labour cost advantages and high domestic cotton production will place the industry in a good position to continue to expand. This is good news for the 15 million people employed in the Indian textiles industry.¹⁰

Increased cotton exports do not necessarily augur well for the domestic yarn industry. Many farmers now feel that their raw cotton can fetch a higher price overseas and, as such, supplying cotton to domestic spinning mills becomes less lucrative. Yarn producers argue that by following this strategy, India will lose revenue by exporting a raw commodity and neglecting value-addition activities—namely yarn and fabric production.



Cotton yarn in hank form

2.2 Cotton yarn: The value chain

India, therefore, is one of the world's foremost cotton producers.

A significant portion of the crop is used to produce cotton yarn, a derived commodity in which India is now the world's largest exporter, with a global market share of 25 per cent.¹¹ The production of cotton yarn is a multi-step process, involving a number of different value chain players.

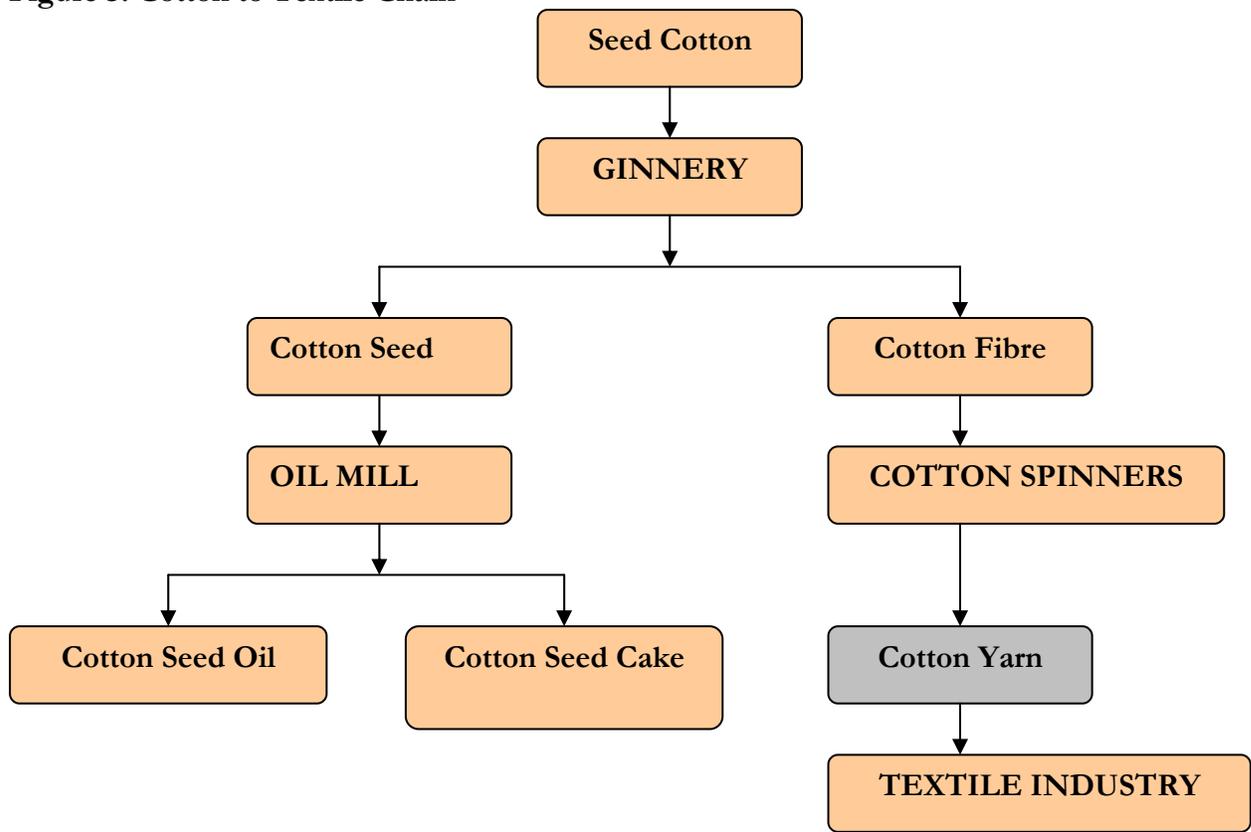
Briefly, the crop is picked in seedpod form either by hand or through mechanized means. These pods, which contain approximately 30 per cent usable fibre,¹² are then sent to ginning mills, where a cotton gin is used to separate the cotton fibres from the pod. From here, seed pods are sent to oil mills, while the fibres are either sent to spinning mills or exported as raw cotton. At the spinning mill, bales of raw cotton are then processed into yarn or thread, in either hank or cone form. Hank yarn is in turn sold to handloom weavers, and cone yarn sold to powerloom operators, to use in the production of fabrics. Figure 3 charts this process.

¹⁰ Ministry of Textiles (2005) "Compendium of Textile Statistics," Government of India, New Delhi.

¹¹ "Overview of the Textile Industry" *Emerging SMEs of India*, <http://www.dnb.co.in/SMEstextile/overview.asp> accessed in 2007.

¹² Field discussions with farmers in Andhra Pradesh, 2007.

Figure 3: Cotton to Textile Chain



The cotton value chain in India: Historical perspective

The production of fabrics and clothing in India used to be a centralized activity. In villages throughout the country you would be able to find the entire value chain; cultivation, production, marketing and consumption all took place within the community, with little information asymmetry and few price distortions. Weavers were well integrated into the local economy, and they typically made use of local cotton, spun the yarn in-house and sold their fabrics in the local markets. The artisan was both the producer and the seller, and as such had control over the value chain.

With independence in 1947 the Indian government began to promote handloom weaver cooperatives.¹³ These member-owned and member-controlled community-based groups were encouraged by the state in order to organize and strengthen handloom weavers throughout the country. Members could voluntarily join the cooperatives to pool their resources and work together to address common social, economic and cultural needs. However the success of the cooperatives somewhat paradoxically harmed the country's weavers; upon joining, these artisans could only procure cotton yarn through the cooperatives or through so-called "master" weavers, adding the first of many additional institutions to the value chain and alienating weavers from their primary production input.¹⁴

¹³ In India, cooperatives are governed by the Cooperative Societies Act.

¹⁴ Chitrika (2005) "Baseline study of Ponduru Cluster," Secunderabad.

This gap between weavers and their cotton inputs would continue to grow. Market liberalization and globalization processes meant that customers became ever more dispersed, and traders became necessary to bridge the gap between growers, weavers and the end consumer. At the same time, new technologies supporting larger production bases moved spinning out of the homes of many weavers and consolidated power in the hands of a few private players.

The Indian value chain today

The manufacturing of cotton textiles can be broadly classified into three stages—cotton farming, spinning and weaving. Along this value chain, a number of players contribute to the final product: cotton farmers, ginneries, public and private cotton traders, spinning mills, and powerloom and handloom weavers. Power is not evenly distributed among these actors; for example, while cotton producers and weavers remain decentralized and largely unorganized, the spinning sector has evolved into a modern, organized group with strong lobbying abilities. This section will briefly describe some of the main actors in the cotton value chain.

Spinning mills¹⁵

Spinning mills procure cotton fibre from the country's ginneries and process it into yarn. This yarn can be produced in two forms, cone and hank. Cone yarn, which carries a higher price and is thus more attractive for mills to produce, is used by power looms and mechanized weaving mills to produce fabric. Hank yarn, on the other hand, is used by handloom weavers to produce their textiles. Despite providing mills with subsidies to produce the less-popular hank yarn, the government has been unable to overcome the enormous price incentive inherent in cone yarn production. This in turn threatens the supply of hank yarn and can lead to increasingly volatile prices.

Mills can be divided into cooperative spinning mills and private spinning mills. *Cooperative spinning mills* are registered under the Cooperative Societies Act and were promoted by the government. The cooperative spinning mills throughout India have not been successful at either controlling the prices or supplying adequate quantity of yarn to the weavers. The dismal performance of the cooperative spinning mills has been due to inefficient management. *Composite spinning mills* comprise of spinning, weaving and processing activities whereas yarn spinning mills involve in yarn production and do not undertake weaving.

By way of scale, in January 2006 India had the second largest spinning capacity after China, with 23 per cent of the world's spindle capacity. The large number of mills has—at times—been problematic. The de-licensing of the spinning industry in the early 1990s led to a surge in spinning capacity between 1991 and 1996; mills were set up without much consideration for what the market could bear.¹⁶ Idle capacity in turn wreaked havoc on many mill owners, forcing the closure of 240 spinning mills and 109 composite mills in 1999–2000.¹⁷

¹⁵ This section is an extract from: U.S. International Trade Commission (2001) "India's Textile and Apparel Industry: Growth Potential and Trade and Investment Opportunities," *Staff Research Study 27*, Office of Industries.

¹⁶ Krishnan, R. (2001) "Cotton Yarn: Threadbare," *Business Line's Investment World*, <http://www.blonnet.com/iw/2001/01/28/stories/0528e051.htm> accessed in 2007.

¹⁷ *ibid.*

Thankfully, the oversupply that these excess mills created has in part been addressed by the increase in exports brought about by the dismantling of the MFA.

Despite its issues, the spinning mill sector remains the most organized part of the textile industry, due to the centralized nature of the spinning activities and its sheer scale of production. With this organization comes a large degree of political clout.

Handloom weavers

There are nearly 6.5 million handloom weavers in India.¹⁸ Weaving cotton yarn into fabrics, these artisans are among the major consumers of the commodity in India. However despite this seeming market power, the vulnerability of handloom weavers in the value chain and stiff competition from substitute products have resulted in this large group becoming the poorest sector of the textile industry.¹⁹

Spread across the country and possessing ineffective institutional frameworks for negotiating with the markets, handloom weavers have gradually lost control over the procurement and pricing of cotton yarn. As previously mentioned, their connections to cotton farmers and spinners have been lost to either government-run societies or traders and middlemen. Due to this weakened market position, any increase in the price of cotton yarn is effectively pushed on to the weavers; with the high price sensitivity of Indian consumers, yarn price increases cannot be passed on to them.²⁰ Handloom weaver margins are thus squeezed.



A traditional handloom

The handloom sector currently holds a 13 per cent share of the Indian cloth market. And while handloom production is growing at a rate of three per cent per annum, it continues to lose ground to the powerloom sector.²¹ This is in part because while 25 per cent of the handloom production is high-value niche products, with which powerlooms do not compete, the remaining 75 per cent of production is made up of low-cost, highly substitutable fabrics.²²

Powerlooms²³

Powerlooms are mechanized handlooms initially established to increase textile production beyond what was achievable with traditional handlooms. Since their introduction, they have quickly dominated the industry; powerlooms now account for more than 40 per cent of total

¹⁸ Ministry of Textiles (undated) *Guidelines for implementation of integrated handloom cluster development programme*, Office of the Development Commissioner for Handlooms, Government of India, http://handlooms.nic.in/hl_sch_ihcdp.pdf accessed in 2007.

¹⁹ Kondo, M. (2001) "The Political Economy of Commodity Export Policy," The World Bank, Washington, DC.

²⁰ Compiled from field notes/discussions with shopkeepers from markets across India in 2005 by Chitrika, an artisan support organization.

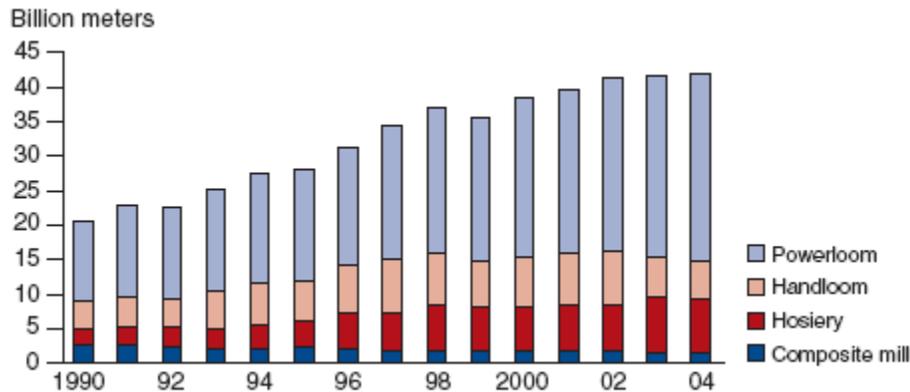
²¹ ICRA (2005) "The Indian Textiles and Clothing Industry," *ICRA*.

²² *ibid.*

²³ Ministry of Textiles (2006) *Annual Report 2005–2006*, Government of India, New Delhi.

Indian cloth production (see Figure 4). By comparison, traditional handlooms are now responsible for less than 20 per cent of production.

Figure 4: Indian Cloth Production²⁴



Source: Landes et al., 2005.

The advantages held by the powerloom sector become apparent when you compare these production totals with the number of employees in each sector; whereas 6.5 million people are employed in the Indian handloom sector, only slightly more than 4.8 million are employed on powerlooms.

Given these production advantages and the preference among spinners to produce powerloom-compatible cone yarn, it seems likely powerlooms will continue to dominate the Indian market and eat into the share held by the handloom sector. And while the sector is not yet well-organized, its political power continues to grow due to both its production strengths and the number of employees—and voters—involved in the sector. Powerloom operations are also frequently grouped with traditional handlooms by the government for support schemes, thereby benefiting from plans designed to support their chief competitors. Powerloom operators do still face a number of challenges: intermittent power supply, a lack of access to credit, uneven quality and technological obsolescence continue to plague the sector.

Traders and middlemen

Due to the decentralized nature of fabric weaving, handloom operators must now largely depend on traders and middlemen for getting the yarn they need. These traders purchase raw cotton from farmers, or yarn from mills, and in turn sell it down the value chain to the more decentralized mills and weavers. This requires a certain margin, of course, and as such increases the price paid by handloom weavers.

Traders therefore occupy a controversial position in the cotton yarn value chain. They are seen by many weavers as key drivers of price fluctuations, oftentimes colluding with mills to

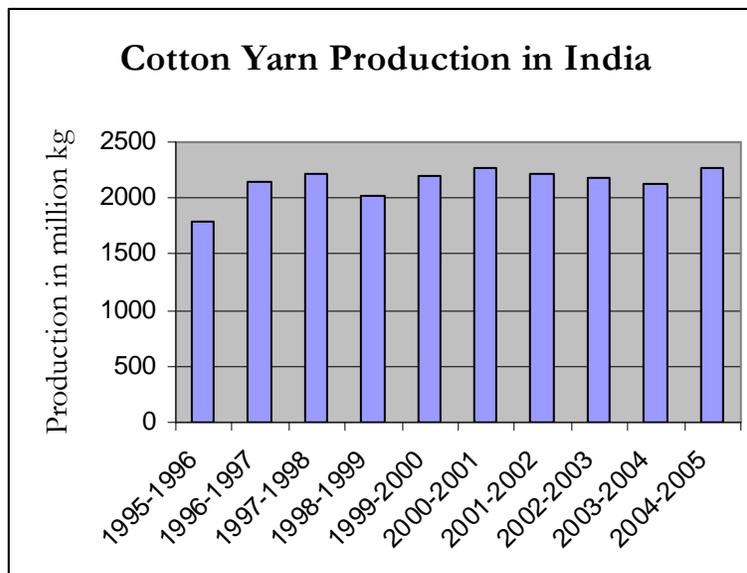
²⁴ Landes, M. et al. (2005) “Growth Prospects for India’s Cotton and Textile Industries,” United States. Department of Agriculture, <http://www.ers.usda.gov/publications/cws/jun05/cws05d01/cws05d01.pdf> accessed in 2007.

push up prices, hoard stocks and monopolize trading areas.²⁵ Traders can pay a monopoly deposit ranging from Rs. 0.3 to 0.5 million²⁶ to the spinning mills and in return will control trade in a given region.²⁷ Due to such arrangements, weavers are often unable to circumvent traders and buy directly from spinning mills; the mills will simply refuse to do business with them.

2.3 Cotton yarn production

The production of cotton yarn in India has remained relatively stable over the past 10 years (see Figure 5). However this picture of stability hides the fact that exports have steadily increased: in the decade from 1993 to 2003, yarn exports grew from 2.38 per cent to 15.8 per cent of production.²⁸ This has in turn squeezed domestic supply, as spinners seek to market their wares abroad and weavers are left with the price effects of competing for less yarn.²⁹

Figure 5: Yarn production



Source: Ministry of Textiles, Government of India

Exports of cotton textiles—including yarn, fabrics and made-ups—account for 26 per cent of total textile exports and in 2005–06 were worth US\$4.5 billion, implying a growth rate of 27 per cent from the previous year (when they were US\$3.5 billion). Most of these exports went to the U.S. and EU markets, which together account for more than 75 per cent of demand.³⁰

²⁵ Field notes, Chitrika: based on discussions with weaver cooperatives and visits to yarn traders in Andhra Pradesh, India.

²⁶ *ibid.*

²⁷ The specific areas are not defined. It is a tacit understanding between the traders and the spinning mills depending on the volume of trade between them.

²⁸ ICRA (2005) “The Indian Textiles and Clothing Industry,” *ICRA*.

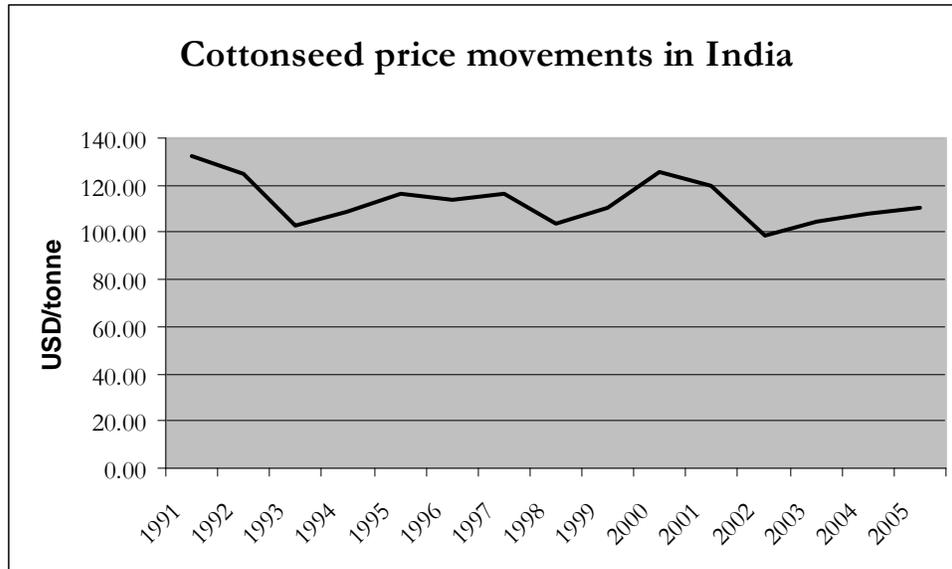
²⁹ Syamasundari, B. (2004) “Persisting shortage of cotton yarn,” *The Hindu*, March 8.

³⁰ “Overview of the Textile Industry” *Emerging SMEs of India*, <http://www.dnb.co.in/SMEstextile/overview.asp> accessed in 2007.

2.4 Price volatility

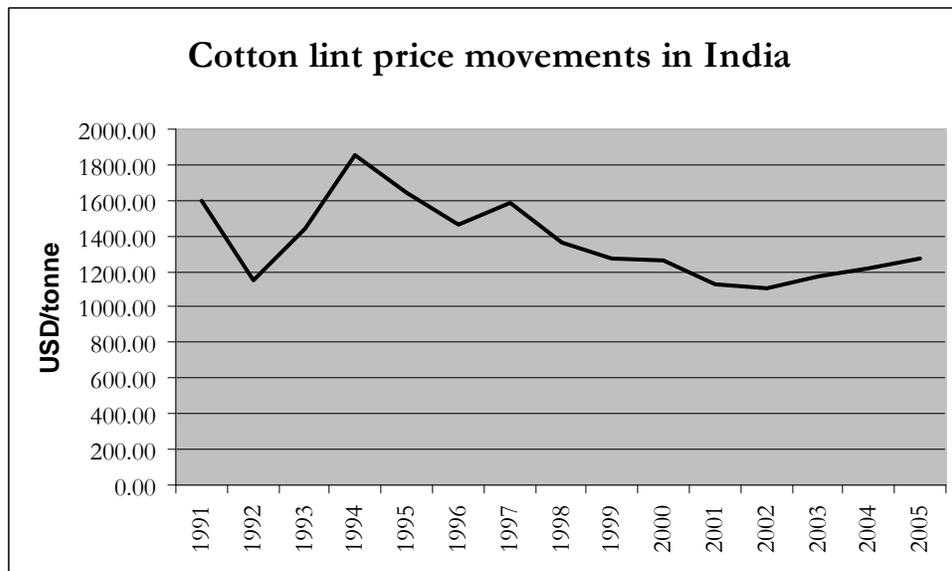
As an intermediary product, the price stability of yarn depends on both the price of cotton and the demand present in the fabric market. While exhibiting a fair degree of volatility in the early 1990s, Indian cotton prices have stabilized in recent years, and have steadily increased despite the expansion in cotton cultivation due in part to increased demand from the export and domestic fabric markets. Figures 6 and 7 display the recent price movements of both cottonseed and cotton lint in India.

Figure 6: Cottonseed Price Movements in India, 1991–2005



Source: FAO (2007)

Figure 7: Cotton Lint Price Movements in India, 1991–2005



Source: FAO (2007)

Yarn prices will not always reflect cotton price movements. Cotton yarn prices were particularly volatile between November 2003 and February 2004. During this period, the handloom industry suffered as the price of hank yarn increased dramatically: the price of 40-count yarn³¹ increased from Rs. 10,000 (US\$221) to Rs. 12,500 (US\$277) per bale, and the price of 80-count increased from Rs. 21,000 (US\$465) to Rs. 24,000 (US\$531).³² This led to significant idle capacity (and lost income) among handloom weavers.

While nature can at times be at the root of such a price hike, during this period such was not the case; cotton production in fact increased during this period (see Figure 1). Instead the price increase points towards what could become the norm for Indian handloom weavers. Raw cotton is increasingly being exported to EU, U.S. and Chinese markets, and as such weavers—for the first time—have to compete for domestic cotton with more and more international actors.³³

There are, of course, a number of other factors which will drive cotton yarn price volatility and in turn impact the livelihoods of India's 6.5 million handloom weavers. These weavers face a myriad of challenges. Nature will typically play a large role, with a high degree of rainfall dependence and low rates of irrigation increasing the risk of crop failures. As previously mentioned, collusion along the value chain can lead to geographic monopolies and stock hoarding between traders and spinning mills. In addition, synthetic fibres continue to make inroads into the market as substitute products, and financing remains out of reach for many to improve supply management. At the macro level, strong cotton farming and trading lobbies have pushed the export agenda, with the unorganized loom sector unable to counter their influence. In addition, underdeveloped market-based risk instruments and exchanges, ineffectual government price-stabilizing policies and continued subsidies for developed-country producers have driven volatility in the past, and could continue to do so in the future.

The average handloom household can earn up to Rs. 75 per day, depending on the type of cloth they weave.³⁴ For these handloom weavers, the cost of yarn constitutes nearly 50 per cent of their production costs. As such, any yarn price volatility will affect the bottom line and can render the weavers underemployed or unemployed.³⁵ During cotton yarn price fluctuations, the weaver can lose anywhere from 10 to 20 per cent of their monthly income—a very significant amount given the low incomes this group commonly earns.³⁶

Unfortunately, while cotton yarn price fluctuations hit handloom weavers the hardest, these weavers remain unorganized and as such suffer largely in silence. There is, however, hope. Their sheer size as a voting block guarantees that they will win the attention of most national politicians, and their historic role within Indian society has placed them in a sympathetic position in the hearts and minds of the country. Hopefully these advantages can be

³¹ The yarn count measures the thickness of single yarns; the higher the measure, the finer the strand.

³² Syamasundari, B. (2004) "Persisting shortage of cotton yarn," *The Hindu*, March 8.

³³ Syamasundari, B. (2004) "Persisting shortage of cotton yarn," *The Hindu*, March 8.

³⁴ Field notes, Chitrika: based on discussions with weavers across Andhra Pradesh, India.

³⁵ Reddy, R. et al., (1995) "The yarn price behaviour & its impact on earnings of handloom weavers," National Institute of Rural Development, Hyderabad.

³⁶ This paragraph has excerpts from CHIP and Chitrika (2006) "A Study on Wage Status of Handloom Weavers in Srikakulam Cluster," Secunderabad.

translated into influence in not just policy formation, but also in policy implementation. The following section will examine some of the micro and macro-level interventions led by the state to address the challenges faced by India's handloom weavers. Table 1 summarizes the key drivers of cotton yarn price volatility.

Table 1: Cotton Yarn Price Volatility

Factor	Volatility driver
Cotton Production	→ Unpredictable yields and increasing production costs
	→ Low use of irrigation and a high dependence on rainfall, leading to fluctuating output
	→ Minimum Support Price policies that distort the cotton trade and act as disincentive to the cotton industry
	→ Unreliable cotton quality
	→ An initial government ban on commercial Bt. Cotton cultivation
Spinning	→ Hoarding by the spinners
	→ Cooperative spinning mills with obsolete technology
	→ Non-fulfillment of the hank yarn obligation (see below)
	→ Geographic disadvantages for the decentralized weavers
Distribution Channels	→ Monopoly dealers controlling the distribution channel
	→ Artificial price inflation by the dealers through collusion with the spinning mills
	→ Yarn hoarding to drive up prices
	→ Quality losses due to a mixing of yarns of varying quality levels
	→ The invisibility of the cotton yarn sector at the policy level
Macro Context	→ Biases towards strong cotton and spinning lobbies
	→ The export-oriented policies of the government
	→ An absence of approaches to curb price inflating tactics of traders/middle
	→ A failure to support stock depots for cooperatives
	→ Using cooperatives as the only channel for the government schemes and thus ignoring 70 per cent of weavers who operate outside of the purview of cooperatives
	→ An underdeveloped futures market
	→ Subsidies by external cotton-growing nations
	→ Technology unsuitable to various varieties of cotton produced in India (i.e., a lack of micro spinning technology, see below)
Technology	→ Unclear government initiatives on pest-resistant genetically-modified cotton strains
	→ A lack of access to institutional finance at the weaver level to maintain buffer stocks
Finance	→ A lack of access to institutional finance at the weaver level to maintain buffer stocks
Market	→ Inroads by substitute products like synthetic fibres

3.0 National approaches to managing commodity revenues

The sheer number of handloom weavers in India and the recent spate of challenges they have faced from increased competition, cotton yarn price volatility and market liberalization have meant that a variety of approaches have been taken, at both the state and local levels, to manage their commodity revenues. Some of these approaches are aimed directly at handloom weavers, whereas others target the textile sector as a whole. They have by and large met with mixed success; a selection of them is described below.

3.1 Macro interventions

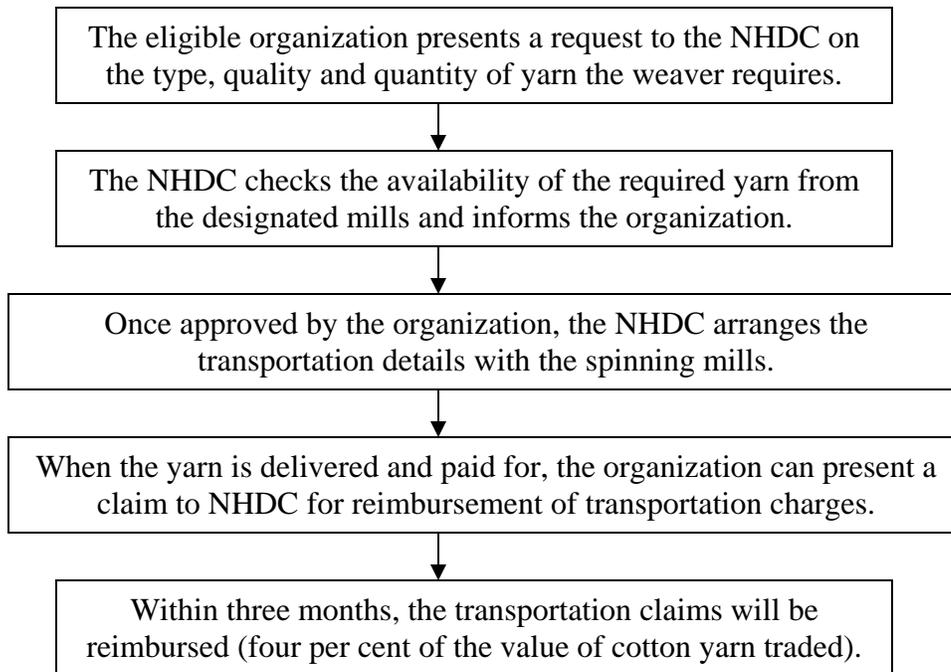
3.1.1 The Mill Gate Scheme

As described in the previous section, handloom weavers are dependent on traders for their cotton yarn. Many of these weavers, spread across the country, work with yarns of a quality not matching that produced in their home regions (with cotton quality frequently reflecting specific growing areas and conditions). Thus, due to the decentralized nature of weaving, for an adequate supply of cotton yarn to get from the spinning mills to the handlooms it must pass through a middleman. This additional step in the value chain has oftentimes resulted in rising yarn prices and shortages in supply.

In 1983 the Indian government created the National Handloom Development Corporation (NHDC) to address the issue of yarn access for handloom weavers. This country-level institution aimed to make yarn available to weavers throughout the country at suitable prices and quality levels. With the Mill Gate Scheme (MGS), the government—through the NHDC—would supply cotton yarn to weavers at the mill gate prices (i.e., the price of yarn procured from reputed spinning mills) and reimburse weavers for the cost of transporting the yarn to them.

Implemented in 1992–93, the MGS aimed at making all types of yarn available at regular supply to handloom weavers at mill gate prices without any price distortions. To achieve this aim, cotton yarn will move from spinners to weavers via agencies authorized by the government. These organizations can be at the district, state or national level, and include cooperatives, NGOs, government handloom departments, export houses, the development commissioner's office and weavers' associations. Figure 8 describes the process.

Figure 8: Yarn Procurement through the NHDC



Authorized organizations have to ensure that the yarn they trade is only used by handloom weavers. They also have the option of maintaining yarn stocks to allow for a regular supply to the handloom weavers. So far, the MGS has had significant buy-in: in 2006, the total cotton yarn traded in Andhra Pradesh alone through the scheme was 24 million bags, valued at Rs. 280 million. Additionally, the MGS is the only scheme through which yarn is supplied to cooperative societies in India.³⁷ Problems with the scheme do remain, however.

The MGS was designed first and foremost to insulate handloom weavers from yarn price fluctuations, especially those distortions arising from the yarn hoarding practices of traders and middlemen. And while some NHDC-yarn depots have been created under the scheme to help address this issue, the organization has not created as many depots as were initially envisaged, and those that do exist do not function as efficiently as they could.³⁸

The scheme fails to match its potential for a number of other reasons:

- *Time lags* – The NHDC does not maintain buffer stock of yarn. As such, a time lag exists between when participating organizations place their orders and when the yarn is delivered, frequently upsetting the production cycle of the weaver cooperatives.³⁹
- *Corruption* – Expenses totalling Rs. 283.4 million⁴⁰ between 1999 and 2003 in Andhra Pradesh state have been incurred without the yarn having been received by the

³⁷ As per discussions with Mr. Ravish Tandon of National handloom Development Corporation, March 2007.

³⁸ Field notes, Chitrika: based on discussions with weaver cooperatives in Nalgonda and Srikakulam districts in Andhra Pradesh, India.

³⁹ Cooperatives are member-owned (here weavers) and controlled community-based organizations operated on democratic principles. Members voluntarily contribute share-capital and pool in their resources for common social, economic and cultural needs. In India, cooperatives are governed by the Cooperative Societies Act.

handloom weavers.⁴¹ This money was lost to corruption in the government structure and at the cooperative level, as the master weavers and traders re-directed the yarn.

- *Lack of credit access* – Participating organizations do not have the option of accessing credit to buy yarn through the scheme. If provided, the working-capital requirements of the NHDC would increase significantly, however the lack of credit access does hamper participation in the scheme.
- *Illegal sales* – Some authorized agencies and cooperatives are maintaining yarn depots but selling the stock illegally to traders or powerloom operators for higher prices.
- *Limited scope* – The reach of the NHDC is limited to weavers under the cooperative purview. This unfortunately only applies to 30 per cent of handloom weavers; the rest work outside of these cooperatives and are thus fully exposed to price volatility as they buy yarn on the open market. Additionally, the NHDC has no control over the pricing structure of the spinning mills.

The end result of these inefficiencies is that prices under the NHDC have not always been competitive with those in the open market. Table 1 illustrates that in 2003 the price of cotton yarn purchased through the NHDC was in fact higher than the price on the open market.

Table 1: Cotton yarn price comparison: open market and the NHDC, 2003⁴²

Other Mills	Thread Count	Price in the open market in July (in Rs.)	Price through the NHDC in July (in Rs.)
Amaravati	60	712.80	730
Super	60	740	765
Amaravati	80	970.20	990
Super	80	1011.90	1011.9

Note: 1\$ = Rs.40

3.1.2 Removal of Central Value-Added tax (CENVAT)

Value-added taxes represent an added burden to many handloom weavers already hard-pressed to meet the costs of cotton yarn. Not only must they meet this obligation themselves, but as taxes squeeze the margins of traders and master weavers both in turn pass the obligation on to often powerless handloom weavers, cutting into their earnings. Recognizing this, the Indian government has moved to reimburse hank yarn consumers for the excise taxes they pay on their input, namely the Central Value-added Tax (CENVAT). Under the scheme, weavers will continue to get plain reel cotton yarn and hank yarn at prices net of CENVAT.

In 2003, the government first equalized the excise tax structure for cotton and manmade yarn. Then, in the 2004–05 federal budget, the State provided a strong boost to the cotton industry by removing its CENVAT obligation, thus allowing all cotton textile manufacturers (at the yarn, fabric and garment stage) to opt for complete excise-tax exemption. To opt for exemption, however, requires a strong degree of reporting by the members of the value

⁴⁰ “Chenetanu Munchutunna Nulu Samasyalu,” *The Centre for Handloom Information and Policy Advocacy*, 2004.

⁴¹ *ibid.*

⁴² *ibid.*

chain; to claim back the excise tax, actors have to report all of their activities, promoting transparency at every level.

With cotton yarn exempt from the CENVAT, producers were given some relief from their most direct competitor: the excise duties on polyester filament yarn (a substitute for cotton yarn) and polyester staple fibre (a substitute for cotton) were left unchanged at 24 per cent and 16 per cent, respectively. These actions reduce the tax rate on cotton yarn and thus the cost of production.

3.1.3 Hank yarn obligation

The hank yarn obligation scheme was designed to provide hank yarn to handloom weavers at a reasonable price and in a timely way. The scheme makes it compulsory for yarn spinners to earmark 30 per cent of their production for handloom weavers. Spinners are typically less keen to reel cone yarn into hank yarn as the process adds to their costs, yarn in that form garners a lower price in the market and it services a diminishing market. Additionally, as many spinners also operate powerlooms, they favour cone yarn to supply their own production. Uneconomical and out of step with the current large-scale, mass production of cone yarn, hank yarn production was falling and as a result handloom weavers were increasingly faced with a decreasing supply of their primary input.⁴³

Under the first hank yarn reservation scheme, initiated in 1993, private spinners were ordered to produce half of their yarn in hank form, the type of yarn required by handloom weavers. All remaining output could be produced in cone form for sale to textile mills. The goal of the first hank yarn obligation was thus to improve the availability hank yarn at a reasonable price for handloom weavers.

In 2000, the scheme was altered in a way which unfortunately allowed spinners to scuttle their obligations. Alterations gave spinners the leeway to fulfill their obligations through 1) filling the deficit by transferring the obligation on to other spinning mills or 2) by carrying forward the deficit to the following year.

Initiatives like this one and the CENVAT removal effectively subsidize handloom weavers by making yarn cheaper. However allegations have surfaced that under the scheme hank yarn is often rewound into cone yarn and supplied to the mills regardless, as the production requirement targeted for the handloom sector is 30 per cent of yarn production while the earmarked limit for hank yarn production is 50 per cent of total cotton yarn production. While this mismatch has since been addressed, spinners were at the time able to show production and sale of hank yarn on paper—thus claiming excise duty exemption of 5.75 per cent—before reworking the hank yarn into cone yarn and selling to the mills.

While both spinning mills and the excise department have shown on record that hank yarn obligations have been fulfilled and excise duty exceptions claimed, collusion to rewind the yarn in cone form for resale to the mills remains a reality. The spinning mills doubly benefit by fulfilling their obligations on record and saving the excise duty on cone yarn. However on

⁴³ Extracts from: Sule, S. (2006) “Reviving cotton to cloth chain,,” *India Together*, June.

the ground weavers continue to face hank yarn shortages, one of the primary factors driving many from the occupation over the course of the last 10 years.⁴⁴

3.1.4 Technology Upgradation Fund Scheme (TUFS)

“Continuation of TUFS is an important factor for leveraging technology advantage specially when the forward looking textile units are keen to install new generation modern technologies and manufacturing processes for man-made fibre based textiles.”

V.K. Ladi, President of the Indian Spinners’ Association⁴⁵

Highly decentralized and dispersed, the handloom sector suffers from distinct disadvantages in comparison to the powerloom and mill sectors: costs are higher, marketing is much more difficult and technology is frequently obsolete. To address the last constraint, the Technological Upgradation Fund Scheme (TUFS) was initiated in 1999 as a five-year project⁴⁶—valued at \$6 billion—to address the technological needs of the weaving, processing and apparel industries.

In order for the handloom sector to increase its productivity, meet and exceed quality standards, reduce production cycle times and ensure price competitiveness, investments have to be made in technological improvements. However, most weavers lack the means to make such investments. To help, the TUFS will allow for a five-per-cent reimbursement on the normal interest rate charged by lending agencies on rupee-term loans and varying rates of capital subsidy on the purchase of new equipment and machinery.⁴⁷ Funding⁴⁸ is open to private handloom entrepreneurs, cooperatives, NGOs, corporations and national level handloom organizations, provided they have a minimum of 10 handlooms housed in a common work area (or hope to grow to such a size).

Textile units are eligible under the TUFS for soft-loans for modernizing their operations through nationalized banks such as the Industrial Development Bank of India (IDBI), Small Industries Development bank of India (SIDBI) and Industrial Finance Corporation of India (IFCI).⁴⁹ From 1999 to 2004, more than 30 per cent⁵⁰ of loans were granted to spinning and composite mills; all other loans have been distributed across the textile value chain. By investing in mill machinery, pollution control equipment, research and captive power plants, it is hoped that the cost of cotton yarn production will decrease with time. Table 2 gives a detailed picture of the utilization of funds released in the first year of the TUFS.

⁴⁴ Field notes: Chitrika, 2006.

⁴⁵ “Government releases vision document for textiles industry,” *Business Line*, New Delhi, December 19, 2006.

⁴⁶ The project was eventually extended until March 31, 2007, and subsequently renewed for another five years.

⁴⁷ Ministry of Textiles (undated) “Technological Upgradation Fund Scheme,” Government of India, New Delhi, <http://texmin.nic.in/TechnologyUpgradationFundScheme.pdf> accessed in 2007. For handloom weavers in particular, the TUFS offers a 25 per cent subsidy on the purchase of new machinery and equipment.

⁴⁸ Funding is available through nationalized banks such as the Industrial Development Bank of India, the Small Industries Development Bank of India and the Industrial Finance Corporation of India.

⁴⁹ Ministry of Textiles (1999) “Resolution No.28/I/99-CTI,” March, Government of India, New Delhi, <http://www.pdexcil.org/news/tufs/tbook/g1.htm> accessed in 2007.

⁵⁰ Crisil Research: TUFS, Press Release January 2007.

Table 2: TUFs Utilization up to February 29, 2000

Industry sector	Applied			Sanctioned		
	Number of loans	Project cost	Loan amount	Number of loans	Loan amount	Amount disbursed
	- million rupees -			- million rupees -		
Spinning	84	10,800	7,077	60	4,422	1,067
Viscose filament yarn	2	241	118	2	118	61
Synthetic filament yarn (texturing, twisting)	17	1,120	719	5	336	157
Weaving	23	2,481	1,490	14	1,113	237
Composite mills	44	25,226	11,836	27	6,728	1,538
Knitting	21	276	192	13	103	25
Made-ups manufacturing	3	84	48	1	8	7
Garment manufacturing	35	1,642	880	24	665	232
Processing	57	7,211	4,186	42	2,964	1,657
Ginning and pressing	8	288	140	8	109	18
All other	10	390	254	5	123	15
Total (Rs.)	304	49,759	26,940	201	16,689	5,014
Total (million dollars)		1,160	630		385	115

Compiled from statistics provided by the Ministry of Textiles, and cited in U.S. International Trade Commission (2001)

The TUFs initiative has helped producers reduce production costs and improve the profitability of the mills. Field research suggests that the focus of the TUFs should now shift to concentrate more on the weaving and processing sectors. The unorganized nature of the handloom industry and an increasingly liberalized market mean that small actors will find it more difficult to access developed markets. A technologically-sound production base could help small-scale handloom weavers remain competitive. If implemented more thoroughly across the value chain, the TUFs will help improve quality from raw materials to finished products. This will in turn render cotton yarn more price-competitive and improve the weavers' prospects on the export markets. The domestic market will also be positively affected through improved supply-chain.

3.1.5 Technology Mission on Cotton

In 2000, the Government of India initiated the Technology Mission on Cotton (TMC) to improve the quality and production of Indian cotton. Supporting the National Textile Policy aim of increasing cotton production by 50 per cent, and funded by the Ministry of Textiles, the TMC aims to improve cotton crop.

Table 3 describes the four components of the TCM:

Table 3: The Technology Mission on Cotton⁵¹

Mission	Focus	Output
Technology Mini Mission I	Research	Developing new genotypes to improve quality of cotton and cotton yarn
Technology Mini Mission II	Technology dissemination to farmers	Extension services and distribution of improved seed varieties
Technology Mini Mission III	Improvements in market infrastructure	112 Market yards were modernized to avoid cotton contamination
Technology Mini Mission IV	Modernization of the ginning and pressing sector	270 ginning and pressing factories were modernized

To date, the total investment of the TCM has been Rs. 14720 million. Its successes include the development of 211 market yards and the modernization of 777 spinning mills. Yields have increased from 302 kg per hectare in 2003 to 468 kg per hectare in 2006, while contamination levels have decreased considerably. Given this record, the mission has been successful both in improving product quality and marketing reach. By promoting both of these functions of the cotton industry, the TCM effectively helps support cotton (and thus cotton yarn) price reductions by improving the technology for cotton and cotton yarn production and thus lowering the cost of production.⁵²

3.1.6 Genetically modified cotton

India loses a significant portion of its yearly cotton crop to pest infestations. The country's pesticide industry has a market value of approximately US\$8.7 million, and each year farmers face uncertainty when trying to predict their yields and, therefore, incomes. This has led the country to introduce Bt. Cotton (*Bacillus thuringiensis*) to cultivation to improve crop resistance to the American bollworm.

Support for the commercial cultivation of Bt. Cotton gathered momentum in the early years of the decade. Many saw it as an asset as the quality of Indian cotton came under continued scrutiny from importers demanding contamination-free cotton. With the cotton textile industry requesting movement on the issue in the interests of domestic industry, in 2003 the Genetic Engineering Approval Committee met and cleared six varieties of the strain for commercial cultivation. With total cotton consumption expected to grow to 350 lakh bales by 2010⁵³ for both domestic and export markets, this development was an good one in the eyes of weavers, as it will also improve the availability, quality and price stability of cotton yarn.⁵⁴

⁵¹ Ministry of Textiles (2006) Background note on "Textiles Sector" for the Economic Editors' Conference, November 7–8, 2006.

⁵² All references for this paragraph from Ministry of Textiles (2006) Background note on "Textiles Sector" for the Economic Editors' Conference, November 7–8, 2006

⁵³ Barwale, R.B., V.R. Gadwal, U. Zehr & B. Zehr (2004) "Prospects of Bt. Cotton technology in India," *AgBioForum*, 7(1&2).

⁵⁴ "Government okays GM cotton farming in North," *The Economic Times*, March 8, 2004.

However Bt. Cotton thus far has met with mixed results. According to Suman Sahai of the Gene Campaign, Bt. Cotton is more suitable to colder climatic regions where the pest attacks are few. It is also more suitable for large landholding farmers, as Bt. Cotton requires 20 per cent of cultivation land for “refuge” to minimize pest attacks; in India, the landholdings are small and it is difficult for the farmers to set aside land without cultivation.⁵⁵ However, despite its controversial nature and initial reports of poor performance, with only four years of cultivation the impact of Bt. Cotton cannot be proven conclusively.

3.1.7 Derivatives⁵⁶

Commodity derivatives have a crucial role to play in economies dominated by agriculture. With price volatility adversely affecting both cotton and cotton yarn producers, access to market-based risk instruments like forward and futures contracts, options and swaps could serve as invaluable tools in improving the predictability of incomes for farmers and weavers alike. However, until recently an underdeveloped exchange system in the country has left many in the dark regarding the utility of commodity exchanges. With increased liberalization increasingly exposing both to international price fluctuations, the time is right to increase the availability of market-based risk instruments and the infrastructure they require to support them.

While India does have a history of commodities trading, activities have remained underdeveloped due to government’s role in the commodity price control. And although India’s first commodity exchange was set up in 1875 in Mumbai to trade cotton, the free trade of the commodities remained restricted in recent years under the Essential Commodities Act of 1955 and the Forward Contracts Regulation Act, 1952. With the ban on futures contracts, many traders went out of business or resorted to unofficial futures trading. Recognizing this, the Khusro Committee successfully recommended in 1980 that the government relax the ban on cotton, jute and some other agricultural commodities.⁵⁷

This relaxation has expanded the number of commodity exchanges in India to 15, however a lack of market intelligence systems, irregular trading, low participation and low penetration have all continued to limit the scope of derivatives in India. Access issues remain central: in a country as large as India, with weavers as decentralized as they are, simply getting them participating in these markets continues to be an important barrier.

The Multi-Commodity Exchange of India (MCX) is one of the few exchanges at the national level involved in the trading of cotton yarn,⁵⁸ and is trying to address some of these challenges. As the premier commodity exchange in India, the institution has undertaken initiatives to educate people on commodity exchanges, their utility and their advantages. In collaboration with India Post, the exchange also plans to disseminate price information to rural areas.⁵⁹

⁵⁵ Krishnakumar, A. (2003) “Bt Cotton in India: A Lesson from the field,” *Frontline*, Volume 20, May.

⁵⁶ Sahadevan, K.G. (2002) “Derivatives and Price Risk Management: A Study of Agriculture Commodity Futures in India,” Indian Institute of Management, Lucknow.

⁵⁷ *ibid.*

⁵⁸ Unfortunately, the volume of cotton yarn traded on the MCX is not available.

⁵⁹ From [http:// www.mcxindia.com](http://www.mcxindia.com)

3.1.8 The development of exportable products and their marketing scheme⁶⁰

This handloom product export scheme has been in place since 1996–97. It was instituted to help handloom weavers build-up, develop and market export-worthy handloom products. To do so, it seeks to promote the “brand” of Indian handloom products abroad and to connect producers to the international market by linking them directly to buyers in each of the export markets. In doing so, producers can then design textiles to meet the unique demands of their international customers. In addition, the scheme has included design innovation and product diversification strategies for the weavers, and offers financial assistance to both national and state-level handloom organizations that can prove their ability to develop and market export-worthy handloom products. By linking weavers directly with export markets and establishing an Indian textiles niche, the scheme allows weavers to secure their product markets with more predictability and charge a premium for their goods. To date, it has been considered a success by those handloom cooperatives and corporations who have used it.

3.2 Micro interventions

At the micro-level, interventions have largely concentrated on linking farmers with handloom weavers. The following section will detail one-such promising intervention.

3.2.1 Decentralized spinning project⁶¹

The dispersed nature of weavers in comparison to the centralized production of yarn adds to the price of the input; pressing, transportation and distribution costs all increase the price for handloom weavers. Unfortunately, most of the technologies developed for spinning are only suitable for large-scale centralized production, trapping many weavers—and yarn prices—within the status quo.

Recent innovations are challenging this, though. Led by the efforts of L. Kannan and the NGO Dastakar Andhra, new micro-spinning technologies are addressing issues of scale as well as connecting farmers and weavers. Working with weavers in Andhra Pradesh, they are trying to re-establish farmer-weaver relationships by integrating crop production, spinning and weaving.

During the yarn production process, cotton bales are converted into slivers, which are then used to create yarn. This second process is inherently small-scale, even in spinning mills, with mills constrained to have tens of thousands of spindles converting the slivers to yarn in order to keep pace with the production rate of the previous stages.

Micro spinning allows for yarn production on a smaller scale by removing the act of compressing cotton into bales. Instead, the technology integrates the operation of ginning (or seed-removal) with the on-site handling of fibres to produce slivers. These slivers can then be converted into yarn at the same venue. As such, micro-spinning technology allows

⁶⁰ Drawn from the Ministry of Textiles (undated) “Development of Exportable Products and their Marketing Scheme,” Government of India, New Delhi, http://texmin.nic.in/handlooms/hl_sch_depm.htm accessed in 2007.

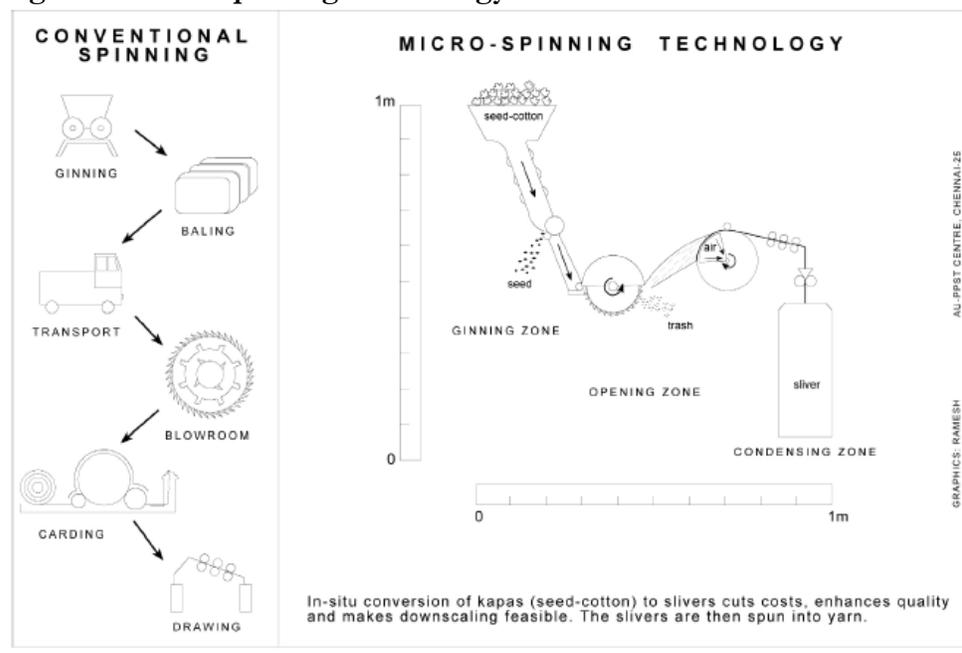
⁶¹ Section 4.2.1 is largely drawn from Kannan, L. (2001) “Micro spinning: Re-inventing the spinning wheel,” Vortex Engineering Private Limited, India.

decentralized cotton farmers to convert their crop into yarn on-site, without having to go through a large, centralized mill.

This translates into a number of benefits for both the farmer and the weaver: baling and transportation costs are eliminated; the interests and margins of mills and traders are bypassed; value-addition shifts to the local level; and a reduced gap between raw materials (cotton) and the market (weavers) promotes a degree of predictability for both yarn stocks and prices. Micro spinning also helps address the mismatch between a dispersed textile industry and a centralized mill sector. It is estimated that these advantages result in savings of approximately 40 per cent for weavers.

A pilot project on micro spinning was launched in Chirala, Andhra Pradesh in 2003. The project aims to open alternative market channels to the cotton growers, to insulate small producers and weavers from prices fluctuations, and to curb hoarding practices by directly linking the farmer to the weaver, cutting out exploitative traders. Figure 9 illustrates the differences between conventional yarn production and micro spinning.

Figure 9: Micro-spinning Technology



Source: L. Kannan, 2001

Supported by the Ministry of Rural Development, the initial project will soon be replicated across eight cotton growing centres in Andhra Pradesh, Tamil Nadu, Maharashtra and Karnataka. Apart from generating local employment, the project aims to bring cotton cultivation, spinning and weaving activities within one cluster: all chosen locations are home to both cotton farmers and weavers. Through these local, technological interventions, it is hoped that weavers can reduce the price risks they face when buying cotton yarn.

Despite the presence of many approaches designed to address cotton yarn price volatility, the problem remains for many of India's handloom weavers. A lack of concerted efforts across value chain actors has meant that when one actor benefits, it is often at the expense of another. For an integrated approach to succeed, efforts must begin with the cotton crop and include the participation of all stakeholders. The following section will make some recommendations as to how this might work.

4. Conclusions and recommendations

Domestic demand for cotton yarn is projected to grow at an annual rate of 7.3 per cent until 2011.⁶² Driven by both international demand for Indian exports and a healthy domestic market derived from the increased purchasing power of the middle class, India's export strategy is likely to continue favouring garments and made-ups⁶³—value-added products that command higher margins. These factors combine to paint an optimistic picture about cotton yarn availability, continued investments in technology and the general business outlook for the country's handloom weavers. And while it bodes well for the industry, growth must be managed properly to insured that the benefits are spread equitably across the value chain. More has to be done to ensure that an adequate supply and quality of cotton yarn reaches India's handloom weavers, and that exploitative links along the value chain are controlled and minimized.

Institutional corrections

The cotton yarn value chain, as it currently stands, does not favour handloom weavers. Private traders exploit the unorganized and decentralized weaving sector to their advantage, frequently exposing handloom operators to price distortions. Government initiatives to address this, such as the NHDC, have failed to solve the problem, as they do not have the scope or the stockpiling capacity to meet the demands of all weavers. In fact, 70 per cent of handloom weavers operate outside of the cooperative system and as such receive few direct benefits from any government schemes.⁶⁴

At the institutional level, the following changes are needed to address supply side issues:

- The NHDC should expand its depot program to allow it to maintain yarn stocks rather than procuring yarn on an order-by-order basis. These yarn depots should be maintained by independent bodies or cooperatives operating under state pricing guidelines; any profits they generate should depend on the volumes they command and any value-added services they can offer, such as cotton dyeing or bleaching and advisory services. Efforts must be made to include any weavers operating outside of the cooperative system.
- Cooperatives should create a price volatility reserve fund, to be used to offset price movements and cushion periods of price volatility.
- The government must also move to discourage collusion between the mill sector and yarn traders. As it stands, a limited number of traders can, through collusion, control a

⁶² A compounded annual growth rate, cited in Ministry of Textiles (2005) "Compendium of Textile Statistics," Government of India, New Delhi.

⁶³ Ministry of Textiles (2006) *Annual Report 2005–2006*, Government of India, New Delhi.

⁶⁴ Kantikar, A. (2006) "Credit Flows to the Handloom Sector, Policies and Practices: An Exploratory Study," *All India Artisans and Craftworkers Welfare Association*.

large quantity of yarn trade, leading to an unfair degree of pricing control in the hands of a few. Direct access to these mills has to be improved for cooperatives and weavers.

- Cotton traders must be regulated through licensing and price caps, with the threat of disciplinary action by the government in the case of predatory trading practices.
- Efforts should be made to put the control of cooperative spinning mills into the hands of handloom weavers and cotton farmers.

Technology

Technology is central to reducing the costs of production, improving yarn and fabric quality and expanding information access along the value chain. The government has started to act on this, investing heavily in the composite mill sector through the TUFS, although this has to be expanded to include more value chain actors. Investments in decentralized spinning technologies, for example, hold great potential to transform the structure of the industry by formally connecting weavers to farmers and putting the means of yarn production back into community hands.

All technology investments have to be tempered with caution; costs, management arrangements and adoption processes all have to be considered when designing a technology strategy. Interventions are primarily needed in promoting decentralized spinning units and in providing access to price information:

- Decentralized spinning units (i.e., micro spinning units) should be scaled up in cotton growing areas to shorten the supply chain and make the cotton price determination based on local production and demand rather than policy decisions and middlemen. Ownership of the unit must be thought through beforehand; where they exist, community-owned and managed organizations like cooperatives should be the basic business units that manage and own the decentralized spinning units. With high initial investments, government funding for machinery and working capital will also be required.
- Market-intelligence systems should be developed to make the price information available to weavers and community-based institutions through rural kiosks, monthly newsletters and radio; such information is currently only available to those who can afford it.
- Encourage integrated mills where spinning and weaving processes are integrated under one roof. This trend is increasingly seen in China, with profitability defined by the mill's ability to vertically integrate with weaving and garmenting.

Supply/trading

The timely supply of cotton and yarn at a reasonable price along the value chain is crucial to stabilizing incomes. Three initiatives can promote income stabilization for handloom weavers:

- Improvements to the cotton procurement mechanism can help reduce costs; raw material procurement costs make-up 60 per cent⁶⁵ of the total cost to spinning mills. Due to high price fluctuations in the cotton crop, managing procurement will help in

⁶⁵ CRISIL: Rating criteria for the Cotton Spinning Industry.

leveraging costs through bulk purchases and improving liquidity during high price periods.

- Access issues continue to hamper the widespread use of market-based risk instruments in India, but do hold great potential for risk-hedging and improving income predictability. Weather conditions, unforeseen cotton price movement and fluctuating exchange rates each pose risks to traders, weavers and institutions involved in cotton yarn trading; market-based risk instruments can help each manage these risks. Investments have to be made in expanding the access to exchange markets and improving their infrastructure. The expanded use and availability of such instruments will have the added benefit of distributing pricing information and reducing the asymmetries often associated with income instability.
- More research should be put into price risk insurance for farmers, spinners and weavers. With market-based risk management instruments limited by access to technology and information, price insurance could provide a helpful substitute.

Finance

The amount of government financing available across the cotton yarn value chain has to be expanded. While some funding has been made available through the TUFSS initiative, it has largely focused on the mill sector; weavers and farmers in the unorganized sector must now be afforded the same benefits. State funding for the acquisition of working capital and for technological improvements must be combined with more cash to implement these interventions, financing which—as evident by the inability of the NHDC to meet its yarn depot targets—has thus far proven insufficient. Providing financial assistance to communities and small producers to independently establish and maintain “yarn banks” at the village/cluster level could be one way of addressing existing shortcomings. Widening the reach of government financing to better include powerloom and non-cooperative handloom weavers will have far-reaching implications for local livelihoods.

Capacity building

The capacity of weavers and farmers to access and understand market and technology trends has to be built up. As their capacity in these areas grows, cotton producers and handloom weavers can plan their procurement and production strategies accordingly and reduce the risks of predatory pricing. Attention should also be paid to improving the legal knowledge these groups carry about the market and their rights within it to further reduce their exposure to exploitation.

Any approach taken to address commodity income stability in the Indian textiles industry has to be integrated across the value chain. As such, policy-makers have to understand the political, social and economic motivations of the different interest groups along the chain, from cotton farmers to handloom weavers, before implementing any initiative. Ideally, these government interventions will support and amplify market-led solution driven by the actors themselves, with the state monitoring the process to ensure that no one group exploits another. Given the promising economic future of the Indian textiles industry in the near-term, now is an ideal, prospering time to address some of the industry’s shortcomings.

References

Baffes, J. (2004) "Cotton: market setting, trade policies and issues," *World Bank Policy Research Paper 3218*, Washington DC.

Barwale, R.B., V.R. Gadwal, U. Zehr & B. Zehr (2004) "Prospects of Bt. Cotton technology in India," *AgBioForum*, 7(1&2).

"Chenetanu Munchutunna Nulu Samasyalu," *The Centre for Handloom Information and Policy Advocacy*, 2004.

CHIP and Chitrika (2006) "A Study on Wage Status of Handloom Weavers in Srikakulam Cluster," Secunderabad

Chitrika (2005) "Baseline study of Ponduru Cluster," Secunderabad.

"Cotton yarn," *Special Product Reports*, Multi Commodity Exchange of India, http://www.mcxindia.com/products_cottonyarn.html accessed in 2007.

FAO (2007) *FAOSTAT*, Food and Agriculture Organization of the United Nations, Rome.

"Government okays GM cotton farming in North," *The Economic Times*, March 8, 2004.

"Government releases vision document for textiles industry," *Business Line*, New Delhi, December 19, 2006.

ICRA (2005) "The Indian Textiles and Clothing Industry," *ICRA*.

Kannan, L. (2001) "Micro spinning: Re-inventing the spinning wheel," Vortex Engineering Private Limited, India.

Kantikar, A. (2006) "Credit Flows to the Handloom Sector, Policies and Practices: An Exploratory Study," *All India Artisans and Craftworkers Welfare Association*

Kondo, M. (2001) "The Political Economy of Commodity Export Policy," The World Bank, Washington, DC

Krishnakumar, A. (2003) "Bt Cotton in India: A Lesson from the field," *Frontline*, Volume 20, May.

Krishnan, R. (2001) "Cotton Yarn: Threadbare," *Business Line's Investment World*, <http://www.blonnet.com/iw/2001/01/28/stories/0528e051.htm> accessed in 2007.

Landes, M. et al. (2005) "Growth Prospects for India's Cotton and Textile Industries," United States Department of Agriculture, <http://www.ers.usda.gov/publications/cws/jun05/cws05d01/cws05d01.pdf> accessed in 2007.

Ministry of Textiles (undated) “Development of Exportable Products and their Marketing Scheme,” Government of India, New Delhi, http://texmin.nic.in/handlooms/hl_sch_depm.htm accessed in 2007.

Ministry of Textiles (undated) *Guidelines for implementation of integrated handloom cluster development programme*, Office of the Development Commissioner for Handlooms, Government of India, New Delhi, http://handlooms.nic.in/hl_sch_ihcdp.pdf accessed in 2007.

Ministry of Textiles (undated) “Technological Upgradation Fund Scheme,” Government of India, New Delhi, <http://texmin.nic.in/TechnologyUpgradationFundScheme.pdf> accessed in 2007.

Ministry of Textiles (1999) “Resolution No.28/I/99-CTI,” March, Government of India, New Delhi, <http://www.pdexcil.org/news/tufs/tbook/g1.htm> accessed in 2007.

Ministry of Textiles (2005) “Compendium of Textile Statistics,” Government of India, New Delhi.

Ministry of Textiles (2006) *Annual Report 2005–2006*, Government of India, New Delhi.

Ministry of Textiles (2006) Background note on “Textiles Sector” for the Economic Editors’ Conference, November 7–8, 2006.

National Cotton Council of America (2007) *Rankings*, <http://www.cotton.org/econ/cropinfo/cropdata/rankings.cfm> accessed in 2007.

Newton, J. (2003) “Pesticides and Politics in India,” *SciDev*, <http://www.scidev.net/Features/index.cfm?fuseaction=readfeatures&itemid=176&language=1> accessed in 2007.

“Overview of the Textile Industry” *Emerging SMEs of India*, <http://www.dnb.co.in/SMEstextile/overview.asp> accessed in 2007.

Oxfam (2004) “Stitched Up,” *Oxfam Briefing Paper 60*, Oxford.

Reddy, R. et al., (1995) “The yarn price behaviour & its impact on earnings of handloom weavers,” National Institute of Rural Development, Hyderabad.

Sahadevan, K.G. (2002) “Derivatives and Price Risk Management: A Study of Agriculture Commodity Futures in India,” Indian Institute of Management, Lucknow.

Sule, S. (2006) “Reviving cotton to cloth chain,” *India Together*, June.

Syamasundari, B. (2004) “Persisting Shortage of Cotton yarn,” *The Hindu*, March.

U.S. International Trade Commission (2001) “India’s Textile and Apparel Industry: Growth Potential and Trade and Investment Opportunities,” *Staff Research Study 27*, Office of Industries.