

Chapter - III

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Techno-economic Environment for the Industry: A Comparative Analysis between Great Britain and Bengal

The actual date of cotton-spinning and weaving in Bengal cannot be arrived at, though there is little doubt about its antiquity. During the early trade of Europe with India, the calicoes and muslins of Bengal were well accepted by the people of the different parts of the World. Bengal textile manufactures of several varieties flooded the European market in the seventeenth and eighteenth centuries, reaching its peak in the mid eighteenth century. The English cotton manufacturers were the main competitors of Bengal in the World market. From the beginning of the eighteenth century, there were two principal production centers of cotton goods in the Global context, with Bengal at one end and England at the other. The cotton textile industry of Bengal was running under severe competition with the cotton textile industry of England as the latter progressed rapidly due to Industrial Revolution or technological innovation and the English industry could win over Bengal's competitive edge by the first half of the eighteenth century. This chapter seeks to compare the different technological and economic aspects of the cotton textile industry of the two production centers of the World and identify the factor(s) behind the triumph of the English industry over the Bengal industry in the World Market.

We have incorporated five sections. Section I compares the technology of production in both countries during 1757 – 1857. Section II compares the labour cost of production between two countries in the said periods. Section III compares the position of the two production centres in respect of availability of raw materials. In Section IV, the economic environment of the two countries have been discussed and compared. Section V is a concluding part.

I

The technology of production of Bengal cotton textile industry was quite simple and the process of production was very crude. The stages of production as described by Watson⁷⁰ are as follows.

Cultivation and Spinning of Cotton:

Cultivation and spinning of cotton were part time jobs like any other domestic chore. Cultivators specially the female members of the family engaged themselves in these works as a part of their household duties. Sometimes cultivation became the prime job due to increase in demand for Bengal cotton clothes. Spinning was just like a small scale industry involving part time workers. Female members were engaged in the spinning processes. It is worth mentioning in this regard that weaving of clothes was done mainly by weaver community, but the spinning was done by other groups of people as well. Weavers, 'Jugi', 'Jaluha' and even *Kayastha*, *Baidya*, upper caste like *Brahmin* were found doing spinning work. Female members of the family played the leading role. For the production of thick and coarse threads 'Charka' was used and for thin and fine threads 'Taku'(spindle).

Spinning involved hard work and a large number of people. As the first step, cotton seeds, soil, dust or other filthy materials were to be separated from cotton using of jaws of 'Boal' fish. The jaws with small thickly arranged teeth served the purpose of a comb. Thereafter, the cotton was rolled round a piece of wooden stick. The cotton balls were transformed into threads by either Charka or *Taku*. The threads were rolled round a bamboo stick.

Now we consider the dyeing of the threads. The threads used to be coloured by the indigenous dyers. They used indigo, lac, mulberry, etc. for the purpose. A yellow dye resembling madder which was extracted from the seed of a shrub called the *Cumla*

⁷⁰ Watson, J. F., *The Textile Manufactures and the Costumes of the Peoples of India*, pp. 64-74.

Gooree. Sometime, an indigenous variety of yellow dye was used which was extracted from the fibres of the root of *auch* trees.

Weaving:

Weaving of clothes was the next step after spinning. Some complicated process, hard labour and time consuming factors marked the step of weaving.

Winding and preparing the yarn:

Generally fine threads were used in '*Banai*', and coarse threads in '*Tanai*'. '*Tanai*' threads were kept submerged in water for 3 days. Then the threads were pressed to dry and kept in small bamboo sticks. Weavers used to wind the threads round a big bamboo stick. These sticks rolled with threads were again placed in water. After squeezing, the threads were placed in the sun to dry them completely. Good threads were chosen by workers and kept in charcoal-mixed water for 2 days. These threads were cleaned with the fresh water. After squeezing, the threads were kept in shadowy areas for drying. Again the threads round '*Natai*' were placed in water for a day. The substance called '*mur*' prepared from '*Khai*' and limewater were used for better smoothness of fibres. Threads were dried up in sun-light. Three varieties of dry threads were selected on the basis of thinness. First grade thin fibres were placed in the right side of the '*Tana*', second grade ones on the left hand side and the third grade ones in the middle.

Warping:

Warping was generally done in an open field near residential place of weavers. Two sets of bamboo were inserted transversely into the ground as pillars on two sides for weaving a full length of cloth. The weaver was to traverse slowly from one end to

other end with glass particles in two hands in such a way that the 'mul' would touch the hands. This process was to be repeated carefully time and again. Glass particles were just like a 'natai' with a glass ring. 'mul' of thread came out easily through the said ring.

Tana and Mana Bandha or Applying the reed to the warp:

'Mana' popularly known as 'Chatai' was a structure made of small thin bamboo sticks. Afterwards the threads of 'tana' and 'mana' were placed in hanging position from the roof of the house. Then two persons exchanged the threads of 'tana' and 'mana,' and ultimately the threads of 'tana' were tied to 'mana'.

Narod Bandha or Reeling Yarn from a Reed:

The next step was beaming. One person just behind the weaver placed the 'tana' threads above 'mana'. Another person was to unfold it and place the fine stick within it. This stick was tied to the 'narod' tightly behind the weaving apparatus. For this purpose one 'cane comb' and a 'curved cane stick' were used. After the placing of the 'narod' with 'tana', threads were folded systematically.

Bo Bandha or Forming the Heddles:

'Bo' was a type of string. 'Tana' threads were tied with this 'Bo'. 'Tana' threads rolled around 'narod' were unfolded slowly and placed horizontally. Then a thin piece of bamboo was inserted in between 'tana' thread and 'mana' for making a 'Bo.' After that the weaver made a 'Bo' with two 'tana' threads taken by finger tips. This process continued thoroughly for the entire period.

Weaving:

The last step was weaving. Four bamboo poles were placed in four corners for weaving, another four bamboo sticks were kept horizontally and tied to those bamboo poles. Then the weaver engaged himself/herself with weaving with some instruments, two bamboo treadles and a '*maku*'. Weaver was to sit in an inclined position forwarding the right leg on a mat or '*takta*' beside the specially designed cave-in portion (hole). Then the weaver pressed the treadle with the tip of left leg and subsequently changed the '*maku*' from one hand to another hand with high pressure. Ultimately '*tana*' threads were tied to '*mana*' threads and thus weaving started. The weaver used to work continuously in this way for weaving a full-size cloth.

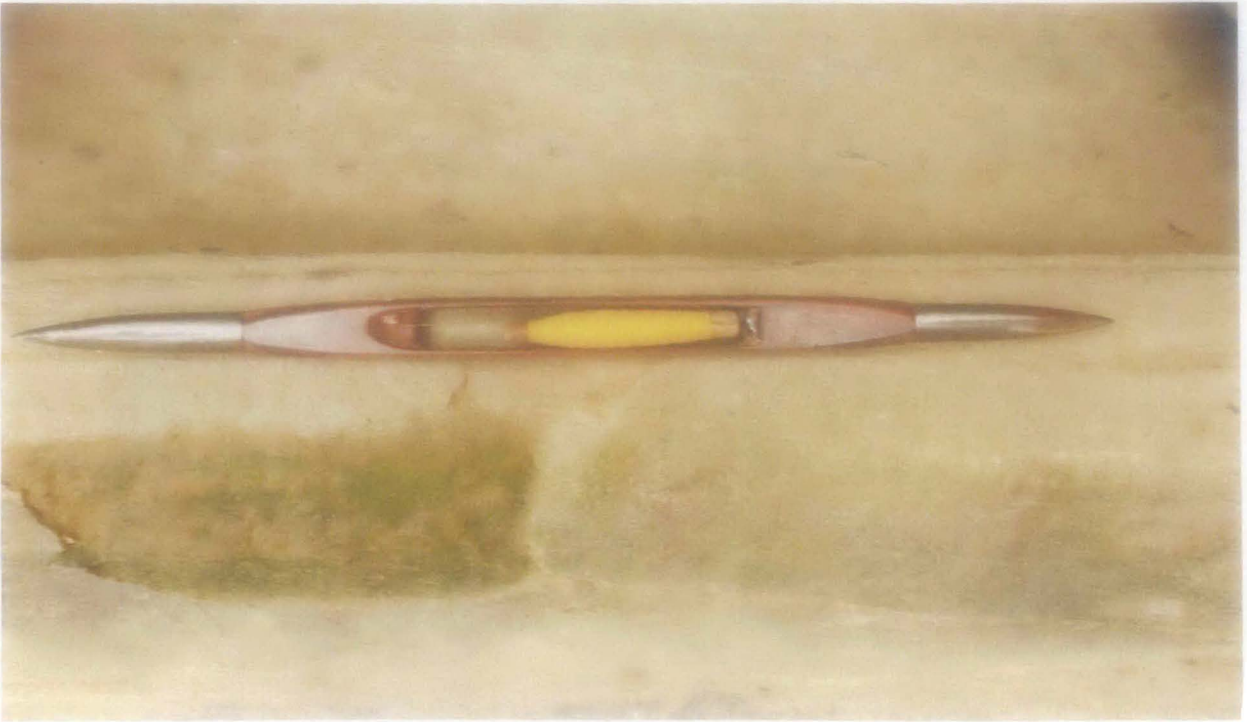
Several steps after weaving:

Washing was an important step after weaving. Generally Hindu washer men used to clean the clothes. Fresh clean water, good alkali or soap and efficient washer-men were required for proper washing. Washer men used to clear the iron strains with '*amrul*' extracts. They had the habit of making a mixture of *ghee*, lemon and alkali for erasing the strains on cloth. Some anomalies or haphazard condition of threads were seen after washing. '*naradia*' arranged the threads in proper way, and '*rifukar*' performed '*rifu*' or mend efficiently in the portions of cloth where threads detected as damaged. Usually the '*naradia*' and '*rifukar*' were Muslims. The *kundukar*, a specific class of people, were engaged to make the clothes smooth and soft.

Following pictures show the different stages of cotton textile production.



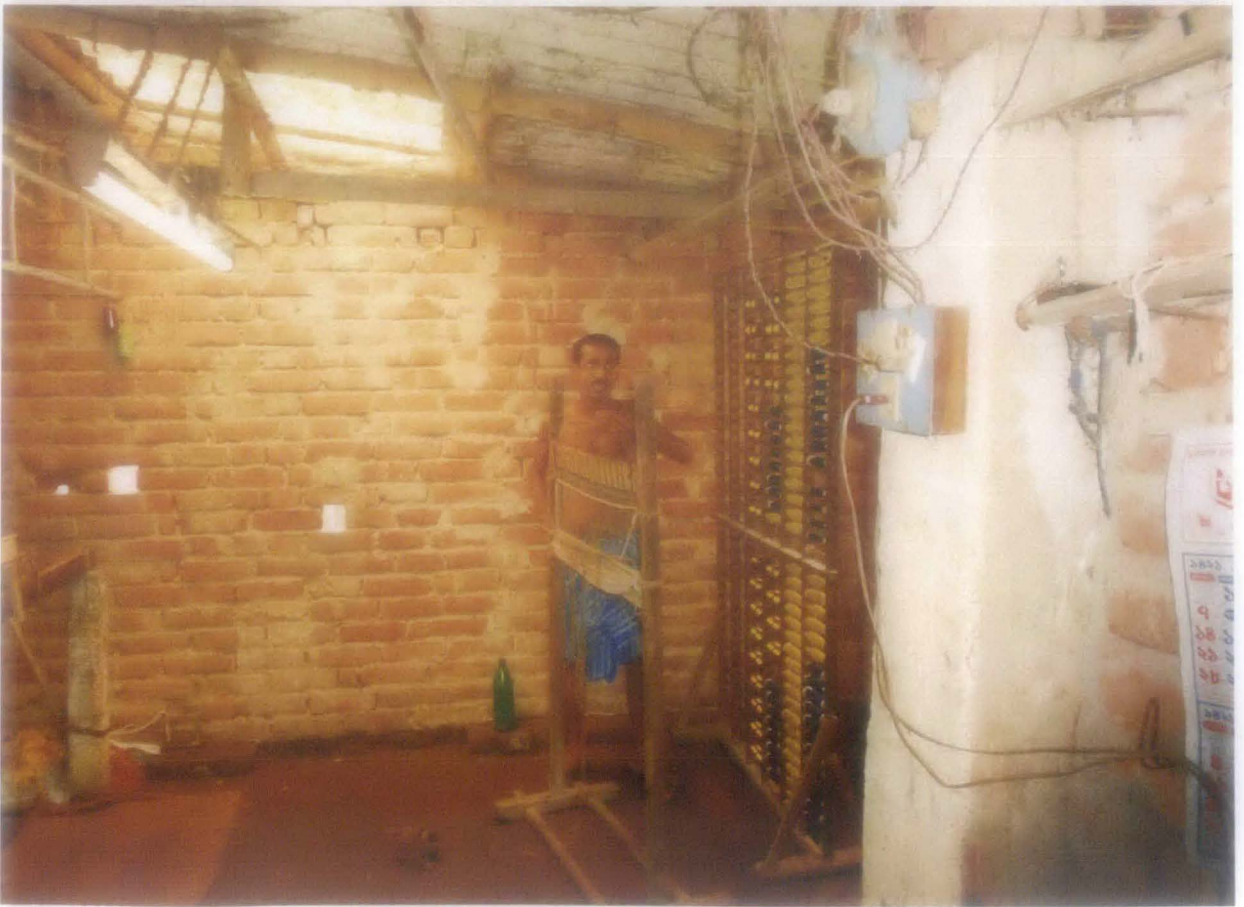
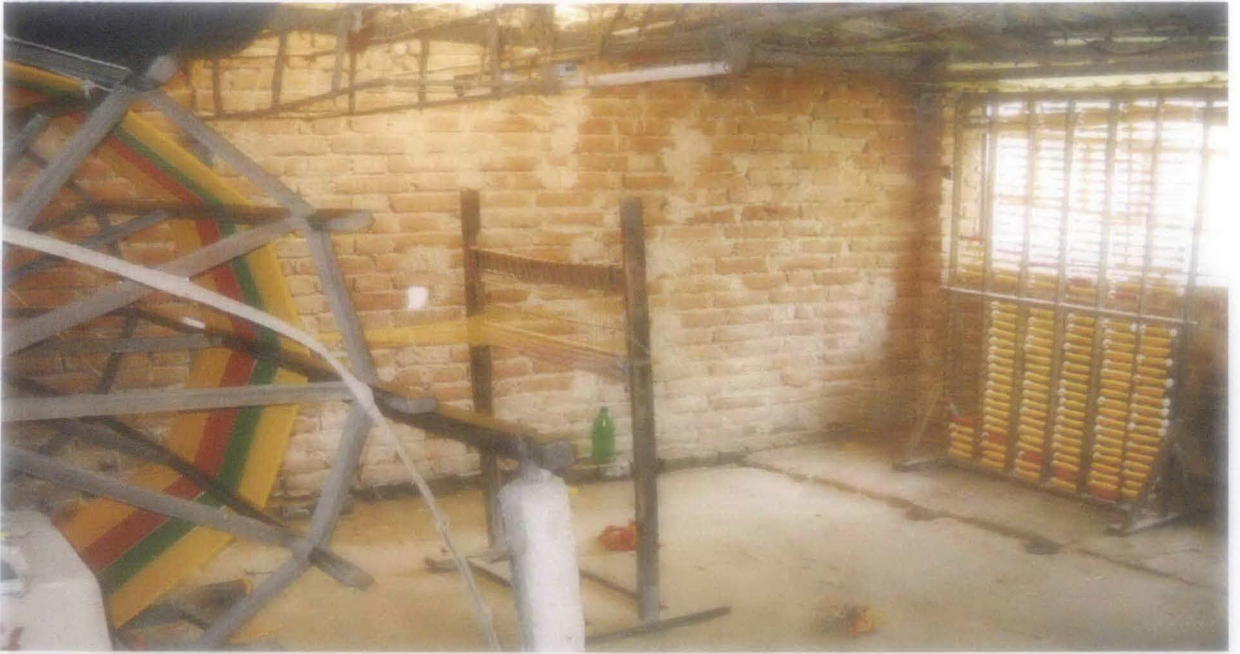
Spinning



Maku



Natai



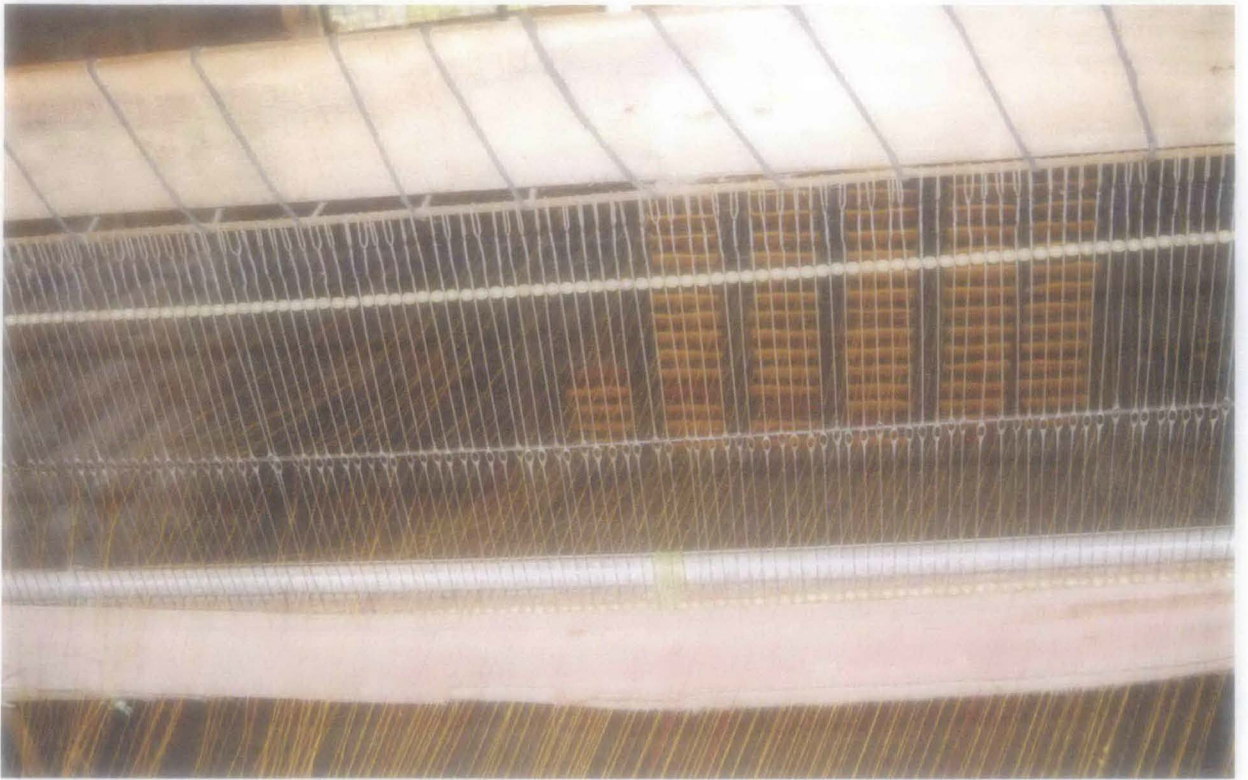
Tana Suta or Tana Threads



Tana and Mana



***Narad Bandha* or Reeling Yarn from a Reed**



Bo Bandha or Forming the Heddles



Weaving

On considering the cotton textile industry, of England we find that the technologies of production before and after the technological innovation were completely different. Before 1760, textile was manufactured domestically where all members of the household used to take part in the process of production. Even children were engaged in cleaning and carding the raw cotton and in helping the weavers.⁷¹ Women used to spin the yarn and men did the job of weaving the cloth.⁷² Cotton manufacturing was a subsidiary occupation to agriculture and other than in Manchester, majority of the weavers were farmers.⁷³ The production process was not at all simple but rather tedious and inefficient. The putting-out system was widely practiced, where the merchants used to distribute the raw materials to the spinners and weavers. Those merchants were found all over the countryside.

The technology and production process of the cotton textile industry of England were more or less similar to that in the Bengal industry before the introduction of many modern power-driven machines by the English manufacturers. As Baines mentioned that till 1760, the machines used in the cotton manufacture in England were nearly as simple as those of India; though the loom was more strongly and accurately constructed, and cards for combing the cotton had been adopted from the woolen manufacture.⁷⁴ Before the Industrial Revolution in England, the total production process was carried on by hand, either in the homes of the workers or in the small shops of the master weavers. Almost all the fibers were cleaned, carded, and spun by hand. In that pre-factory forms of organization, there were many independent craft shops where master weavers appointed and assisted one or more journeymen or apprentices. In the thirteenth century, that sort of independence came to an end in many areas and the artisans had become bound to the merchant who supplied

⁷¹ Deane, P., *The first industrial revolution*, p. 88.

⁷² *Ibid.*

⁷³ *Ibid.*

⁷⁴ Baines, E., *'History of Cotton Manufacture in Great Britain'*, p. 115.

necessary raw materials and in return procured the finished products. That subordination of the producers to the intermediary was a result of the growth of market. The artisans were unable to know and exploit the demand of the consumers staying at distant places. The informations were gathered by the merchants about the changes in tastes of the consumers. They used to give necessary directions to the producers and necessary tools as well as required raw materials for the production of goods as per consumers' demand.⁷⁵ It was largely in this way that the production had come under the putting out system. In those days the English cotton manufactures lagged far behind the producers of muslins and calicoes in Bengal. Orme described that the women spun the thread designed for the cloths and then delivered it to the men, who had fingers to model it as exquisitely as those had prepared it. The tools which they used were as simple and plain as they could imagine them to be. The rigid clumsy fingers of a European would scarcely be able to make a piece of canvas with the instruments, which were all an Indian used, to employ in making a piece of cambric.⁷⁶

When, we consider the technology of production in England after technological innovation, we come across a drastic transformation in the total scenario. The cotton industry of England, underwent revolutionary changes with regard to technology. According to Farne, the English cotton industry was the pioneer for the implementation of power-driven machinery and was expanded very rapidly. Its expansion impressed the imagination of the world. The adoption of new technology and the world-wide extension of commerce of the English industry became the fodder of thought for the authors of both *The Communist Manifesto* and *A Non-Communist Manifesto*.⁷⁷ The production of cotton textiles were reshaped by different technical inventions. Kays flying shuttle (which was invented in 1730 and was used widely by the weavers in between 1750 and 1760), Paul's carding machine (which was

⁷⁵ Habakkuk and Postan (ed.), *The Cambridge Economic History of Europe*, Vol. 6, p. 274-76.

⁷⁶ Orme, *Historical Fragments*, p. 413.

⁷⁷ Farne, D.A., *The English Cotton Industry*, p. 6

industry housed in large cotton mills. The wealthy merchants started building mills for the production of cotton yarn and cloth, and it became a profit giving investment. These cotton mills were found mostly in three districts of England e.g. in the North West England centered on Manchester, in the Midlands, centered on Nottingham and in the Clyde valley in Scotland between Paisley and Lanark. By 1780's the industry had become more concentrated in Lancashire with a large number of mills within the Oldham, Bolton and Manchester triangle. From the 1790's the cotton industry grew more rapidly in Lancashire than elsewhere.⁸⁴ The spinners and the weavers became the employees of the factory owners and no longer worked for themselves at home. The workers used to earn their income in the form of wage by rendering their labour for a specific period of time each day. In order to find work many people used to move to the areas where the cotton mills were located. The spinners and weavers then had been able to give up their agricultural activities and engaged themselves fully in manufacturing cotton. There was a considerable rise in the number of weavers and they were concentrated in town. According to Radcliff, during the period from 1770 to 1788 a complete change had gradually been effected in the spinning of yarns, wool had disappeared altogether and linen was also nearly gone; cotton had become almost the universal material for employment.⁸⁵

Through the Industrial Revolution the cotton textile industry of England reached to the highest peak of development by the second quarter of the nineteenth century. Since then their large scale production enabled them to capture the home as well as World market and outclass the Bengal cotton goods.

⁸⁴ Farne, op. cit., p.45

⁸⁵ Radcliff, W., *Origin of the new system of manufacture: commonly called "power-loom weaving,"* p.61.

II

Before the Industrial Revolution and the advent of large scale factory system of production in England, the Bengal cotton textile industry was in an advantageous position in comparison with its nearest rival i.e. the English cotton textile industry because Bengal had one of the major advantages of human resources. Its large population could give the industry abundant supply of cheap labour whereas in England labour was costly. This comparative advantage resulted in lowering the cost of production in Bengal in comparison with its rival. After the Industrial Revolution this comparative advantage of Bengal industry gradually shifted to England. In the post-Revolution period, the Bengal industry was still run by labour-intensive indigenous production methods whereas the English industry started to apply labour-saving method of production, leading to a fall in unit labour-cost in England although the wages of labour in England were much higher than that in Bengal. Here the abovementioned fact will be described with quantitative data.

Since the seventeenth century the Bengal cotton products flooded in the domestic market of Britain and it became a popular fashion with the people there. The domestic textile producers of England became jealous and demanded protection. Baines describes that in the seventeenth century the Dutch and the English East India Company imported Bengal muslin and calicoes in large quantities. As early as 1678 a loud outcry was made in England against the import of Indian cotton goods to protect woolen industry.⁸⁶ The cotton textile producers started to imitate the cotton manufacture of Bengal. But they did not imitate the labour-intensive method of production of Bengal because it was not possible for them to apply it as wages were very high in England.

The cotton textile industry of England remained small in the seventeenth and even in the early decades of the eighteenth century. It was because of the very fact that the Bengal cotton products were high in quality and low in price mainly due to its low

⁸⁶ Baines, op. cit., p.70.

average cost. A pamphlet of 1678 describes that a man's coat made of Bengal calicoes was cheaper than that made of the English one in English market by around 12d.⁸⁷ Bengal had several advantages over other centres of textile production of which the most important was the abundance of cheap and highly skilled labour. The cost of living was low in Bengal due its developed agriculture and the prices of both food and cash crops were also low which ensured low wages as well as low cost of production. According to Chaudhury, such abundance of labour together with the cheapness of staples like rice, wheat and yarn automatically kept the production costs lower in Bengal than that in other regions.⁸⁸ This rural domestic handicraft industry of Bengal was run mostly by family labour where children and women in spite of doing their daily household chores dedicated themselves in the industry without any remuneration and it was a major reason for low cost of production. Many weavers used to took this profession adjacent to agriculture where agriculture was their prime profession. So, they did not care much on their earning from cotton manufacture or their lower wages did not discourage them. The fixed cost was very low because the construction cost of a loom was very low as it was built in the weavers' own houses with the simplest possible low cost implements. This was obviously an important reason for the low cost of production.

After the industrial revolution, the British cotton textile industry became endowed with new machines for production. Due to the technological innovations and advanced factory system of production, the large scale production became possible. From 1766 to 1787 the cotton manufactures of England increased by 5.5 folds in terms of their monetary value. Prior to that period the value of the cotton goods was

⁸⁷ Baines, op. cit., p. 71.

⁸⁸ Chaudhury, *From Prosperity to Decline Eighteenth Century Bengal*, p. 133.

6,00,000 pound starling and it had become 3,304,371 pound starling in 1787.⁸⁹ In England, the cost of production per unit also declined considerably because of the large scale production.

Now, we want to compare the labour cost of production between the two countries in the first half of the eighteenth century when the English industry got fully endowed with new machines but the Bengal industry was still run by age old method of production. The labour cost of production has been analyzed in the following table:

Table: 3.1: The monthly wages of the spinners in different parts of Bengal

Year	Kheerpoy Rs.a.p	Malda Rs.a.p	Radhanagar Rs.a.p
1806-07	3-0-0	2-8-0	3-0-0
1807-08	3-0-0	2-8-0	3-0-0
1808-09	3-0-0	2-8-0	3-0-0
1809-10	3-0-0	2-8-0	3-0-0
1810-11	3-0-0	2-8-0	3-0-0
1811-12	3-0-0	2-8-0	3-0-0
1812-13	3-0-0	2-8-0	3-0-0
1813-14	3-0-0	2-8-0	3-0-0
1814-15	3-0-0	2-8-0	3-0-0

⁸⁹ Baines, op. cit. p. 218.

1815-16	3-0-0	2-8-0	3-0-0
1816-17	3-0-0	2-8-0	3-0-0
1817-18	3-0-0	2-8-0	3-0-0
1818-19	3-0-0	2-8-0	3-0-0
1819-20	3-0-0	2-8-0	3-0-0
1820-21	3-0-0	2-8-0	3-0-0
1821-22	3-0-0	2-8-0	3-0-0
1822-23	3-0-0	2-8-0	3-0-0

Source: Proc. of B.O.T commercial, 29th June, 1827.

Table: 3.2: Average Weekly Wage of Cotton Spinners In The Manchester District

Year	Weekly Wages
1806	24s. 2d.
1810	30s. 2d.
1815	28s. 11d.
1819	27s. 1d.
1833	22s. 0d.
1841	21s. 7d.
1849	24s. 1d.

Source: Briggs, Economic History of England, p. 339.

From the Table 3.1 it is learnt that the wages of the spinners in Bengal was nearly Rs 3 per month on average till 1822-23. The Table 3.2 explicitly shows that in England till 1819, the average wage a spinner was 27s. 7d. per month or 12.73 Sa Rs (Exchange Rate between India and England was 2s. 2d. per Sa Rs in 1831-32⁹⁰). Here it is clear that wage rate in Bengal was much lower than that in England till 1819. From the Table 3.2, we see that in England the wages of the spinner started to fall around 1833.

In reply to the questions of the members of the select committee Montgomery Martin made the following observations on the spinning cost:

Mr. Hogg. - Have you examined the comparative prices of spinning cotton in India and in England?

Mr. Martin. - In the documents laid before Parliament in 1832-33, there is a calculation given of the cost of labour of producing yarns in Britain and in India for one pound weight, from No. 40 to 250, and likewise of the value of the labour and material combined. Now this shows the great advantage in the cost of labour that England has over India. It shows that on yarn No.40, the cotton costs in England 1s. 6d., and the labour 1s., making 2s. 6d; but in India the cotton costs 3d. and the labour 3s. 4d.; the cost is therefore 3s. 7d.; on the next yarn spun, where the cost of labour in England is 1s. 6d., in India it is 5s. 8.5d.; on the next yarn, where it is 2s. 2d. in England, it is 8s. 10.5d. in India: and in a similar manner the comparison proceeds through the different qualities of yarn, until upon yarn No.250, where the labour here is 31s., the labour in India is 83s. 4d.⁹¹

⁹⁰ *House of Commons* (P.P. 1831-32, vol. 10), p.385.

⁹¹ *House of Commons* (P.P. 1840, vol. 8), *Report from Select Committee on East India Produce together with the Minutes of Evidence, Appendix and Index*, p. 276.

From the description of Martin, we observe that around 1830 the spinning cost in England became lower than that of Bengal.

The productivity of the weavers in England was much higher than that of India. According to Martin, one weaver in England would produce more goods than six weavers in India.⁹²

The prices of different cotton goods in England had declined and became lower than that of Bengal in the first half of the nineteenth century. The following Table shows the prices of different piece goods in England and in Bengal in 1818.

Table: 3. 3: Comparative Prices of British and Bengal Piece Goods

Description of the Articles	Price Made in England	Price Made in Bengal
Doreas (20 yds. Piece)	55 Shilling	Dacca – 155 Shilling Keerpoy – 45 Shilling Hurripaul – 89 Shilling
Cossaes	60 Shilling	Malda & Dacca – 95 Shilling
Mulmuls	22 to 35 Shilling	Santipur – 47 to 76 Shilling Keerpoy – 39 Shilling
Nainsooks	33 Shilling	Keerpoy – 61 Shilling
Seerhand- connees	50 to 64 Shilling	Dacca and Santipore – 80 to 89 Shilling

Source: Amales Tripathi, Trade and Finance in the Bengal Presidency, p.165.

⁹² Ibid.

Table 3.3 shows that the prices of different English piece goods were lower than that of Bengal.

In this section we see that in the first half of the nineteenth century the prices of English cotton goods became lower than that of the Bengal products even though the wages of labourers still remained much lower in Bengal than their English counterparts. So, we may say that prices of English cotton goods reduced due to the high productivity and large scale factory production which were the fruits of Industrial Revolution in Great Britain. Here it is worth mentioning that the cheapest Hindu labour could not compete either in quality or quantity with Lancashire's mules or throstles.⁹³

III

In this section we compare the availability of raw cotton and its prices between England and Bengal in the period under review. The English cotton manufactures had to face stiff competition with the Bengal cotton manufacturers for a long period of time. The calicoes and muslins of Bengal successfully kept aside the British cotton goods in both home market of England and in the World market due to its singular beauty and endless varieties. In the first half of the nineteenth century, the English won the race and started to outclass the Bengal manufactures in their home as well as in the World market. Here, we analyze how far the raw cotton cost of production was responsible for the triumph of the English manufactures over the Bengal manufactures.

During the second half of the eighteenth century and by 1800, a new factory system of production grew in England. The textile merchants became wealthy men, and were able to build on their wealth the mills for cotton yarn and cloth. That time the

⁹³ Habakkuk, H.J. and Postan, M.M. (ed.), *The Cambridge Economic History of Europe*, Vol. 6, p. 275.

technological up-gradations in spinning as well as in weaving in England and the requirement of raw cotton increased by many times and the availability of raw cotton could have been a single limiting factor to production. But then the British set up colonies in those parts of the world which became the supplier of raw cotton to their industry. Raw cotton used to come easily from the American colonies. It was also grown and brought from India. About 77 per cent of the total import of raw cotton by England during 1815 – 59, was supplied by the USA.⁹⁴ Eli Whitney of America, in 1793, invented cotton gin.⁹⁵ Hodgen Holmes later in the same year modified and improved the Whitney's machine which was named as saw gin.⁹⁶ Application of saw gin resulted in many fold increase in the production of cotton in America. With the use of saw gin, the production of cotton was equivalent to 30,000 bales of 500 pounds each in 1798 as compared to an amount equivalent to 3,000 bales of 500 pounds each in 1790, when no such saw gins were in use.⁹⁷ Thus the British colonies became the exporter of raw cotton to England and importer of cotton goods from England. The following table shows the quantities of cotton imported into Great Britain from America alone.

Table: 3. 4: Quantities of cotton imported into Great Britain from America alone

Year	Quantities of Cotton Wool Imported into the U.K from U.S.A lbs	Year	Quantities of Cotton Wool Imported into the U.K from U.S.A lbs
1785	21,410	1801	18,283,511

⁹⁴ Farnie, D.A., op. cit., p. 15.

⁹⁵ Thompkins, D.A. The Cotton Industry, Publications of the American Economic Association, third series, vol. 5. No.1, Papers and Proceedings of the 6th Annual Meeting Part I. New Orlands, LA., Dec. 29 – 31, 1903 (Feb. 1904), pp. 144 – 153.

⁹⁶ Ibid.

⁹⁷ Ibid.

1786	3,178	1802	26,834,984
1787	48,800	1803	28,243,352
1788	245,919	1804	27,320,009
1789	476,557	1805	32,786,892
1790	350,105	1806	29,330,569
1791	35,906	1807	46,249,158
1792	88,676	1808	13,067,517
1793	189,250	1809	37,950,234
1794	278,897	1810	60,894,027
1795	1,146,349	1811	47,589,239
1796	3,656,488	1812	27,407,660
1797	3,253,019	1813	Records destroyed by fire
1798	6,051,314	1814	11,927,487
1799	7,430,924	1815	54,407,299
1800	15,048,186	1816	51,291,997
1817	60,695,293	1833	237,506,758
1818	68,217,656	1834	269,203,075
1819	62,412,654	1835	384,455,812

1820	89,999,174	1836	289,615,692
1821	93,470,745	1837	320,651,716
1822	101,031,766	1838	431,437,888
1823	142,532,112	1839	311,597,798
1824	92,187,662	1840	487,856,504
1825	139,908,699	1841	358,240,964
1826	130,858,203	1842	414,036,779
1827	216,924,812	1843	574,738,520
1828	151,752,289	1844	517,218,622
1829	157,187,396	1845	626,650,412
1830	210,885,358	1846	401,949,393
1831	219,333,628	1847	364,599,291
1832	219,756,753		

Table 3.4 Continued from page 71.

Source: House of Commons, P.P, 1847 – 48, Appendix No. 44, vol. 8, Part – II, p. 371.

From Table 3.4, we see that from 1784 to 1847 the raw cotton import from U.S.A gradually increased. It was only 21,410 lbs in 1785 and it reached up to 626,650,412 lbs in 1845. It slightly decreased to 364,599,291 lbs in 1847. Owing to Industrial Revolution, the Cotton Textile Industry of Great Britain experienced a remarkably high growth of production for which enormous quantities of raw cotton was required.

Due to this emergence and encouraged by the superior quality (which was resulted from stronger fibre and long staple), the British traders used to purchase large quantity of cotton from slave plantation in the U.S.A.

Now, let us consider the import of cotton into U.K from different parts of the World in the following table:

Table3.5: Quantities of Cotton Wool imported into the United Kingdom from different countries

Year	Brazil lbs	The Mediterranean lbs	British Possessions in the East Indies lbs	British West Indies lbs	Other Parts lbs
1815	13,104,267	30,466	7,175,243	15,341,197	10,650,674
1816	20,131,581	239,966	6,972,790	12,731,822	3,912,809
1817	16,338,861	44,532	31,007,570	9,743,605	8,473,828
1818	24,987,979	1,109,982	67,456,411	11,249,851	5,723,698
1819	20,860,865	486,864	58,856,261	7,050,753	1,785,757
1820	29,198,155	452,684	23,125,,825	6,836,816	2040,001
1821	19,535,786	1,131,567	8,827,107	7,138,986	2,432,435
1822	24,705,206	518,804	4,554,225	10,295,114	1,732,513
1823	23,514,641	1,492,413	14,839,117	7,034,793	1,989,427
1824	24,849,552	8,699,924	6,420,005	6,269,306	953,673

1825	33,180,491	22,698,075	20,005,872	8,193,948	4,018,206
1826	9,871,092	10,308,617	20,985,135	4,751,070	833,284
1827	20,716,162	5,372,562	20,930,542	7,165,881	1,338,950
1828	29,143,279	7,039,7574	32,187,901	5,893,800	1,743,799
1829	28,878,386	6,049,597	24,857,800	4,640,414	1,153,818
1830	33,092,072	3,428,798	12,481,761	3,429,247	644,216
1831	31,695,761	8,460,559	25,805,153	2,401,685	978,067
1832	20,109,560	9,163,692	35,178,625	2,040,428	583,467
1833	28,463,821	1,020,268	32,755,164	2,084,862	1,825,904
1834	19,291,369	1,681,625	32,920,865	2,293,794	1,484,670
1835	24,986,409	8,451,636	41,429,011	1,815,270	2,564,831
1836	27,501,272	8,226,029	75,949,845	1,714,337	3,951,882
1837	20,904,145	9,326,979	51,532,072	1,595,702	3,240,169
1838	24,464,505	6,409,466	40,217,730	1,529,356	3,791,628
1839	16,971,979	6,429,671	47,172,939	1,248,164	5,976,008
1840	14,779,171	8,324,937	77,011,839	866,157	3,649,000
1841	16,671,348	9,097,186	97,388,153	1,533,197	5,061,513
1842	15,222,828	4,489,017	92,972,609	593,603	4,441,250

1843	18,675,123	9,674,076	65,709,729	1,260,444	sic
1844	21,084,744	12,406,327	88,639,776	sic	sic
1845	20,157,633	14,614,699	sic	sic	sic

Table 3.5 continued, from page 74.

Source: PPHC, 1847 – 48, Appendix No. 44, vol. 8, Part – II, p. 371.

From Table 3.5, we see that besides the U.S.A, a considerable quantity of raw cotton was imported from different countries of the world.

Bengal cotton textile industry at one point of time depended for its raw cotton on local production. Cotton was grown in many districts of Bengal. Colebrooke rightly mentioned that, in the province the entire amount of raw cotton required for her own cotton industry was at one time produced locally.⁹⁸ According to the estimate of James Grant, domestic production of cotton in Bengal was 100,000 maunds in 1786.⁹⁹ It increased to 156,000 maunds in 1791.¹⁰⁰ We see that during 1791 – 1861, the production of raw cotton decreased from 156,000 maunds to 110,000 maunds.¹⁰¹ Cotton cultivation and production were carried on in different parts of Bengal for meeting local demands only.

As the demand for cotton manufactures of Bengal increased to a large extent by the merchant companies of the foreign countries, the demand for raw cotton also increased many times. So, the Bengal industry had to depend on other provinces of India for raw cotton. Raw cotton was then started to be imported from Surat, Doab, Berar, and other parts of the Decan. According to the estimate given by Mr. Grant,

⁹⁸Colebrooke, *Remarks on the Husbandry and Internal Commerce of Bengal*, p. 84.

⁹⁹ Quoted in Ray, , *Identifying the woes of the cotton textile industry in Bengal*, *EHR*, 2009,p.22.

¹⁰⁰ Quoted in *ibid*.

¹⁰¹ Quoted in *ibid*.

during the first half of the eighteenth century, Bengal imported about 50,000 maunds per annum, which was nearly one-third of her yearly requirements.¹⁰² This import increased later and reached to 189,600 maunds in 1788-9 and 393,600 maunds in 1795-6.¹⁰³ About a decade later, the average import stood at 450,000 maunds annually, of which about 180,000 maunds and 270,000 maunds came from the Deccan and the Doab, respectively.¹⁰⁴

From the beginning of the nineteenth century, Bengal gradually became the exporter of raw cotton in England. Then raw cotton exported from the Bengal increased so considerably that it caused a scarcity of raw cotton for meeting the demand of her own industry. In 1816 – 17, the total export in private account was 6,20,263 maunds while in the period 1817 – 18 it was 9,68,020 maunds.¹⁰⁵

The following Table shows the value of raw cotton exported from Bengal to England and to other countries of the World.

Table 3.6: Value of raw cotton exported from Bengal to England and to other Countries of the World

Year	Exported to U.K S.R	Exported to World S.R
1823 – 24	4,51,021	23,47,568

¹⁰² Quoted in *ibid.*

¹⁰³ Quoted in *ibid.* p. 23.

¹⁰⁴ Quoted in *ibid.* p. 23.

¹⁰⁵ WBSA, *Proc. of Board of Customs, Salt and opium*, 6th Jan, 1826.

1824 – 25	5,01,779	32,28,335
1825 - 26	4,76,169	30,57,130

Source: Amales Tripathi, Trade and Finance in the Bengal Presidency, p.202.

The export of raw cotton from Bengal gradually increased. In between 1830 to 1840, the average quantity of cotton annually sent from Calcutta to the English market was 2,742,787 lbs.¹⁰⁶

The following Table shows the quantity of cotton imported into England from Bengal.

Table 3.7: Quantity of cotton imported into England from Bengal

Year	Total Quantity of Cotton Imported into England from Bengal lbs
1850	85,789
1851	1,175,940
1852	557,088
1853	7,660,242
1854	1,144,416

¹⁰⁶ Medicott, *Cotton Hand Book of Bengal*, p. 292.

1855	86,912
1856	1,418,928
1857	2,538,560
1858	190,400

Source: J. G. Medlicott, *Cotton Hand Book of Bengal*, p. 293

From the above Table 3.7 we see that from the third decade of Nineteenth century, Bengal was turned into an agricultural farm of England or the raw cotton supplier to the British cotton textile industry.

Now to compare the prices of raw cotton between England and Bengal cotton textile industry the Table given below may be taken into consideration.

Table 3.8: Comparative prices of raw cotton of England and Bengal

Year	In Calcutta	In Calcutta	In Liverpool
	Lowest d. per lb	Highest d. per lb	Average d. per lb
1755	10.03		
1790	2.14	2.52	21
1802			15
1813	3.90	6.00	15 $\frac{3}{4}$ - 19 $\frac{1}{4}$

1820	4.20	6.10	11 $\frac{3}{4}$
1826	4.95	5.70	9
1827	4.35		6
1829	3.30	4.20	5
1830	2.62	4.20	5 $\frac{3}{4}$
1831	2.25	4.15	5 $\frac{1}{4}$
1832	3.00	4.50	4 $\frac{3}{4}$
1833	3.60	4.40	7 $\frac{3}{4}$
1834	4.05	5.40	7 $\frac{1}{2}$
1835	4.20	4.68	8
1836	3.07	4.68	7 $\frac{3}{4}$
1838	3.15	4.65	5 $\frac{3}{4}$
1839	3.52	4.50	6 $\frac{3}{4}$
1840	3.00	4.50	5 $\frac{3}{4}$
1841	3.30	4.53	5 $\frac{1}{4}$
1842	2.77	3.90	4
1843	2.70	3.86	3 $\frac{3}{4}$
1844	2.47	3.56	4 $\frac{1}{4}$

1845	2.51	3.45	3 ¼
1846	2.47	3.60	4 ¾
1847	2.40	3.33	3 ¼
1848	2.55	3.45	3 ¼
1849	2.43	3.41	4 ¼
1850	2.55	3.86	5 ⅛
1851	2.51	3.87	4
1852	2.51	3.72	3 ¾
1853	2.36	3.22	3 ½
1854	2.46	3.37	3 ½
1855	2.74	3.26	3 ⅞
1856	2.85	3.30	4 ⅜
1857	2.85	4.50	5 ⅜
1858	5.10	6.15	4 ¾
1859	4.20	6.15	4 ¾
1860	4.05	4.50	

Table 3.8, Continued from page 79.

Source: Medlicott, Cotton Hand Book of Bengal, p. 289.

The Table 3.8 shows that the average price difference is insignificant between Bengal and England, rather the raw cotton price is lower in Bengal. So, from this we see that the price of raw cotton was not at all responsible for the lower price of finished products in England in their home and in the World market. Actually, high productivity growth in cotton textile industry owing to the Industrial Revolution in England was the important factor responsible for the disappearance of the Bengal cotton articles in the World market from the second half of the eighteenth century when the prices of similar cotton piece goods were lower in England than that in Bengal (from Table 3.3).

IV

Before the British rule in Bengal, the Hindu Kings and latter the Mughal emperors, their *Subadars* and the members of their noble court were great patrons of Bengal cotton manufactures. In those days the cotton textile industry of Bengal thrived under the state patronage and protection. When the British set their feet in Bengal, the cotton textile industry of Bengal was highly developed and the cotton goods of Bengal after meeting its domestic consumption were exported to the different parts of India and the World. Around 1615, the English East India Company started to trade in Bengal where the cotton manufacture was most important. They used to send the products to their home country as well as to the other parts of the World. From the second half of the seventeenth century, Bengal muslins and calicoes flooded in the market of Britain. By that time the English parliament gradually started giving different protections to their cotton textile industry just to save them from the stiff competition with the Bengal cotton manufactures. Besides, the British in Bengal used to apply many coercive or oppressive measures on the local weavers.

In this section we want to show how the protection to the cotton industry in England and the coercion on the Bengal weavers simultaneously made enough impetus to the triumph of the English industry over its nearest rival Bengal.

After the win in the Battle of Plassey in 1757 and asserting the political authority in Bengal, the English East India Company became the main purchaser of the Bengal cotton manufactures. Since then the English applied all possible measures to outclass other European or native traders from the business in Bengal. So, the English implemented a series of regulations in the second half of the eighteenth century. In spite of these, the English East India Company could not ensure monopoly in cotton trade in Bengal. The French and the Dutch company were the main rivals of the English. So, several foreign nations and indigenous merchants were engaged in considerable trade in Bengal cotton manufactures in the period under review despite the efforts made by the English Company to eliminate its potential competitors.

After 1757, the indigenous traders or '*dadni* merchants', for whom the weavers used to weave clothes, gradually disappeared from the investment business. Since then the English East India Company adopted the new system of advances under which the weavers were bound to give their entire produce to the company only. The company started to employ many '*gomostas*', '*paikars*' and '*dalals*' at every factory or *aurung* in order to impose strict control over the weavers. After the victory of Plassey the aim of the East India Company was to capture as much wealth as possible through internal and external trade in Bengal. According to Sinha, by 1780's the British made an attempt to create an Indian market for Bengal products and also for European imports. According to Sinha,¹⁰⁷ "The entire economy of Bengal was dominated by the needs of the European market in the 1760's, 1770's and 1780's". After 1757, the powerful Moghul domination in India came to an end and it was then replaced by the Maratha domination. The Marathas were averse to the luxurious mode of living like the Mughal. So, the demand for Bengal cotton goods had nearly disappeared in different provinces of India. According to Sinha, the British domination in Bengal and Maratha ascendancy in many other parts of India combined to bring about the steady decline of the flourishing Indian market for Bengal goods.¹⁰⁸

¹⁰⁷ Sinha, N.K., *The Economic History of Bengal*, vol. 1, p. 110.

¹⁰⁸ *ibid*, p. 111.

By capturing the economic as well as the administrative power of Bengal the English East India Company started to invest money to procure cotton goods. The company's method of investment was conducted by the Export Warehouse keeper and the company's servants at the subordinate factories. Many *aurung* or factory were established in different cotton manufacturing centres of the then Bengal for the procurement of goods. In an *aurung* one Resident or Company's European officer was appointed. He was the executive head of an *aurung* and under him one head *gomasta*, one *mohuree* or clerk, one cash keeper and some peons were posted. *Gomastas* used to give instruction to the *dalals* and *paikers* along with the weavers. When the weavers received money, they had to sign an agreement paper. According to Bolt, the *gomastas* made them sign a bond for the delivery of a certain quantity of goods within a certain period of time at a certain price and then only the weavers were given a part of the contract-money in advance. The asset of the poor weaver was in general not deemed necessary for the *gomastas* when employed on the Company's investment frequently made them sign what they pleased.¹⁰⁹

The woven cloths used to store in warehouse and every branch of cloth were marked by the producer or weaver's name. Here, on behalf of the *gomasta*, a person who was called *jassendar* or assorter was appointed to fix the price of each piece of cloth. Bolt describes that the roguery practiced in that department was beyond imagination, but all terminated in the defrauding the poor weaver; for the prices which the Company's *gomastas* and in confederacy with them, the *jassendars* fixed upon the goods in all places at least fifteen percent and in some cases forty percent less than the money the goods so manufactured could bring if they would have sold in the public bazaar or market without any restriction or compulsion.¹¹⁰ In this system the weavers were paid low price. So, they frequently resorted to selling their cloths to others, mostly to the Dutch and the French merchants. The company's *gomasta* used to punish the weavers for such practices. According to Bolt, at that time the English Company's *gomasta* set

¹⁰⁹ Bolts, W., *Considerations on Indian Affairs*, p. 193.

¹¹⁰ *Ibid*, p. 193.

his peons over the weavers to watch him and not infrequently to cut the piece out of the loom when nearly finished.¹¹¹ If a weaver was unwilling to engage himself in East India Company's business as he was not paid fair price from the Company, the force was applied on him mercilessly. In the letter of Nov. 11, 1768, the court of directors observed – "they (the weavers) are unwilling to engage in because we (the English Company) do not pay them a fair price. The gentlemen at Dacca say the foreigners give 20 or 30 percent more than we do but the fact that comes the strongest to the point is the sale of ferrit and damaged goods which sold at public auction from 10 to 100 percent advance, a clear proof of the injustice done to the weavers".¹¹² J. C. Sinha quoted the proceedings of April 12, 1773 which states that the two annexed papers which the President had formed from an examination into the complaint made to him by the weavers of Santipore and which he had every reason to believe to be authentic, would show the then miserable situation of the weavers, since it appeared that the prices given to them for the clothes provided on account of the Company's Investment, amounted to be no more and in some instances less than the cost of the materials and their labour was extracted from them without any repayment. They at the same time suffered the pain of corporal chastisement and were forbidden to work for private merchants or to make any other assortments but those ordered for the Company's investment. As a result they had no other means of living but by sinking a part of the advances made them in irrecoverable balances and by embezzlements and clandestine sales of their cloths to foreigners other than the British.¹¹³

The oppressions on the weaver can be understood by a letter date Nov. 11, 1768 where the court of Directors wrote that they could ascribe the Company's difficulties to nothing but the oppressed state the weavers had been in for some years, which had

¹¹¹ *ibid*, p. 193.

¹¹² Sinha, N. K. ed., *Fort William- India House Correspondence*, vol. 5, Letter to the court, 11th Nov., 1768, p.139.

¹¹³ Sinha, N.K. ed., *Fort William- India House Correspondence*, vol. 5, Letter to the court, 11th Nov., 1768, p.138.

occasioned many of them to fling up their looms.¹¹⁴ The price usually paid by the English East India Company to the weavers was arbitrarily fixed and was lower than the offered price of the other European rivals. So the Company forced the unwilling weavers to work for them. Besides this, the Company's *gomastas* used to abuse their power which was another mode of oppression on the weavers. Verelst observes that the *gomastas* or agents of the Company were necessarily entrusted with powers, which they frequently abused to their own emolument; and an authority given to enforce a just performance of engagements, became, notwithstanding the utmost vigilance of the higher servants, a source of new oppression.¹¹⁵

Due to the oppressions, a large number of weavers gave up their age old profession. Besides this, a great famine occurred in Bengal in 1770 which caused death of a large number of weavers and spinners. So, a crisis of weavers aroused in Bengal.

In 1773, Hastings declared the freedom of trade to the weavers. According to this proclamation, now a weaver got the liberty to engage himself to a business with any person or company.¹¹⁶ Then most of the weavers refused to make business contract with the English East India Company and even who received the company's advances, refused to deliver goods and disobeyed the whip of the Company's *gomastas*. To stop the audacity of the weavers, 'Coercive Regulations' were enacted in 1775.¹¹⁷ According to the 'Regulations' the weavers who used to take advances from the Company had to deliver goods accordingly; they had to deliver goods in time and they did not sell cloth to any other company. If a weaver disobeyed the above 'Regulations' he would be punished in a regular process in the Judicial Court.

¹¹⁴ Sinha, N.K. ed., Fort William- India House Correspondence, vol. 5, Letter to the court, 11th Nov., 1768, p.138.

¹¹⁵ Verelst, *A View of the Rise, Progress and Present State of the English Government in Bengal*, p. 85.

¹¹⁶ WBSA, *Proceedings of Board of Trade (Commercial)*, 9 May 1775.

¹¹⁷ WBSA, *Proceedings of Board of Trade (Commercial)*, 5 Sept. 1775.

Many measures were taken in between 1782 and 1787 to get the product in time and to stop open market selling by the weavers.

Though different Regulations were imposed by the English East India Company on the rival mercantile groups and gave utmost effort to eliminate them from competition, they did not succeed in true sense.

As per the Charter Act of 1793, the Company had to allow three thousand tons of shipping annually to the private merchants for their trade in the East.¹¹⁸ Unlike the period prior to 1793, the trade in cotton manufactures was now done both by the English East India Company and by the private traders. In the closing decade of the eighteenth century a large number of European private agency houses started their export trade from Bengal. One of the important items of their trade was cotton goods.

The coercion on the weavers and absence of any state protection in the period under review made it possible to displace the cotton weavers of Bengal and the glorious Bengal industry had started to ruin. The severity of oppression can be understood by “the story of weavers’ thumb” as described by J.C. Sinha.¹¹⁹ According to Sinha, there are two versions of the story. One is that the servants of the East India Company and their agents went to the length of cutting off the thumbs of weavers. The other is that the weavers themselves severed their own thumbs to avoid being forced to weave cotton items for the company. According to William Bolt, various and innumerable were the methods of oppressing the poor weavers, which were regularly practiced by the Company’s agents and *gomastas* in the country. Such modes of oppressions included fines, imprisonments, floggings, forcing bonds from them and because of that the number of weavers in the country had been greatly decreased. The severities practised towards those people were scarcely described, for it frequently happened,

¹¹⁸ Ghosal, H.R., ‘Cotton Industry in Bengal, Bihar and Orissa during the Early nineteenth Century’, *Journal of Indian History*, Aug., 1939, p. 206.

¹¹⁹ Sinha, J.C op cit ,p. 84.

opined Bolt in his observation.¹²⁰ The *gomastas* and other lower class servants used to take perquisites from the weavers which were quite unlawful.¹²¹ The Company's servant used to give whips on the weavers and if they failed to follow that they had to suffer from corporal punishment.¹²² The Commercial Residents were empowered to punish the 'acts of unwarrantable severity' but the ignorant weavers did not bring these incidents to the notice of the Resident and if they did the *gomastas* and other subordinates suppressed them.¹²³ Sometimes the weavers complained to the Board of Trade but in vain. At last when they became helpless they left their houses and looms to get relief.¹²⁴

Now, we want to describe the state protection to the cotton textile industry of England when the Bengal cotton industry faced various oppressions by the English East India Company. Since the last quarter of the seventeenth century, Bengal cotton goods had rapidly captured the English market for which the textile industry (mainly the woolen and silk) of United Kingdom had lost their market gradually at home. According to O'Brien, Griffiths and Hunt,¹²⁵ "England's native woolen and silk interests first became politically active against Asian textiles as early as the 1670s, but agitation to prohibit the consumption of imported calicoes and wrought silks only became serious in the mid 1690s". During 1696 - 1720, the structure of English legislation to regulate the entry of Asian clothes into the English market was important for the survival and long-term growth of the British domestic cotton industry.¹²⁶ To protect the infant

¹²⁰ Bolt, op cit, p. 74.

¹²¹ WBSA, *Proc. of B.O.T Commercial*, March 31, 1815.

¹²² WBSA, *Proc. of B.O.T Commercial*, May 8, 1818

¹²³ WBSA, *Proc. of B.O.T Commercial*, March 31, 1815.

¹²⁴ *Ibid.*

¹²⁵ O'Brien, Griffiths and Hunt, 'Political components of the industrial revolution: Parliament and the English cotton textile industry, 1660-1774', *Economic History Review*, 2nd series, vol. XLIV, 3, 1991, p. 401.

¹²⁶ *Ibid*, p. 401.

industry from the competition of Bengal cotton goods, the British Parliament from time to time enacted various Acts to prohibit the Indian cotton goods. It was started from 1700 with the Act prohibiting the use of painted, dyed or printed calicoes of India in England.¹²⁷ All such goods were imported for re-export only after the Act came into being.¹²⁸ White calicoes and muslin proper did not come under the purview of the abovementioned Act and were subjected to an import duty of 15% ad valorem.¹²⁹ After the enforcement of the Act, the import of white calicoes increased to a large extent which used to print in England. So, another prohibitive Act was passed in 1720 according to which the use of printed Indian calicoes whether printed in England or elsewhere were prohibited in England. In spite of all these, the export of cotton manufactures from Bengal as well as from India was not stunted. So, prior to the period under review the cotton industry of Bengal had been performing well.

After the Battle of Plassey the economic environment of Bengal started to be dominated by the whip of the British. The English East India Company acquired the 'Diwani of Bengal' in 1765. Since then the Indian cotton products imported to Great Britain had to pay an ad valorem duty of 45%, which exceeded by more than 100% than the duty on the raw materials imported from India.¹³⁰ Yet an additional duty of five per cent was imposed in 1779 on manufactures imported into England and a further five per cent was added in 1782.¹³¹ In 1783, to stop smuggling due to high tariff, the British Parliament replaced all previous duties upon muslin, unrated muslin and calicoes and imposed a single import duty of eighteen per cent ad valorem and

¹²⁷ Ray, , Identifying the woes of the cotton textile industry in Bengal, *EHR*, 2009, p.6.

¹²⁸ *ibid.*

¹²⁹ Sinha, J.C., *op cit*, p. 26.

¹³⁰ Hamilton, C. J., *Trade Relations between England and India*, pp. 107-8.

¹³¹ *ibid.*

ten per cent on re- export.¹³² From 1797 onwards, fresh duties were imposed by the British Parliament on articles imported into United Kingdom.¹³³ As shown in Table 3.9, we can infer that the duty gradually increased from 1802 and reached highest level in 1813. In 1813, the duty was about 44 per cent on muslins and around 85 per cent on calicoes.

The rates of duty per cent on Indian muslin, calicoes and on other cotton manufactures can be clearly understood from the following tables:

Table 3.9: The rates of duty per cent on Indian muslin, calicoes and on other cotton manufactures

Year	White Calicoes	Muslins and Nankeens
	£ s d	£ s d
1802	27 1 1	30 15 9
1803	59 1 3	30 18 9
1804	65 12 6	34 7 4
1805	66 18 9	35 1 3
1806	71 6 3	37 7 1
1809	71 13 4	37 6 8
1813	85 2 1	44 6 8
1814	67 10 1	37 10 0

¹³² Ibid, p. 162.

¹³³ Dutt, R., *The Economic History of India Under Early British Rule*, p. 293.

1819	67 10	37 10
1823	67 10	37 10
1824	67 10	37 10
1825	67 10	37 10
1826	10	10
1827	10	10
1828	10	10
1829	10	10
1830	10	10
1831	10	10
1832	10	10

Source: For the years 1802 - 14 from Baines, History of Cotton Manufactures in Great Britain, p. 76, 1819 - 1832 from HC, PP, 1831-32, vol. 10 , part II, appendix 5, p.594.

From the above table, it is observed that since the early nineteenth century, the rates of duty on Indian muslins and calicoes gradually increased. In 1802, the British Parliament imposed around twenty seven per cent and around thirty per cent ad valorem duty respectively on the muslins and white calicoes of Bengal. The duties gradually increased and reached maximum in 1813. In 1813, the ad valorem duty on white calicoes reached around eighty five per cent which was around forty four per cent on muslins. In 1824, the duties were reduced to sixty seven per cent on white calicoes and thirty seven per cent on muslins. Until 1825, the duty remained more than sixty per cent on the white calicoes and more than thirty per cent on the muslins. In 1826, the duty was drastically reduced to ten per cent ad valorem on calicoes and on muslins and since 1826, the tariff rates were reduced. By 1826, the English cotton

goods were able to successfully outclass the Indian cotton goods in the World market as well as in their home market.

Once Montgomery Martin replied to the questions of the members of a select committee where the Hindus of Calcutta complained that every encouragement was held out to the exportation from England to India of the growth and produce of foreign as well as of English industry, while many thousands of the natives of India, who, only a few years before, had earned their livelihood by growing cotton, and by manufacturing cotton goods, were then without bread, in consequence of the facilities that had been afforded to the produce of America, and also to the manufacturing industry of England. He also mentioned that by the exportation of their steam-power based manufactures to India, the British not only supplanted the native manufacture, but also the spinner of the twist and the grower of the cotton. The decay and destruction of Surat, Dhaka, Murshidabad, and of other places, where native manufactures were carried on, were, in fact, very unfortunate. Martin was not ready to consider that as a fair practice of trade; he thought it had been the power of the stronger exercised over the weaker, and it would have been for the stronger's interest. On moral grounds, Martin was in favour of imposing the British duty, to be levied at the same rate as in India on British manufactures as had been levied in England on Indian manufactures.¹³⁴

Martin observed that the high rate of duty was imposed on Indian cotton manufactures while it was imported into England; on the other hand, the British cotton goods were exported into India at a low rate of duty. Thus the British cotton manufacturers in Glasgow and Manchester had supplanted the Indian native manufacturers from the market of India and abroad.¹³⁵

Martin also observed that England had evidently nothing to be afraid of competition with the Hindu labourers. If England had acted with justice and admitted the cotton

¹³⁴ *House of Commons* (P.P. 1840, vol. 8), p. 275.

¹³⁵ *ibid.*

manufacturers of British India on the same terms upon which the cotton manufacturers of England were admitted to British India, then the unjust treatment for a quarter of a century might have been compensated or avoided.¹³⁶

Bengal cotton textile industry was not highly affected by the high tariff policy although it checked the importation of Bengal cotton manufactures into Great Britain only. The British Parliament started to impose tariff and prohibition of Indian cotton goods in English market as early as 1700. Since then after a century hence i.e. up to the second decade of the nineteenth century, the export of Bengal cotton goods was considerable. But when the English cotton textile industry became highly developed, its high productivity and large scale production caused the decrease of the price of their cotton products, the export of Bengal cotton products was on the wane. Besides these, the cotton goods of England since the first half of the eighteenth century started to be long lasting and handy for use. This was why cotton goods of England successfully outclassed the Bengal cotton goods in the World market as well as in the indigenous market of India.

V

The facts described in this chapter show that the period under review represented economically an important phase when the Industrial Revolution caused a drastic change of the production system in England whereas Bengal industries still followed the traditional age old system of production. In this period a gradual recession of the cotton industry of Bengal occurred and the cotton industry of England emerged as the leader in the global market.

Here we have analyzed the various techno-economic factors which should be judged to find out the main cause for the triumph of English cotton goods over the Bengal muslin and calicoes. We have discussed about four factors viz. technological

¹³⁶ *ibid.*

innovation, labour cost of production, supply of raw material and economic environment.

When we consider the labour cost of production, we see that after the Industrial Revolution the labour cost in England became lower than that of Bengal although the wage rate was very high in England.

When we consider the raw cotton of production there is hardly enough evidence available that can certainly show that the price or the supply of raw cotton was responsible for the triumph of the cotton goods of England over the Bengal cotton goods.

When we describe the oppression on Bengal weavers in the one hand and tariff protection to English cotton industry on the other, we see that after tariff policy and oppression the Bengal cotton textile industry maintained its buoyant position for more than a hundred years. So, this factor was not that much significant.

Among the factors mentioned above, the technological innovation was so far the most powerful one. That the oppression and prohibitive tariffs were the leading factors behind the competition among the two production centres of the world were some sort of baseless notions. However, these certainly had some detrimental effects on the cotton industry of Bengal. The point is that even if there had been no hostile tariffs and no oppression, the downfall of the Bengal industry could not have been prevented long on account of the mighty force set in motion by the mechanical revolution. It was Industrial Revolution that enabled England to supplant the Bengal cotton products not only outside, but within our own country itself. Inventions of power driven machineries made it possible for the British industry to produce muslin and calicoes in imitation of the Bengal products at such low prices as to outclass Bengal cotton goods of same qualities.