COMPETITION AND CONTROL IN THE MARKET FOR TEXTILES: INDIAN WEAVERS AND THE ENGLISH EAST INDIA COMPANY IN THE EIGHTEENTH CENTURY[1]

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Introduction

The changes in the international textile market have been a central issue in explaining the rise of Britain as the industrial power and the relative decline of the Indian economy under colonial rule. India dominated the textile market before the industrial revolution in Britain. Indian textile products of different varieties flooded the British market in the seventeenth and the eighteenth centuries, reaching a peak in the mid eighteenth century. Indian calicoes were in great demand and muslins became synonymous of high fashion. A considerable share of these products brought to the British shores by the English East India Company (EIC) was re-exported to other parts of the world. The EIC supplied not just the British market, but also acted as the entrepot for world textile trade. Protests by textile lobbies in Britain (mostly woollen and silk manufacturers) in the late seventeenth century led to the so-called Calico Act of 1701 which banned the import of printed calico for the home market, but allowed its re-export. The policy encouraged a rapid growth of the printing industry in Britain, which provided a continuing and growing demand for white calicos. Further legislation in 1721 banned the import of white calicos for the home market, but allowed re-export.[2] There are no precise estimates of the extent to which

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[2] Patrick K. O'Brien, Trevor Griffith and Phillip Hunt, "Political Components of the Industrial Revolution: Parliament and the English Cotton Textile Industry, 1660–1774", *Economic History Review*, 44, 3 (1991), pp. 395–423.

the ban was circumvented, although there were indications that this was the case. Calicoes continued to be imported in large volume for re-export. The share of Indian textiles in the world market began to decline in the late eighteenth century; by the early nineteenth century Indian exports to Britain started to dwindle, by the middle of the nineteenth century, India had become a net importer of British textiles.[3]

These changes in the international textile trade coincided with two major developments: the political domination of the Indian subcontinent by the EIC and the industrial revolution in Britain. The literature on India sees the political factors as central to the decline in the textile trade and has focused on the interactions between the weavers and the EIC. The political dominance and monopolist position of the Company are seen as the decisive factors in the textile trade in India. As the EIC acquired revenue rights in Bengal and gained political and legal control, the exploitation of weavers increased and prices paid to the producers decreased. Limited attention has been paid to changes in the international market conditions as British producers began to substitute imports of cotton textiles using more capital intensive technologies. The increasing output per worker reduced textile prices in Britain and the international market price of textiles faced by the Indian exporters had started to decline.

European demand had been at the centre of the analysis of the international textile market in the seventeenth and eighteenth centuries.[4] Rising demand for Indian textiles in the European market had a significant effect on the industry in certain regions in India. The analysis of the superiority of Indian products is based mainly on supply-side factors, such as cheapness of labour and skills in weaving and design. Considering available technology, Indian products enjoyed a competitive advantage in the world market. As the technological frontier of this industry changed with the industrial revolution, its impact on the world market was dramatic. The competitive advantage in cotton textiles shifted from India to Britain. Imports from India had provided the impetus for import substitution in Britain using a more capital intensive

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[3] Stephen N. Broadberry and Bishnupriya Gupta, "Lancashire, India and Shifting Comparative Advantage in Cotton Textiles, 1700–1850: The Neglected Role of Factor Prices", *Economic History Review*, 62, 2 (2009), pp. 279–305.

[4] This view is questioned by Sushil Chaudhury, who sees the Asia trade to have a larger share of the market. See Sushil Chaudhury, *From Prosperity to Decline: Eighteenth Century Bengal* (New Delhi: Manohar, 1995).

technology. The higher labour productivity in Britain compensated for the wage differential and tilted the balance away from Indian producers.[5]

This paper looks at the implications of the changes in the world market on the fortunes of the Indian weavers and raises two issues: firstly, the monopoly position of the EIC was not as important as has been argued. Although in specific segments the company exercised monopoly, the textile market in India must be seen as a competitive market. The weavers had substantial bargaining strength in this market, which was reflected in the failure of the Company in meeting its procurement targets all through this period. In the last decades of the eighteenth century, the Company agents found it increasingly difficult to meet the export targets, suggesting that weavers could sell to other buyers. Secondly, the developments in the Indian textile industry must be seen in the context of the developments in world markets, in particular, the British one, which was the hub of international trade. The EIC was a price taker in this market. The absence of an increasing trend in textile prices in the European market from the middle of the eighteenth century and the eventual decline in nominal and real terms can explain the failure on the part of the EIC to increase procurement prices.

Organization of the Textile Industry

Supply-side explanations have focused on regional developments in the textile industry in India.[6] This literature has reconstructed the history of textile production in the different regions of the Indian subcontinent and has explored the channels through which the output was

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[5] Broadberry and Gupta, "Lancashire, India, and shifting competitive advantage in cotton textiles, 1700–1850: the neglected role of factor prices".

[6] See for instance on Bengal: Debendra B. Mitra, *The Cotton Weavers of Bengal 1757–1833* (Calcutta: Firma KLM, 1978); K.N. Chaudhuri, *The Trading World of Asia and the English East India Company, 1660–1760* (Cambridge: Cambridge University Press, 1978); Om Prakash, *The Dutch East India Company and the Economy of Bengal* (Princeton: Princeton University Press, 1985); H. Hossain, *The Company Weavers of Bengal* (Delhi: Oxford University Press, 1988). On the Coromandel Coast see: Kanakalatha Mukund, *The Trading World of the Tamil Merchant: Evolution of Merchant Capitalism in the Coromandel* (Hyderabad: Orient Longman, 1999); Prasannan Parthasarathi, *The Transition to a Colonial Economy: Weavers, Merchants and Kings in South India, 1720–1800* (Cambridge: Cambridge University Press, 2001).

traded in international markets. K. N. Chaudhuri's classic work on the EIC brings together a picture of the Indian industry combining evidence from the West, South and the East. This is a comprehensive narrative of the shift in production centres from Surat to the Coromandel and finally to Bengal in the eighteenth century. This work presents empirical evidence on the volume of trade from the three major exporting regions. However, Chaudhuri's work stops at 1760 and therefore does not touch on the decline of India as a primary textile producer.[7]

The low labour costs in India were the key to the comparative advantage enjoyed by the subcontinent in textile manufacturing as Indian wages were circa one-fifth the British level between 1680 and 1820.[8] In 1701, for instance, labour that cost one shilling in England cost two pence in India.[9] This advantage in wage cost gave Indian producers a competitive edge as long as labour productivity remained unchanged in the two countries. Technical skills were important both in the processing of raw materials and in weaving. These skills were passed down the generations within the family and tended to remain within caste groups. However, the technology used was labour intensive.

The cost of fixed capital has been estimated to be between one to three month's wages.[10] Habib argues that until the invention of the flying shuttle, there was no scope for any development of the ordinary loom used for the simple weave.[11] Consequently, labour productivity remained unaltered. However, innovations took place through the centuries through the introduction of patterned and draw looms which allowed weaving of designs, and through new materials and methods for dyeing and printing cloth.[12] Chaudhuri sees the constraints on increase in labour productivity through the development of craft skills and specialization of labour in eighteenth-century textile manufacturing.[13]

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[7] Chaudhuri, *Trading World,* Appendix 5, Tables 20–22.

[8] Stephen N. Broadberry and Bishnupriya Gupta, "The Early Modern Great Divergence: Wages, Prices and Economic Development in Europe and Asia, 1500–1800", *Economic History Review*, 59, 1 (2006), pp. 2–31.

[9] J. R. MacCullock (ed.), *Early English Tracts on Commerce* (Cambridge: Cambridge University Press, 1954), p. 549.

[10] This is observed for South India by Parthasarathi, *Transition to a Colonial Economy*, p. 12, and for Bengal by Mitra, *Cotton Weavers of Bengal*, p. 174.

[11] Irfan Habib, "The Technology and Economy of Mughal India", *Indian Economic and Social History Review*, 17 (1980), pp. 1–34.

[12] Vijaya Ramaswamy, *Textiles and Weavers in Medieval South India* (Delhi: Oxford University Press, 1985), pp. 126–27.

[13] Chaudhuri, *Trading World*, pp. 273–75.

The export trade of Indian cotton textiles has been estimated to be 10 percent of total output of the subcontinent.[14] Although relatively small, the export trade had a significant effect on the economy of the producing regions. There was a qualitative difference between production for local markets and inter-regional/international markets. Production for local markets was dispersed across the country. Production for export was concentrated in four major centres in Gujarat, Bengal, Madras and Punjab.[15] Local fairs met the needs of intra regional exchange, but long-distance trade led to greater specialization and the growth of weaving centres. The concentration of textile production in certain regions can only partly be explained by availability of hereditary craft skills and particular raw materials. Centres of textile production also developed in response to demand from the export market.

The main source of external trade moved from the West to the South and finally to Bengal in the East in the course of the seventeenth and eighteenth centuries. Surat in western India was the centre of the early textile trade. The Coromandel Coast in southern India became important from the middle of the seventeenth century as the European companies established trading posts along the coast. The share of this region in the EIC trade declined after 1690 as political conflict disrupted supply. As trade recovered in the early eighteenth century, Bengal rose in importance in the export trade to Europe and remained the main centre until the turn of the century. This region bore the brunt of the decline in India's share of the world market. The industry in this region enjoyed the advantage of skilled labour, cheap agricultural products and cheap transport along waterways. Weavers in many instances combined textile production with agricultural work. Spinning as in other parts of India was a part-time occupation done by women across different castes.[16]

Different social groups were involved in local and long-distance trade. Indian merchants were involved in the long-distance trade to South East Asia, Central Asia and Africa, but did not have a presence in the European trade except as middlemen. The latter was dominated by

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[14] See Sinnappah Arasaratnam, *Merchants, Companies and Commerce on the Coromandel Coast, 1650–1740* (Delhi: Oxford University Press, 1986) for South India; and Prakash, *Dutch East India Company* for Bengal.

[15] Chaudhuri, *Trading World*, passim.

[16] Hossain, *Company Weavers of Bengal*, p. 47.

the European companies, in particular, the Dutch and the English trading companies. The EIC carried the bulk of the textile trade to Europe. There was intense competition in the product market and the Dutch were willing to pay higher prices in many instances.[17] Mitra suggests that the European rivals were prepared to pay 20–30 percent more for the same product.[18] The Dutch were involved in the Asian trade and the officials were instructed to give priority to the Asian market over the European one.[19] Hossain documents the complex market structure in Bengal in the middle of the eighteenth century.[20] There were many buyers in the market: European trading companies, Asian merchants and private traders. The employees of the EIC undertook their own trade and sold to different European companies. In one instance of sales from the Dhaka *arangs* in 1786 only 13 percent was accounted for by investments of the EIC. Individual merchants (Indians and foreigners as well as the servants of the Company) accounted for the bulk of the sales.[21] This indicates that the EIC did not by any means enjoy a monopoly in the market. However, this interpretation appears to be inconsistent with trends in European markets. Prices of Indian goods in different European markets stayed roughly constant or declined. There was competition in European markets among the European companies as documented by Chaudhuri. Prices charged by different Companies could not have been very different in the same market.

The textile production of India consisted of hundreds of varieties of cloth. Different products were sold in different markets. A great variety of textiles were exported from the different regions in India. These included medium coarse varieties such as longcloth and calicos and also fine varieties such as muslins.[22] The Asian markets were concerned about the colours and paid little attention to the length and width of the woven cloth. By the early seventeenth century, textile trade with South East Asia was well established. The Europeans wanted standardization. Adjustments were made to the looms to make this possible. If it is possible to make some generalization, then we can state

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[17] See in particular Prakash, *Dutch East India Company*; Hossain, *Company Weavers of Bengal*; Mukund, *Trading World of the Tamil Merchant*.
[18] Mitra, *Cotton Weavers of Bengal*, p. 62.
[19] Arasaratnam, *Merchants, Companies and Commerce*, pp. 179–80.
[20] Hossain, *Company Weavers of Bengal*, ch. 3.
[21] Hossain, *Company Weavers of Bengal*, p. 75.
[22] See Giorgio Riello's paper in this volume.

Table 10.1. Percentage shares of different categories of textiles traded by the Dutch and English East India Companies, 1730–59

	Dutch East India Company			English East India Company		
	1730–39	1740–49	1750–59	1730–39	1740–49	1750–59
Ordinary Calico	46	40	56	46	31	31
Fine calico	15	20	13	20	22	19
Muslin	20	26	18	24	34	39
Silk	10	10	11	3	5	6
Thousands of pieces per year on average	278.3	275.2	427.1	760.2	763.5	565.9

Source: Sushil Chaudhury *From Prosperity to Decline: Eighteenth Century Bengal* (New Delhi: Manohar, 1995), table 7.3, p. 184; K. N. Chaudhuri, *The Trading World of Asia and the English East India Company, 1660–1760* (Cambridge: Cambridge University Press, 1978), pp. 547–48; Femme S. Gaastra, "The Textile Trade of the VOC: The Dutch Response to the English Challenge", *South Asia*, 19, Special Issue (1996), pp. 85–95.

the following: European demand was concentrated on relatively better quality goods. Other markets absorbed cheaper and lower quality products. Table 10.1 shows the trade share of the English and the Dutch companies in the textile trade in Bengal. In eighteenth century Bengal, the share of the English Company continued to rise at the expense of the Dutch. While Muslins became more important than Calico in the English trade, the Dutch trade showed the opposite trend.

Price and Quantity Trends in Different Markets

Chaudhuri documents the development of the market for Indian cottons in Europe and beyond.[23] The domination of the English Company was challenged in Europe by the Dutch and by the 1670s there was keen competition between the two in the European markets, making demand sensitive to price.[24] Chaudhuri estimates the price elasticity of demand in the different regions and suggests that price was an important determinant of demand.[25] Tables 10.2 show the rise in exports

[23] Chaudhuri, *Trading World*, ch. 12.
[24] Ibid, pp. 291–92.
[25] Ibid., p. 283.

Table 10.2a. Indian exports of textiles to Europe by the VOC and EIC, 1665–1759 (in thousand pieces per year)

	By the EIC from				By the VOC
	Bombay	Madras	Bengal	Total EIC	
1665–69	96	37	7	140	127
1670–74	295	169	47	511	258
1675–79	310	193	67	570	127
1680–84	452	408	108	968	283
1685–89	201	244	169	614	316
1690–94	90	23	59	172	157
1695–99	149	108	131	388	365
1700–04	296	105	197	598	311
1705–09	34	99	71	204	295
1710–14	165	150	260	575	373
1715–19	82	200	252	534	436
1720–24	185	269	342	796	476
1725–29	120	142	559	821	399
1730–34	57	87	584	728	241
1735–39	67	137	581	785	316
1740–44	95	98	619	812	288
1745–49	60	144	480	684	262
1750–54	55	170	407	632	533
1755–59	56	106	308	470	321

Sources: 1665–1759: K. N. Chaudhuri, *The Trading World of Asia and the English East India Company, 1660–1760* (Cambridge: Cambridge University Press, 1978), pp. 540–45; Michel Morineau, "The Indian Challenge: Seventeenth and Eighteenth Centuries", in Chaudhury, Sushil and Michel Morineau (eds.), *Merchants, Companies and Trade: Europe and Asia in the Early Modern Era* (Cambridge: Cambridge University Press, 1999), pp. 273–74. 1771–94.

to Europe from the middle of the seventeenth century. The trend was punctuated by sharp downturns due to wars and political upheavals. The downturn in the early eighteenth century reflects the introduction of protection in Great Britain, but trade bounced back as protection was circumvented. The regional balance changed over time. Bengal emerged as the primary exporter in the eighteenth century: export volumes showed fluctuations, but did not show a sustained decline until the 1790s, when there was a sharp decline in Indian exports.

Chaudhuri's data on unit price from the three major producing centres show a slight upward trend in all regions from 1660 to 1750 (Fig. 10.1). Thereafter, prices stayed stable for a variety of textiles.

Table 10.2b. Indian exports of cotton textiles, 1790–1859 (thousand pieces per year)

	Exports to Britain		Total exports	
	Bengal	Total India	Bengal	Total India
1790–99	787	2,200		4,500
1800–09	1,331	1,824		
1810–19		1,358		
1820–29		431		
1830–39	6	271	478	3,000
1840–49		304		2,606
1850–59				2,279

Source: Michael J. Twomey, "Employment in Nineteenth Century Indian Textiles", *Explorations in Economic History*, 20 (1983), pp. 42–44.

Parthasarathis's data on longcloth prices from Cuddalore in the Coromandel from 1698 to 1790 show a similar trend: they rose until the first years of the 1730s and thereafter they remained stationary (Fig. 10.2).

In the Coromnadel, the trade in woven piece goods included three main varieties of cotton cloth: longcloth, salampores and moris. Figure 10.3 shows the price trend in the first two varieties. Prices show a slight upward trend up to 1705, there after staying relatively flat. Mukund argues that European demand increased sharply after 1710 and pushed up prices. There were two distinct periods of price rise: 1696 to 1702, followed by a decline and another from 1732 to 1750, similar to that observed by Chaudhuri.

There are no long term price series for Bengal. What we can find are short term series of prices from different regions and for specific products which makes systematic comparison difficult. Sushil Chaudhury finds that the prices of finer varieties of textiles tended to decline between 1730 and 1750, where as prices of coarse varieties rose. This is attributed partly to the Maratha invasions, which affected mostly those regions that produced coarse cloth, and partly to greater competition in the market for coarse textiles. Hossain's data for a later period also suggests little change in the prices of several varieties of cloth (Fig. 10.4). This difference in the price trends of coarse and fine varieties is an important aspect of the textile market and suggests that the market for fine textiles was mainly European; whereas private traders bought more coarse goods and created more competition in this market.

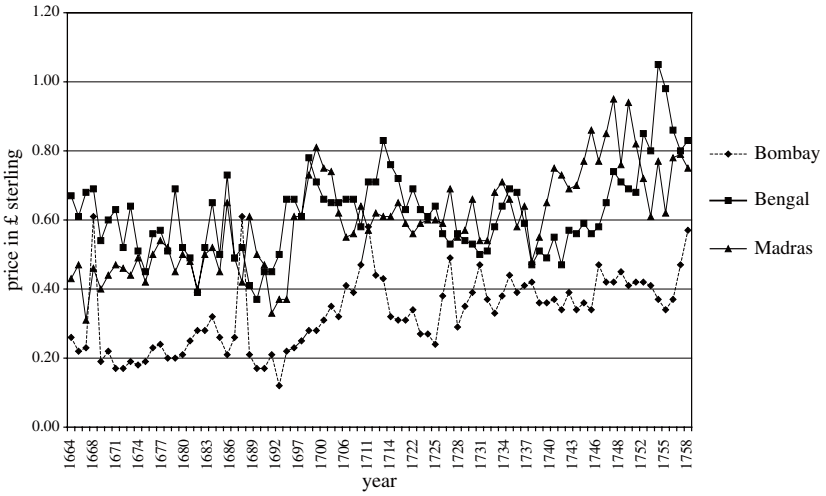

Fig. 10.1. Regional textile prices, 1664–1764. *Source*: K. N. Chaudhuri, *The Trading World of Asia and the English East India Company 1660–1760* (Cambridge: Cambridge University Press, 1978), Appendix 5, tables C 20–22.

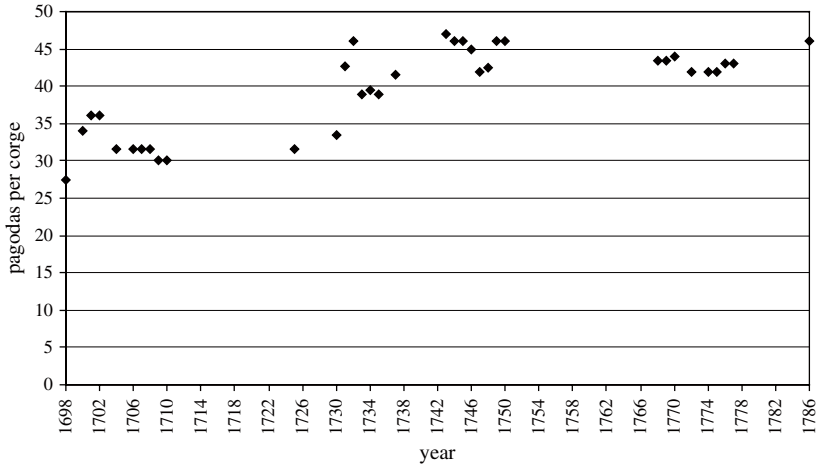

Fig. 10.2. Prices of longcloth at Cuddalore, 1698–1786. *Source*: Prasannan Parthasarathi, *The Transition to a Colonial Economy: Weavers, Merchants and Kings in South India 1720–1800* (Cambridge: Cambridge University Press, 2001), p. 40.

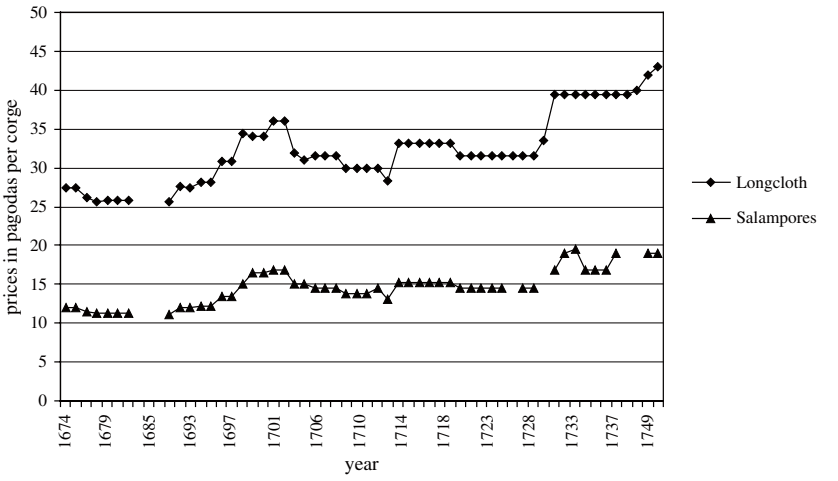

Fig. 10.3. Textile prices in Coromandel, 1674–1752. *Source*: Kanakalatha Mukund, *The Trading World of the Tamil Merchant: Evolution of Merchant Capitalism in the Coromandel* (Hyderabad: Orient Longman, 1999), pp. 81–2.

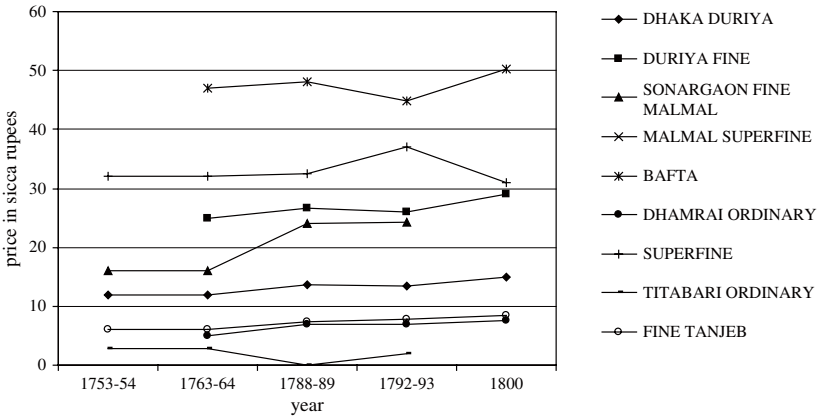

Fig. 10.4. Prices of different varieties of textiles in Bengal, 1753–1800. *Source*: Hameeda Hossain, *The Company Weavers of Bengal: The East India Company and the Organization of Textile Production in Bengal 1750–1813* (Delhi: Oxford University Press, 1988), pp. 53–4.

Weavers, Merchants and the Company

The European companies bought textile goods through a network of intermediaries. Commissioning of cloth by a middleman merchant on behalf of the company was a common practice. The weavers undertook production on the basis of advances made by merchants as done in Europe. The significant difference with the European putting-out-system was that the advance consisted of cash and not raw materials. The system of cash advance gave specific characteristics to the production of textiles. It allowed the weavers to purchase raw materials for production and food for the family. It also allowed the weaver to juggle sales between the English company and alternative buyers. The system of purchase therefore conferred some advantage to the weaver.

The cash advance from the company was based on contracts that specified what was to be supplied and when. Typically the contract was made a year before the delivery date. Contracts between the weaver and the merchant decided on the advance and the type and price of products and the date of delivery. The price of cloth was determined by a process of bargaining between the weaver and the merchant. Potential for dispute arose when the intermediary collected the product. Disputes over price and quality were endemic. By suggesting that the quality had not met the required standard, the Company intermediary could pay a lower price. Goods were confiscated if they did not meet the quality standard. But there was also the threat that the Company would not be able to fulfil its export target. Despite the problem of being locked into a system of advances it offered interest free credit when the going rate of interest in urban areas was 12–15 percent and 7–8 percent in rural areas.[26] This was potentially another advantage to the weaver.

There is little indication that there was a monopsony in the market. Instead there was fierce competition between the European companies, Asian merchants and local trade. Cash advances were paid to weavers through the intermediaries. The weaver was cash constrained and the cash advance provided a loan at a lower than the market rate of interest, which could be used not just to buy raw materials, but also food and other necessities. It also allowed the weaver to produce for other buyers before meeting the requirement of the European companies. Contracts normally established a rather long delivery date that allowed weavers

[26] Mitra, *Cotton Weavers of Bengal*, p. 61.

flexibility in the timing of production. Moreover, since the European market demanded superior quality cloth, anything which failed the quality test could be sold in other markets.

Yarn purchases gave control over choice of raw materials. When the price of yarn rose, the weaver could buy lower quality yarn to maintain their income or use less yarn in the weave, thereby affecting the quality of the output. The expense on thread was three quarters of the total cost for finer varieties of cloth and two thirds for cloth sold in local markets.[27] If the product did not satisfy the agents of the company, the cloth could be sold to other buyers. The cash advance was important for the weavers who did not have enough working capital to buy thread and the system of contracts provided a certain flexibility and an advantage to the weavers.

Parthasarathi argues in the context of the trade in the Coromandel that the weavers had a stronger position in this bargaining process before 1750 so that a rise in the cost of yarn and food was passed on to the merchants, keeping the weavers' shares fixed. The way in which the contracts affected procurement has been documented by Mukund. When cloth price increases did not keep pace with increases in the price of raw cotton and food grains, there was a shortage of supply of cloth to the company. Often the merchants agreed to supply only half of what the company demanded. The weavers' response to the low price was to weave thinner cloth using less yarn leading to complaints from the Company. There was a downturn in cloth procurement after 1684. The contracted quantity was only 54 percent of the previous year. In 1692 the English increased the price by 8 percent and by a further 10 percent in 1694. The following year marked an all time low in procurement: the Company contracted only 15 percent of its requirements.[28]

Chaudhuri documents a similar bargaining advantage enjoyed by the weavers in Gujarat and Madras in the late seventeenth century. The rise in input prices caused a decline in quality and the rejected cloth was sold to alternative buyers. Chaudhuri argues that since the cloth demanded by the EIC had little demand elsewhere, the weavers protected themselves by producing cheaper and inferior cloth, which could be sold in other markets if these were rejected by the Company.[29]

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[27] Francis Buchanan, *An Account of the District of Purnea in 1809–10* (Patna: The Bihar and Orissa Research Society, 1928), p. 542.

[28] Mukund, *Trading World of the Tamil Merchant*, pp. 93–4.

[29] Chaudhuri, *Trading World*, pp. 258–59.

Evidence from different regions suggests that it was not unusual for weavers to renege on contracts and to sell to the highest bidder. Weavers could sell coarser qualities of cloth more easily to different buyers instead of just finer varieties, and during the latter part of the seventeenth and all through the eighteenth century they sold their output to buyers other than the East India Company.

Parthasarathi argues that the bargaining advantage enjoyed by the weavers in the early eighteenth century, disappeared as the EIC gained economic and political power.[30] Weavers' distress in other parts of India has also been seen to coincide with the political domination of the Company.[31] After 1770, the EIC brought in a series of legal sanctions to make the contracts more binding. These in effect reduced the bargaining power of the weaver and strengthened the power of the company. For delays in production, incomplete orders and clandestine sales, the weavers could be prosecuted and fined. Towards the close of the eighteenth century, as cotton prices rose in Bengal, weavers often lacked adequate resources to buy yarn and consequently economized on this input, producing inferior quality cloth. These goods failed to meet the company's quality standard. At the time of sorting, the cloth was given a lower grade and a lower price and some were rejected. The share of "ferreted cloth", as these were known, increased. The weavers found it increasingly difficult to sell this in another market due to the legal restriction introduced by the company on such sales. Moreover, the rejects had to be replaced, which led to further indebtedness.

There is much evidence that suggest that weavers received harsh treatment in the hands of the Company agents.[32] However, at the same time, some of the bargaining advantages enjoyed by weavers, which Parthasarathi discusses in the context of early eighteenth century Coromandel, continued to be a feature of the late eighteenth century Bengal. What was missing was the buoyancy of the European demand. The response of the weavers documented for southern India in the late seventeenth and early eighteenth century was also seen in Bengal in the late eighteenth century. The rising prices of food and raw material led to supply shortfalls. The increasing problems in fulfilling company's orders in Bengal can be documented for the 1770s. Despite the legal

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[30] Parthasarathi, *Transition to a Colonial Economy,* pp. 83–93.

[31] Hossain, *Company Weavers of Bengal*, ch. 4; Mitra, *Cotton Weavers of Bengal*, pp. 132–50.

[32] Ibid.

backing and confiscations of products delivered by the weavers and the use of force in many instances, the company found it difficult to meet its export target. This was particularly true for finer varieties of cloth. The procurement problems dominate the correspondence between the Company agents in Bengal and the higher authorities. There was increasing dissatisfaction with the *gumasthas* (an intermediary) for failing to meet procurement targets. The Company resident withheld further advances until the shortfalls or confiscated orders could be replaced.

The gumashtas, on the other hand, complained of their inability to procure goods from the weavers unless the advances could be made. In January 1776, the persons in charge at different arangs wrote to the Residents in Patna, Dacca, Cossimbazar and elsewhere that if goods from a subordinate factory were found to be unsatisfactory, the resident by whom they were provided should pay for the difference at which they were rated and their actual value.[33] The contracts with the chief at Patna specified a penalty of 10 percent over and above the money advanced.[34] In many instances money for further investment was raised by the sale of confiscated goods. There is evidence for seventeenth-century Surat that a penalty of 9 percent was specified for non-fulfilment of a contract, though such a penalty was rarely imposed.[35]

One case reported in May 1776 refers to the purchase of thread with the advance received for 10,800 pieces from the gumashta. As the price of thread was high, the advance was not adequate to pay for the appropriate quantity and the quality of the cloth failed to meet the required standard. The weavers claimed that the money was inadequate to purchase the right amount of yarn. The local resident placed the blame on the agent for his failure to ensure quality. 600 pieces met the quality standard and 900 were rejected.[36]

The Board of Trade frequently discussed the inferior quality of the cloth delivered and the consequent effect on the colours on the woven cloth.[37] Table 10.3 reports on the loss made by the company on the sale of ferreted cloth. The Board stated the recovery of outstanding

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[33] West Bengal State Archives (thereafter WBSA), "Letter to Board of Trade", 2 Jan. 1776.

[34] WBSA, "Letter to P. M. Dacres", 17 Jan. 1776.

[35] WBSA, "Public Department Diary of the Bombay Government", No. 24B of 1751, pp. 238–467.

[36] WBSA, Board of Trade, Fort William, 14 May 1776.

[37] WBSA, Board of Trade, Fort William, 17 May 1776.

balances of 1774/75 and 1775/76 as the primary objective. Advances were to be denied to weavers who had not settled their balances. Resolving disputes in the legal system was also mentioned.[38] However, further advances continued to be made in response to the demand by weavers that they would not be able to supply the contracted quantity. During the same period, weavers from two arangs returned the advances paid to them and refused to work for the company.[39]

The chief of Luckipore wrote to the Board of Trade in April of 1776 that the prices paid by the Company were below the "real cost of cloth to the weavers" and the loss made on sales to the Company were made up by clandestine sales to private traders. He warned about the problems with procurement unless the weavers were paid the right price. The chief of Dacca, on the other hand, had a much less compassionate view and argued that the weavers made use of the advance paid by the Company to produce cloth and then sold to the best bidder. When the

Table 10.3. A comparative statement of the profit and loss on the following goods sold at outcry, the 15 May 1776 (in rupees)

	Pieces	Prime cost	Outcry price	Profit	Loss
Baflaes Tugdea	240	797.7.3	731.4		66.3.3
D.Luckypore	480	1794.4	1725		69.4
D.Fine	1200	5869.15.3	5298.12		571.3.3
D.Callipatties	960	5271.7.6	4477.8		793.15.6
Cossaes	400	3275.8	2690.10		584.14
Ditto	100	922	737.8		184.8
Ditto	100 ms.	666	715.10	40.10	-
Raw silk	39.4.4	19,343.10.3	8630.11.3		10,712.15
Ditto	3.8.8	1336.6.3	739.4		597.2.3
Ditto	38.39.4	18696.15.6	8,790.12.3		9,906.3.3
Charges		57,943.10	34,536.15.6	40.10	23,486.4.6
Wrappers & wax cloths			172.12		49.10 deduct
Total			34.709.11.6		23436.10.6

Source: WBSA, Board of Trade, 21 May 1776.

[38] WBSA, Board of Trade, Fort William, 7 June 1776.
[39] WBSA, Board of Trade, Fort William, 14 May 1776.

weavers were put under pressure to deliver the goods or when they were in need of further monetary advances, they hastily produced cloth of inferior quality with several defects. Upon delivery these goods were rejected by the Company for not having met the quality standard specified in the contract. The spot or 'ready money purchases' as they were known, were seen to be the only option left to procure the right quality cloth.[40] However, with this the Company could never be sure of meeting its procurement target and stood to loose any control it had on the weavers. The existing system of contracts allowed the Company to use substantial threats against the weavers as output was confiscated and sold to local buyers. The Company appropriated the sum of the sale and the weaver continued to remain indebted to the Company and worked to pay off the loan.[41] Table 10.3 shows the losses that were sustained by the Company on these sales. Mukund discusses a similar phenomenon for the Coromandel.[42] Archival evidence from Surat suggests a similar response by the weavers.[43] The response of the weavers to changes in the price of inputs was similar even when the political context differed. There is no evidence to suggest that monopoly in the market for textiles and the political power of the EIC brought about crucial changes.

The textile market after 1760 was characterized by the shortfalls in supply to the EIC. The story of weavers' impoverishment is one of increasing debt to the company, harassment in the hands of the agents and increased legal penalties as the EIC gained political power in Bengal. Although the balance of power titled heavily in their favour, the agents of the company failed to meet the export targets. This puzzle can be explained if we look at the market for textiles in Britain.

Indian Textiles and the World Market

The economic distress of the Indian weavers coincided with the stability of textile prices in the British market. It also coincided with the rise in prices of agricultural products in the Indian market. These included the price of raw cotton and food. As the cost of production rose the weaver's profit margin became increasingly smaller. Yarn accounted for

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[40] WBSA, Board of Trade, Fort William, 10 May 1776

[41] WBSA, Board of Trade, Fort William, 1 April 1776.

[42] Mukund, *Trading World of the Tamil Merchant*, p. 93.

[43] WBSA, "Public Department Diary of the Bombay Government, Consultation", 1751, various letters.

approximately 70 percent of the cost of production. Therefore an agricultural crisis which might increase the cost of cotton had profound effects on the cost of production. At the same time an agricultural shortage also increased food prices and the weavers demanded higher prices for the cloth they supplied. The prices offered by the company showed little upward trend. Table 10.4 shows the gap between the weaver's asking price and the Company's offer price. Between the 1760s and 1790 the offer price increased by circa 50 percent for fine cloth varieties, but the coarser qualities showed no price change. The price acceptable to the weaver for fine cloth had doubled, and for coarser varieties it was 50 percent higher. While the Company was prepared to increase the offer price for finer textiles, it was reluctant to do so for inferior quality cloth as the price gap in different varieties suggest. This reflects the demand and supply situation in the market. The imbalance between demand and supply was much more significant in the market for fine cloth. The main shortfall was in fine quality textiles.

The gap between the Company's demand price and the weavers' asking price reflected the ceiling imposed by changes in the British market. Weavers adopted the same defense mechanism as earlier in the century: they economized on the use of yarn and produced inferior quality cloth which could be sold to other buyers in the local market. A compelling explanation of the weavers' response is that there was more competition in coarse and medium varieties due to private trade. This also explains why the supply shortfall was primarily in the market for fine quality cloth, where demand was mostly from the European markets.

Table 10.4. Difference in company's price and the price acceptable to the weaver (in rupees)

Type of good	Average price (1764–66)	Offer price in 1790	Price acceptable to the weaver	Price gap in percentage
Midling Malmal	9.2.6	9.13.0	13.8.0	40
Fine Malmal	12.7.11	16.0.0	18.0.0	12
Superfine Malmal	17.8.5	28.4.0	35.0.0	25

Source: Hameeda Hossain, *The Company Weavers of Bengal: The East India Company and the Organization of Textile Production in Bengal 1750–1813* (Delhi: Oxford University Press, 1988), Table 2.4, p. 55.

Hossain argues that it is not necessarily true that aggregate output declined. It is likely that weavers switched to private trade. Weavers, particularly of coarse varieties of cloth, produced for both export and home markets. They used advances from the Company to produce for domestic demand that once fulfilled – sometimes surreptitiously – provided funds to complete Company's orders. A differential pattern of production developed: the first part of the season was spent on part of the Company's orders and part of the time on the cheaper warp that was laid for private trade. Money earned from the sale to private traders was then spent on completing the Company's orders.[44] Mitra argues that the export market for Indian goods was shrinking as a consequence of changes in demand in Britain with the onset of the industrial revolution and the technological changes in cotton textile production.[45]

There is evidence of competition in the textile market, although it is difficult to find reliable quantitative estimates. The changing market shares of the Dutch Company and the English Company have been documented for Bengal.[46] It has been suggested that only one third of the estimated output was under the English EIC's control. The prices offered by the company were invariably lower than that offered by its rivals. The price difference between private traders and the EIC on comparable varieties of cloth, though not the same, ranged from 4 to 83 percent.[47]

If competition in this market was so intense, then clearly the Asian merchants had an important role. However, in the absence of quantitative estimates of Asian trade, more precise statements are difficult to make. Chaudhury presents some patchy information from specific centres. One estimate puts the volume of textiles exports from Dhaka in 1747 by Asian merchants (including Armenians) at two thirds, and by European merchants (including private trade) at one third of the total. Dutch sources estimate the investment by non Dutch merchants (Asians and Europeans) to be twice as high as the share of the English Company. Chaudhury's estimates are in line with these figures.[48]

Despite the lack of precise estimates of the European and the intra-Asian trade, all the evidence from the competition in the textile market

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[44] Hossain, *Company Weavers of Bengal*, p. 59.
[45] Mitra, *Cotton Weavers of Bengal*, pp. 3–4. However, Mitra does not discuss how the market for textiles was changing.
[46] Chaudhury, *From Prosperity to Decline*, pp. 188–95.
[47] Mitra, *Cotton Weavers of Bengal*, pp. 3–4.
[48] Chaudhury, *From Prosperity to Decline*, p. 210.

indicates a significant presence of alternative buyers. Qualitative estimates from the correspondence of the company officials to the court of directors indicate a high volume of intra-Asian trade carried out by Asian merchants. Therefore the idea of a monopsonistic market in textiles is not a realistic one.

An Alternative Framework of Analysis

Why did the weavers face a squeeze in earnings in the EIC trade? We have already shown the trends in the prices of Indian exports from different regions. Now let us consider the prices at which they were sold in the European market. Prices in London and Amsterdam showed similar trends over the eighteenth century (Figs 10.5 and 10.6). Prices fetched by the EIC's textiles in London declined both in nominal and real terms. Calico prices in Amsterdam show a similar picture. The price trends reflect the technological changes and the rising labour productivity in Britain.

What about the cost of production in the Indian textile industry? Here the picture suggests an increase after 1760. Agricultural crises raised the prices of cotton and food. The weavers demanded higher prices for the final product. However, given the general price levels in international markets (especially the European ones), it is not surprising that the procurement prices in India did not compensate for the rising cost of production. Although there is little evidence on the price of yarn, we can take the price of cotton textiles as an indicator. Evidence from the Coromandel Coast suggests that the price of raw cotton was substantially higher during the first half of the eighteenth century than half a century earlier.[49] This coincided with the periods of supply shortfall in the Coromandel. Mukund's econometric estimates show that the rise in textile prices cannot be totally explained by changes in food or raw cotton prices, even if food prices had a great impact on the cotton prices. Demand factors appear more important.

There is evidence of a rise in cotton prices in all regions of Bengal after the 1740s. In Dhaka the price of cotton increased from Rs. 2 per maund in 1738 to Rs. 10 in 1752, to Rs. 24 in 1762. In Lakhipore cotton prices increased 25 percent between 1788 and 1789. Some varieties of cotton became 50–100 percent more expensive. Such a rise in prices

[49] Mukund, *Trading World of the Tamil Merchant*, p. 84.

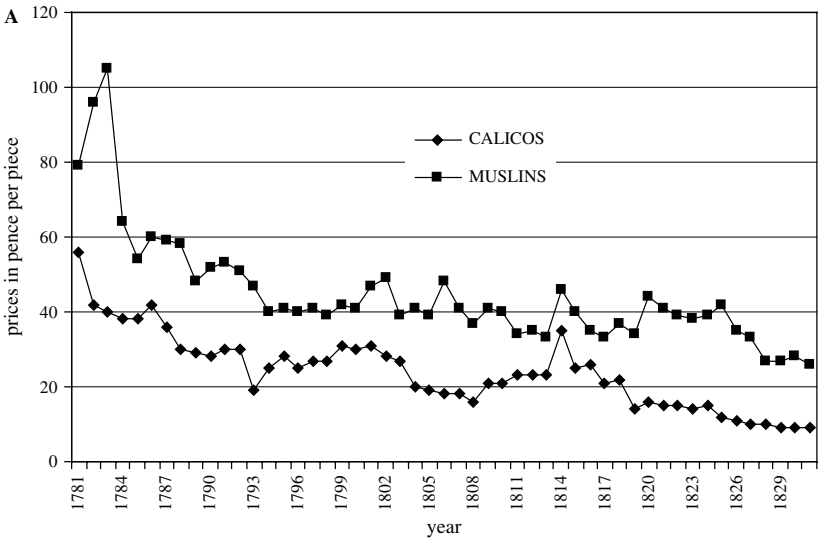


Fig. 10.5a. Current textile prices, 1781–1832. *Source*: Javier Cuenca Esteban, "British Textile Prices, 1770–1831: A Comment on the Crafts-Harley View of the Industrial Revolution", *Economic History Review*, 46, 1 (1994), pp. 66–105.

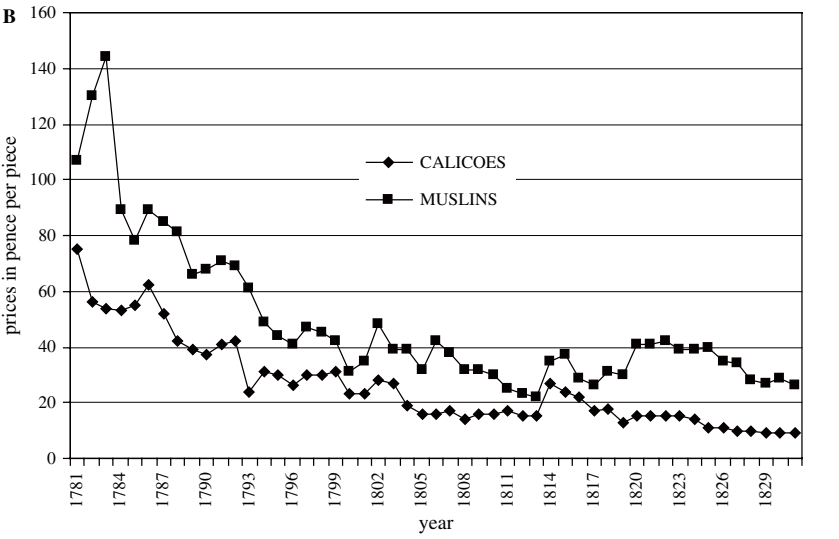


Fig. 10.5b. Deflated textile prices, 1781–1832. *Source*: Javier Cuenca Esteban, "British Textile Prices, 1770–1831: A Comment on the Crafts-Harley View of the Industrial Revolution", *Economic History Review*, 46, 1 (1994), pp. 66–105.

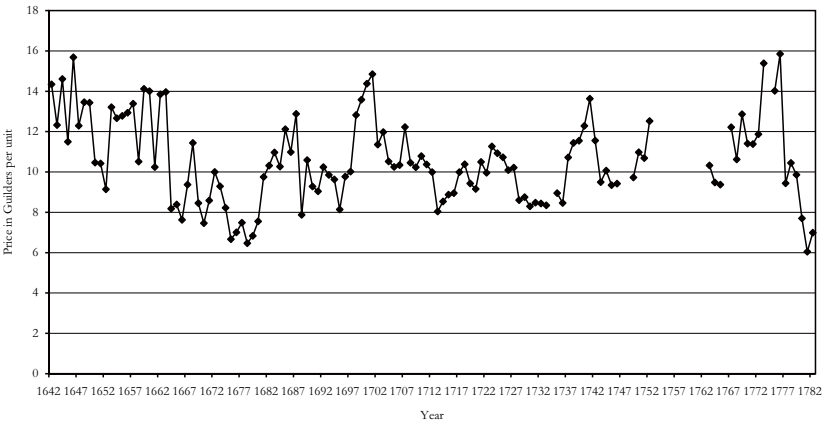
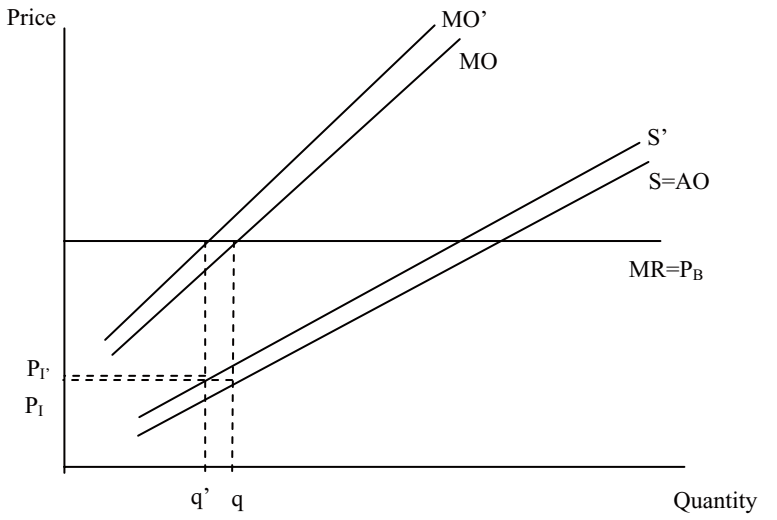


Fig. 10.6. Calico Prices in Amsterdam, 1642–1783. *Source*: Data made available by J.L. van Zanden from Dutch sources.

was caused partly by political conflicts and partly by weather conditions. The price of rice increased by 30 percent between 1738 and 1751. Similarly the price of cleaned cotton doubled in the last few years of the century, confirming a trend that was already visible in the 1750s. High cotton prices reflected shortages of the raw material. Bengal, for instance, produced just over 7 million pounds of cotton and had to import over 43 million. Periods of high cotton prices clearly coincided with periods of procurement problems. Towards the end of the seventeenth century in the Coromandel and after the mid-eighteenth century in Bengal, the EIC frequently failed to meet its procurement target.

By analyzing the demand and supply of cotton textiles within a competitive international product market, we can explain the shortfall in output. The EIC can be seen as facing a perfectly elastic demand curve, given by the British price (P_B) (Fig. 10.7). This represents the EIC's marginal revenue curve (MR). The supply curve (S) of Indian textiles is upward sloping. Let us first consider a market with many buyers. Now consider the situation where the supply curve in an Indian region shifts upwards because of an increase in local costs, while costs and prices in Britain are unaffected. There are two likely reasons why the supply curve may have shifted to the left: first, a rise in the cost of yarn or raw cotton; and second, an increase in the cost of labour. Region-specific movements in raw cotton costs and in labour costs can thus be seen as affecting

A: Monopsony



B: Perfect competition

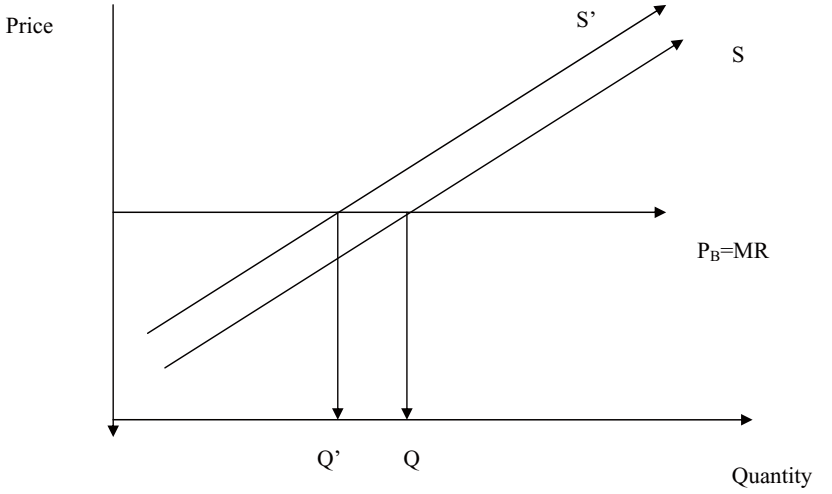


Fig. 10.7A–B. The English East India Company and the market for textiles.

the regional balance of supply. As the supply curve shifts upwards, the new equilibrium will be found at a reduced volume of output.

We can also consider a situation where the EIC enjoyed monopsony power, its marginal outlay curve (MO) lies above the supply curve. The supply curve (S) of Indian textiles is upward sloping, and determines the average outlay (AO) of the EIC. The EIC equates marginal revenue to marginal outlay to determine the quantity of cloth purchased (q), while the price paid to the Indian supplier (P_I) is read off the supply curve. The new supply curve is S' and the new marginal outlay curve is MO'. The response of the EIC is to raise the procurement price to P_I', but by less than the shift in supply resulting from the cost increase. Hence the quantity procured falls from q to q' (Fig. 10.7).

Note also that the framework can be adapted to deal with oligopsonistic competition between the EIC and the VOC, with the two companies having different strengths in different regions of India. Even with cotton cloth fetching similar prices in the Netherlands and Britain, relative procurement prices would be expected to vary inversely with the extent of regional market dominance. Hence the EIC would be expected to offer higher procurement prices in regions of Dutch dominance and vice versa. This would be consistent with Mukund's claim that the Dutch offered 10 per cent higher prices than the British in the Coromandel Coast region during 1672–83.[50]

Therefore in both scenarios, there would be a procurement failure if the cost of production increased. The essential condition here is that the EIC was a price taker in the international market. Prices in this market reflected gains in labour productivity in Britain. Therefore bringing in the world market resolves the puzzle of procurement failure in the market for textiles despite the political domination of the EIC.

Conclusion

This paper has offered an alternative framework for analyzing the decline of the Indian textile trade. The existing literature is rich in detail and analyzes the rise and fall of the textile trade in different regions in India. By bringing the developments in the international market for textiles

[50] Ibid., p. 93.

and the industrial revolution in Britain into the story, we can get a new perspective on the changes in the textile market. The textile trade in India was characterized by competition among many buyers that included European companies as well as local traders. Consequently the political control exercised by the EIC could only lead to limited economic control. The decline in this trade can be best understood by bringing the developments in the international textile market into the story.