III- INDUSTRIES

III.1 COTTON TEXTILES

India was famous for its cotton and textile products. In every part of the country people in large numbers were engaged in textile production. Bihar was an equally important centre of cotton textile production. Various travellers from pre-British period praised this place, particularly Patna and its environs for its cotton textile production and its trade. Few of its product like amertees, zafarkhani and alejahs and mercool, were produced in large quantity and was in considerable demand in European and central Asian market.¹

At the beginning of nineteenth century, in Patna-Gaya and its adjacent places, cotton textile industry was the largest industry. In this region city of Patna, being the centre of commercial activities served as an emporium of these textile goods.² Being the largest industry, this industry engaged largest number of working hands. The Patna-Gaya region had acquired a distinct reputation for producing some of the high specialized piece goods by specialized craftsmen.

¹ Cf. English Factory Records; cited by Hamida Khatoon Naqvi, Urban Centers and Industries in Upper India, Bombay, p. 123.
This was an unorganized sector. Like other parts of the country, in Patna-Gaya region also, this industry was organized at best as cottage industry. This was a peculiar feature of Indian agricultural society that in it "these families-communities were based on domestic industry, in that peculiar combination of hand weaving, hand spins and hand tilling agriculture, which gave them self supporting power".3

In fact 'spinning and weaving are carried on in each family as a subsidiary industry' in India.4 Cotton textile industry had two levels; the first one existed at village level and produced chiefly coarse cloth. These products were consumed locally without the intervention of the market. Peasant grew cotton on a small patch of his land, which cleaned, carded and spun into yarn in his house and finally gave it to a village weaver to weave it into pieces of cloth.5

The second was largely urban based and textiles were produced external markets. These were of better qualities. Various cities and regions were often associated with the production of such qualities and varieties of cloths.6

5 Irfan Habib, Indian Economy 1858-1914, p. 93.
6 Ibid.
At the village level cottage industry labour was performed by women. They separated the seed from the raw cotton with the help of cotton-gin separate the fibers and it was performed by the professional people called *dhuniya*. Probably one third of the *dhuniya* were engaged in it. It is interesting to note that till the beginning of the 19th century the cotton beaters had adequate resources to buy a little amount of cotton clean it and then retail it themselves. 7 Nevertheless people were hired for such work and men and women both were able to earn 3 rupees to 4 rupee in a month. In rural area where they received their wages in kind, used to get 1½ seers of grain to beat one ser of cotton. In a day a man could beat 4 *sers* of cotton. Buchanan further reported that those who had little capital were able to earn 4 to 5 rupees in a month. 8

Spinning of cotton was largely done by the women. Women of every section of the caste hierarchy were engaged in spinning. 9 No special stigma was attached to it. Women, who spun professionally, work on finer kind of

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7 Buchanan, p. 647.
8 Ibid.
9 Buchanan, p. 649. In any period of time in Indian history spinning or such work were considered as the 'work' of womenfolk. Arthshastra mentioned that directives were issued for employer, who hired the services of single and needy women of upper strata of society, regarding their wages and condition of working. Similarly during medieval period spinning was a 'women's work'.
thread which had better return. They spun and twist this yarn by the means of spindle or takua,\textsuperscript{10} unlike the ordinary one who work on ‘charkhi’ (spinning wheel).\textsuperscript{11} The cotton thread spun by spindle was stronger and finer in comparison to thread obtained from spinning wheel.

According to the estimate of Buchanan, 330396 women were engaged in it.\textsuperscript{12} Majority of them spun for few hours during their leisure time.\textsuperscript{13} They produced thread, worth Rs. 23,67,277 per annum. It was suggested tht if the total cost of production worth Rs. 12,82,272 were deducted than a profit of Rs. 10,81,005 could accrue to spinners.

Thus, an average earning of a spinner was around Rs. 7 rs. 2 \textit{ana} and 3 \(\frac{1}{2}\) rs. were earned as profit.\textsuperscript{14} The weavers consumed the thread which were worth of Rs. 177139 \(\frac{1}{2}\).\textsuperscript{15} Women who took it as an occupation, usually they worked for fine thread, as stated earlier, could be able to earn much more and women from indigent families could expenses of their families.\textsuperscript{16}

\textsuperscript{10} K.K. Dutta, \textit{History of Bengal Subah}, p. 43.
\textsuperscript{11} Buchanan, p. 647.
\textsuperscript{12} Ibid, p. 771.
\textsuperscript{13} Ibid, p. 647.
\textsuperscript{14} Ibid.
\textsuperscript{15} Ibid, p. 775.
\textsuperscript{16} K.K. Dutta, op. cit., pp. 43-44.
Unlike the spinning, weaving was usually confined to a particular caste group of Hindus and a particular section of Muslims. These were *tantis* among Hindus and *julaha* among Muslims.¹⁷ Weaving was primarily business of men but usually women assisted them in their work.¹⁸ There was one more feature associated with the peasant's industriousness that usually they had looms in their houses and both men and women utilized their leisure time to manufacture cloths.¹⁹ To start their work weavers not require a substantial sum. It has been estimated that eleven rupees two *anans* were minimum requirements in the beginning.²⁰ Coarsest kind of cloths were weaving throughout the year but for woven the fine muslin; period between middle of May to middle August was considered the most suitable one owing availability of required moisture in the atmosphere,²¹ which in turn facilitated the manipulation of the threads without causing harmful friction.


¹⁹ Ibid.

²⁰ Sinha, op. cit., p. 26; Martin, pp. 974-75.

²¹ *A Descriptive and Historical Account of the Cotton manufacture of Decca*, pp. 77-78. Cited by Ghoshal, p. 4.
There were altogether 19,900 houses of weavers and 24352 looms engaged in these houses for the cotton production.\textsuperscript{22} For fine fabric the whole annual value of the manufacture was Rs. 540,000 on which cost of thread was 458600 rupees. Generally three persons were employed in a loom. Therefore each one had an average income of Rs. 36 annually.\textsuperscript{23} For the coarsest kind Rs. 28 $\frac{1}{2}$ was the annual profit from each loom.\textsuperscript{24} Along with the cotton textile manufacturing, subsidiary industries were developed in the region. In Patna-Gaya region, 552 persons were engaged in dying the cotton thread or cloths.\textsuperscript{25} These were divided into four groups according to the material they used for dying. \textit{Rangrez} used various colours for dying, \textit{Nilgur}, as was suggested by name, dyed with indigo, \textit{achfursosh} used \textit{moringa} while the fourth \textit{golasaz} dyed with \textit{lac}.\textsuperscript{26} These dyers earned fairly good wages. According to Buchanan, a family of dyers could earn more than Rs. 120 in a year.\textsuperscript{27}

Another important profession dependent upon cotton manufacture was embroidery. It was a specialized craft practiced by women and they

\textsuperscript{22} Buchanan, p. 775.
\textsuperscript{23} Ibid, p 652.
\textsuperscript{24} Ibid.
\textsuperscript{25} Buchanan, p. 775.
\textsuperscript{26} Ibid, pp. 649-50.
\textsuperscript{27} Ibid, p. 652.
were known as ‘Buta Banwaiyas’. Their number at Patna was 95. They were very efficient in their work and they decorated the cloth in the same way as it was done at Malda and other places of Bengal.\textsuperscript{28} Besides these needle workers, there were seventeen houses of ‘Chhapagars’. They put gold and silver flowers on fine muslin by a very simple process. Buchanan observed: “they stamp the cloth in the form wished, with common glue, and then apply gold and silver leaf, which adheres to the glue, and rubs off where that has not been applied”.\textsuperscript{29} These kind of ornamented cloths were never washed, but were very showy. People used it only on special occasions.\textsuperscript{30}

A good proportion of cloth was generally bleached. Kundigars were the specialized professionals who performed this job. Parchahkush were the set of another people who were employed in it.\textsuperscript{31} Apart from the cotton textile, silk manufactures were also flourishing in this region. Particularly in the vicinity of Gaya, Fatwa and Nawada, different varieties of silk piece goods were manufactured of which ‘sela’ was the most important one. It was widely used as wrapper and women’s petticoat was well. The

\textsuperscript{28} Buchanan, p. 655.

\textsuperscript{29} Ibid.

\textsuperscript{30} Ibid.

\textsuperscript{31} Ibid.
pilgrims of Maharashtra, who often came to Gaya on religious tours, were very fond of it and made a good purchase of this item every year.  

A piece of 18 cubit long and 2 cubits wide was sold at Rs. 2.8 as it consisted of cotton with *tasar* silk border.  

Weavers who worked entirely in silk were not many in numbers. Weavers were mainly engaged in manufacture of cotton piece goods or mixed goods. About 1622 weavers in this region were engaged in manufacturing of mixed fabrics. They mostly lived in the neighbourhood of Patna-Gaya and Nawada. *Banusa, Maghiyas, Sela* and *Lunggi*, were the important varieties produced in these places.  

*Chintz* were manufactured at Patna but not used by local people. While in other places *chintz* were produced to cater the indigenous demand. In Patna it was an article of trade. Probably this was not in regular demand. Therefore it seems that the workmen did not have regular employment in it and accordingly could earn 5 or 6 rupees in a month. Two men could in one day print one piece of calico, for which they got one

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34 Sinha, p. 35.

35 Ibid; Buchanan, p. 652.
rupee; but the raw materials cost one half of the money. A regular employment in a month could be able to give Rs. 7-8 to the persons engaged in it.\textsuperscript{36}

Besides chintz Patna was also famous for its other varieties like *emerties* (ambertio). These finer varieties produced in Patna was in great demand among the Europeans and Americans. Various varieties of fabrics were exported to the Cape of Good Hope and Mauritius.\textsuperscript{37}

As far as the market was concerned European companies were the largest buyer of these goods. The commercial resident of Patna served as an ‘agent’ for providing the Company’s investment and he was also the ‘head of the commercial affairs’ in the province of Bihar. There were satellite factories attached to the chief factory at Patna. These were situated at Bankipore, Jehanabad, Mogra, Miabigha, Lucknah, Shahabad, Chapra, and Singhia. Besides these there were a large number of cloths manufacturing centres spread all over the residency which were attached to the chief factory.\textsuperscript{38} They procured the commodity through their agents.

\textsuperscript{36}Buchanan, p. 555.
\textsuperscript{37} Home Department, Pub. Cons. May 1, 1798, no. 5, May 22, 1800, no. 16, August 1, 1817, no. 33. Cited by Sinha, p. 43.
\textsuperscript{38} Sinha, p. 69.
Company offered advances to the weavers for securing piece goods. The amount of advances was considerable for the weavers. It has been suggested that money was provided in advance with a desire to provide the manufacturers with an ultimate resource for the payment of the land revenue which could have been seriously affected without advances issued regularly to them. Company had special consideration for the quality, which they never compromised.

Through this investment, company ensured the supply of goods of standard quality. Fluctuation of prices could not affect the purchase of these goods as it was fixed at the time of offer of advance to the weavers. But it left the weavers in a state of complete dependence. Therefore, weavers were often avers to accept the advance.

In such circumstances Thomas Brown, Commercial Resident of Patna, abolished the system of advances and introduced the system of ready money in purchase piece goods. From then on, this system of obtaining Company's investment continued till the winding up of the East

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39 Ghoshal, p. 7.
41 Ghoshal, p. 8.
42 Ibid.
India Company’s cloth factories in Bihar in 1819.43 Introduction of direct purchase had a negative impact on quality of Patna cloths.44 There were efforts to improve the quality of piece goods; but these failed to attain the desired objective.45 In fact, by 1818, the demand of cotton textile in British market had fallen, which led to the discontinuation of investment in this commodity from Patna.46 In the year 1813-14 the Residency of Patna had supplied no less than 61495 pieces of cloth at a cost of 247456 rupees, but in 1818 the total number of piece goods, received at the Sadar Godown at Patna from the several subordinate arrangements hardly exceeded half that number. Thus by the year 1819 the different cloth factories under the Patna Residency were abolished.47 After coming of the Charter Act of 1833, commercial concerns of the East India Company met a final blow and finally this led to cease of commercial residency at Patna after 1835.48

Beginning of the nineteenth century witnessed the decline of the cotton textile industry. By 1800 England was on the threshold of

43 Journal of Indian History, 1914, (supplementary), cited by Sinha, p. 78.
44 Board of Trade, (commercial), Proceedings, April 15, 1814..
46 Extract from the Proceedings Governor General Council in the Commercial Department, April 16, 1819
47 Sinha, p. 79.
48 Ibid.
completing the conquest of the cotton textile industry by machine. Besides exporting cotton piece goods, gradually India became a supplier of raw cotton to feed the English factories at Laneasline.49

The decline of cotton textile industry was due to certain factors. Decline of aristocracy and elite class contributed to the decline of demand for fine cloths, which was otherwise more remunerative.50 But the real loss was due to decline of demand abroad. Industrialization in England and tariff policies had adverse impact on Indian demands for Indian piece goods.51

Apart from the loss of foreign market, the imperialist invasion of Lancashire goods was possibly responsible for the debacle of Indian market for indigenous cotton textile products. Few of the specific qualities or rather coarser kind of cloths survived till the last decades of the 19th century. Silk weaving, which was the first to experience the brunt of 'dislocation' could survive at the end of the century in Gaya, due to its demand for religious purposes.52 Similarly, coarse cloth like 'motia'

50 Ghoshal, p. 24-25.
51 Ibid., 25-31.
survived due to its durability and cheapness. Common people paid for higher price for certain varieties of coarse cloth than for similar imported varieties. Greater durability and warmth of the ‘motia’ or ‘gazi’ (which was chiefly used by the poor classes) believed to compensate for the higher price.

Decline in the cotton textile industry or the ‘De-industrialization’ of it not only affected the employment of weavers and spinners, but also many other classes of people like dyers, bleachers, cotton beaters and needle workers who were lost their employment. A.K. Bagchi, on the basis of Buchanan’s estimates argued that 60 percent of the industrial population was engaged in cotton textile industry at the time of Buchanan’s survey. But by 1901 the percentage of the population engaged in cotton textile was only 15 percent of the industrial population. By the end of our period, textile industry witnessed a tapering off.

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53 Bagchi, p. 514.
54 Ibid.
Plate V: A Cotton-carder (Dhuniya) at Work, (G. Grierson, *Bihar Peasant Life*, p. 64)
Plate VI: Cotton Gin, (G. Grierson, *Bihar Peasant Life*, p. 46)
Plate VII: The Spinning Wheel (Charkha), (G. Grierson, *Bihar Peasant Life*, p. 46)
III.2 SALTPETRE MANUFACTURE

The soil of Bihar was rich in nitre, which produced good quality saltpeter in abundance. Saltpetre being an ingredient of gunpowder had created a stable demand for it among European nations.\textsuperscript{55}

After the conquest of Bengal (1757) the English East India Company established a monopoly on its trade.\textsuperscript{56} Besides, its demand for gunpowder, saltpetre was also needed for dying and manufacturing of glasses.\textsuperscript{57}

During eighteenth century European trading companies were competing with each other for saltpetre. They advanced money to the ‘Assamies’ for keeping saltpetre area under their hold.\textsuperscript{58}

Saltpetre was sent to Calcutta through waterways. For this purpose a fleet of boats was sent from Patna to Calcutta known as ‘Patna Fleet’.\textsuperscript{59} This Patna fleet was a large flotilla of strongly built Pulwar boats escorted by armed soldiers, carrying saltpetre and piece and Patna had the advantage of linkage with distant Calcutta through the long course of river

\textsuperscript{56} Ibid.
\textsuperscript{57} Ranjan Sinha, p. 65.
Ganges and the English East India Company had secured this route with the help of its army.\textsuperscript{60}

Buchanan mentioned that before establishing monopoly, manufacture of niter was free. It was consumed in a considerable amount locally for gunpowder and fireworks. \textit{Atishbaz} were the people who were engaged in it.\textsuperscript{61} Probably they manufactured it on their houses. Company had established their manufactories at different places in Bihar. They procured the soil after the first boiling.\textsuperscript{62} Prices of the saltpetre depended upon its quality. It varied from Rs. 3 to Rs. 7.\textsuperscript{63} On each furnace, where saltpetre was prepared, one man, one woman and two boys or girls were usually employed for six months.\textsuperscript{64} There were altogether 566 furnaces in Patna-Gaya region which produced 8000 \textit{maunds} of crude nitre in the season.\textsuperscript{65}

During the last decade of 18\textsuperscript{th} century demand for saltpeter was greatly increased due to ongoing Napoleonic wars. This possibly added to

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\textsuperscript{60} Kumkum Chatterjee, \textit{Merchant, Politics and Society in Early Modern India}, Leiden, 1996, p. 69.
\textsuperscript{61} Buchanan, p. 664.
\textsuperscript{62} Ibid, 655.
\textsuperscript{63} Ibid.
\textsuperscript{64} Ibid.
\textsuperscript{65} Ibid.
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the demand for Saltpetre. According from Rs. 1,78,000 in 1792 to Rs. 3,28,000 (or 1,50,000 maunds) between November 1798 to October 1799.66

Nunias were the people mainly engaged in its preparation.67 They collected saline efflorescence from the walls of their houses and boiled it into their kitchen.68 The English East India Company used to give money in advance to these people through their dalals.

These dalals exploited the saltpeter manufacturers. Nunias or Saltpetre manufacturers were given very low prices. Generally for one maund of saltpetre the paykars received one rupee and fourteen anas from the Company, out of which nunias received one rupee and six anas.69 By 1813 prices were further reduced and pykars received only one rupee and seven ana per maund, out of which only fourteen anas remained as the manufacturer’s share.70 Nunias from Patna petitioned against the pykars and their subordinate peons. They oppressed the nunias by reducing their advance, demand for salami or physical torture.71

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67 Buchanan, p. 664.
68 Bengal Board of Trade (commercial) Cons. May 6, 1814.
69 Ghoshal, p. 138.
70 Ibid.
71 Ibid, pp. 138-140.
Production of saltpetre witnesses an increase in 1840's. In 1845, 500,000 cwt. saltpeter was produced and a major part of this production was supplied from Patna. This was reduced to 392000 cwt. in 1903-1904. This was due to discovery of Chile salt as an alternative of Indian saltpetre.\footnote{Imperial Gazetteer of India, III, p. 236, cited by Sinha, p. 83.} This led to decline of saltpetre trade in India. Therefore, decline of foreign trade led to the decline of Patna saltpetre industry as well.\footnote{R. Sinha, p. 83.}