CHAPTER: 3

GENESIS & GROWTH OF ARTISANAL SILK INDUSTRY IN INDIA (with special reference to West Bengal)

3.1 Introduction

In the preceding chapter, genesis of silk has been elaborately discussed for across the countries in the world. The mysterious power of this magic yarn which kept on weaving the economic and commercial relations between countries of the continents has been found worth illustrating. Against this backdrop, the present chapter will unravel the history of Indian artisanal silk industry and its growth down the timeline up to the period of Independence. As the core area of this research concentrates on artisanal silk industry of West Bengal, the major line of discussion in this chapter will ultimately converge to the history of Bengal Silk.

In the foregoing chapter, it has also been mentioned that Chinese silkworm *bombyx mori* was smuggled to India during 2nd and 3rd centuries BC though literary evidences of *tussah silk* was found much earlier in the foothills of the Himalaya. However, with the archaeological excavations in two sites of Indus Valley civilizations during 1999-2000, researchers started thinking about the origin of silk in Indian subcontinent in a different dimension. The volume of artifacts amassed from these two sites strongly indicates that silk manufacturing in India was equally prevalent like China and dated back to 2450-2000 BC (Ball, 2009). Fine structure of silk strands were observed in the necklaces and bangles excavated from these sites , while the precise shape of the individual silk threads determined the shape of the orifice through which they are executed. These also provide clues regarding the species of silk moths that produced the strands. Researchers show that Harappa and Chanhu-daro samples contained silk from species of Antherra moths indigenous to South Asia (Good et al., 2009). The silk fibers found in these excavations were processed using similar process of degumming and reeling as that of Chinese. Scanning electron micrograph, it has been found that some fibers were spun after the silk moth was allowed to escape from cocoons[1].

The artisanal expertise in Indian silk industry, especially in brocade weaving, was initially inculcated by Parsis in Gujarat, who had been migrated from Southern Persia (Faristan). Parsis came from the area of the Persian Gulf that was better known for its high quality pearls. They used real pearls in their manufactured silk embroidered fabric. The influence of this Gujrati silk-art work pervaded the rest of Indian silk industry in extensive manner. The silk weaving centers started developing in and around the capitals of the kingdoms and around the holy-cities where people from affluent sections either dwelled or traversed. Along with these artisan classes a rich merchant class also developed who contributed substantially in developing of these artisanal silk with their advance capital. In subsequent sections of this chapter the changing characters of these native capitalists and their relation with silk artisans will be illustrated with the changing passage of time. However, in the beginning their role seemed to be like a patron who sincerely desired to contribute with positive attitude. We will discover how the attitude of the middlemen changed with time. The ancient silk weaving centers were situated in Lahore, Agra, Fatepur Sikri, Varanasi and Murshidabad, other than Gujarat and Malwa and South India. However the historical trajectory of this artisanal growth of silk industry will be discussed in the subsequent sections of this chapter with special reference to Bengal artisanal silk sector.

Section 3.2 will elucidate the genesis and growth of sericulture and silk industry in Indian subcontinent starting from the ancient period to pre-British East India Company's arrival to India, while the following section 3.3 will at a time illustrate the problems and prospect of the artisanal silk industry during the period of British traders (1612-1757) and also for the period of the Company Rule (1757-1858). The subsequent section 3.4 will explicate the situations of Indian Silk Artisans at the background of the changing global trade prospect. Section 3.5 will

illustrate the status of the silk weavers and artisanal classes across the country in colonial period while section 3.6 will concentrate on the Bengal silk industry and especially the rise and fall of economic situations of Bengal artisans as a resultant impact of British colonial policy. Section 3.7 will conclude the discussion elucidating a comprehensive picture on the over-all growth of the sector up to Indian Independence and commencement of economic planning where special emphasis had been given on priority sectors.

3.2 History of Silk Manufacture & Trade in India before the Arrival of British Traders (up to 1612)

As mentioned earlier, there exists an ambiguity regarding the origin of sericulture in India (Charsley, 1982). Commentators have remarked that perhaps wild silks (e.g., Muga, Eri, Tassar) were produced in ancient India since time immemorial. Literary source of Vedic Period (c. 1500BC-500BC) and Epic-Purana Period (c. 200BC – 700BC) like Rig Veda, Ramayana and Mahabharata had indicated about silk. The earliest religious scripture 'Rig Veda' mentioned "urna", generally translated as some sort of silk (Dutta and Nanavaty, 2007), while another sacred law-book 'Manusmriti' referred to clothes made of silk and the great ancient Indian epic Mahabharata explained silk clothes as one of the array of luxury items brought to the court of Pandavas after their conquest of the kingdom. Again, King Yudhhisthhira received clothes woven from thread spun by worms as a gift from feudatory Princes. There are illustrations of the fabric in Ramayana too. The wedding gifts of Sita included among others 'fine silken vestments' of diverse colours. All these literary evidences point to the origin of silk (not mulberry but wild silks) in India by 1300-1400BC.

According to certain historians, the cultivation of silk first began in the sub-Himalayan areas flanked by the rivers Brahmaputra and Ganges. N.G. Mookerjee (1919) in his book 'Genesis of Silkworm' said that domestication of sericulture originated somewhere at the foothills of Himalayas (Dutta and Nanavaty, 2007). The Aryans discovered the silkworm in these areas of Sub-Himalaya. Chinese and other Turinians found it in the ultra Himalayan regions and Semitics in the western Himalayas beyond Kashmir. However, some other commentators believed that mulberry sericulture might have entered India through overland routes from China around 140BC via Khotan (Ray, 1995).

References were cited by Banabhatta, the famous court-poet of King Harshabardhana (AD 606- 648), about the glories of silk in India during the time of early Christian era. King Harsha had decorated his entire palace with rainbow coloured silks at the time of the wedding of his beloved sister Rajyashri. That was the richness, love and tradition of Indian silk during the reign of Kings in the past. During medieval period (800AD-1800AD) silk production was practiced in India as a dependable livelihood in Kashmir, Bengal, Mysore and other parts of India. Silk production was also greatly patronized under Mogul Regime in India (1526AD-1857AD). The writings of many medieval historians contain frequent references of silk industry and sericulture. Mirza Haider (1499 -1551) in his 'Tarikh-i- Rashidi' refers to large number of mulberry trees among the wonders of Kashmir. Similar references are found in 'Ain-i-Akbari'(Constitutions of Akbar) in 16th century. In Akbar's court, Kashmiri shwals and woven silks were quite popular. As a matter of fact, Gujarati silk manufacturers and artisans were brought to the royal workshops in AD 1572 by Emperor Akbar. He took an intensive initiative to supervise the royal textile workshops at Lahore, Agra and Fatepur Sikri where skilled immigrated weavers from different background used to work together. The intermingling of their creative techniques brought about a great transformation in the artisanal

silk industry of India. The exquisite latifa buti was the outcome of the fusion of Persian and Indian designs.

During 14th and 15th century, Moors (Medieval Muslim inhabitant of Morocco) used to export Kashmir and Bengal silk from India to European market (Nananvaty, 1990). But the Bengal silk failed to make any big dent in the European market by that time (Foster, 1622-23). During the 16th Century, commercial production of silk had been started in Bengal by the last ruling Sultan Hussain Shah. However, prior to 1650 the Dutch company traded Bengal silk involving not greater than 10,000 rupees per annum (Om Prakash, 1988). During that period, performance of English company was even worse than Dutch Companies, i.e., not more than 17 percent of their meagerly invested capital in this trade in 1651 (Balkrishna, Commercial Relations, p 99). When the British company came in India in 1612 AD, they found silk as a potentially flourishing trade. The East India Company set up trade centers at ports of Surat and Maslipatnam and a filature of silk at Patna. Later, Kassimbazar and Murshidabad in Bengal became major of hub of silk trading in India.

Meanwhile, in Gujarat, a rich section of middlemen developed between the village artisans and traders, who were known as *dadani* merchant or silk merchants. These silk dadani merchants were having inward-looking approach and they never tried to venture the procurement and overseas interests at a time like Surat, Malabar and Coromondel Merchants (Mukherjee, 1994). These local merchants were actually intermediaries between native producers of raw silk and the exporters of raw silk and silk textiles. They used to receive the advances from Asian or European export merchants and distributed them to rural poor producers. At the time of harvest, they collected the raw silk from those poor producers and brought it to manufactories (*arang*), where export merchants could get the raw silk rewound and sorted by local artisans before sending it to European market (Chaudhury, 1995). From the third decade of the 17th century (with the expulsion of Portuguese forces from Hugli by Mughal forces), the influx of Gujrati merchants in Bengal became vibrant. Bengal-Surat trade developed directly in this century bypassing Coromandel ports, but the control of trade was more in the hands of Surat merchants and their Bengali agents (Chaudhury, 1971; Arasaratnam, 1987; Marshall, 1987). Thus up to mid 17th century, the Bengal silk industry was mainly sustained under the aegis of domestic traders (besides Gujrati traders, there were other merchants from Lahore, Multan, Benaras, Gorokhpur, Hyderabad, Delhi, Benaras and Agra) , who traded Bengal silk in Agra, Delhi, Lahore and Surat etc. The mid of the 17th century witnessed a strong connection between North India and Bengal Economies through inter-regional silk trade. John Kenn of British East India Company wrote in 1661 - "*According as the silk sells in Agra, so the price of silk in Kassimbazar riseth and falleth. The exchange of money from Kassimbazar to Patna and Agra riseth and falleth as the silk findeth a vent in Patna and Agra*" (Wilson, 1895). However, the market of this exotic fiber was still not large enough due to lack of sufficient traders and their ignorance about the market price of distant places. India's domestic market was also restricted due to ban on indiscriminant use of silk-clothes during the Mughal period.

In the international market silk trade was mainly governed by Italy and France till the 17th century. During 1619-1622, there was an accelerating trend in silk price due to Mediterranean crisis and famine of Italy (Ball, 1977; Romano, 1985; Cipolla, 1976). To meet the demand gap, Persian silk started dominating the market. However, that too had stopped after 1650 due to severe internal political disturbances in those regions. That was the time when the Dutch traders started importing Chinese silk and a cheaper substitute of that, i.e., Indian Silk, to

European market, which ultimately made Kassimbazar (now in Murshidabad district of West Bengal) a famous silk hub in the history of silk trade.

Cheaper price of Bengal silk was explained by several historians in different ways. The most common explanation was the provision of low cost economy. Bengal could easily afford all necessities of life almost at a price that was half of that in other parts of India (William Foster, The English Factories in India, 1634-36). Another explanation might have been the employment of family labour in the industry – the engagement of artisans' wives in winding and spinning and their children in sundry affairs (Robert Orme, 1805). Involvement of family labour gives the Bengal artisans a cost advantage to make their products exportable. During 1635 to 1650, the volume of silk exports from Bengal to European market had risen from 15-20 thousand pound to 50 thousand pound. The year 1693-94 was marked as the highest volume of silk exportation from Bengal to Europe by the Dutch traders. Bengal silk accounted for 57.8% of the total Dutch exports to Europe and 37.3% of total Dutch exports to Japan (Prakash, 1985). The Dutch merchants introduced Bengal silk in Japan's market in the late 17th century (ibid, 1985).

European trading houses were ignorant about Bengal silk even in the second decade of 17th century. A letter of English factories in 1622-23 indicated, "*Wee are glad we are acquint of further search after Beng silke, whereunto wee were somewhat engaged, for beinge (m)isleed through a veyne promise of an unable merchante to write of some large hopes of good quantetyes procurable in these parts, which after soe longe expectaction vanisheth into smoke, for here seldome comes anye eyether in itts quantety or condiction worth the surveigh…*". [Letter of W.Methwold and F.Futter at Masulipatam to Surat, in William Foster, The English factories in India, v.2, 1622-23, c.2]

According to another study (Master, 1911), the EEIC was investigating the possibilities of buying Bengal silk instead of Surat silk mainly due to cheaper cost of the raw silk. In the 1620's, the commercial mission of Hughes and Parker was to ascertain the commercial value of Bihar and Bengal silk. They reported back to their superiors that the best silk came form the vicinity of Murshidabad, where silk could be bought 20 percent cheaper than the rest of India. Thus within the mid of 17th century, history witnessed East India Company setting up their permanent silk factories in Bengal. They established silk factories in Baulia, Kumarkhali, Kassimbazar, Jangeepur, Malda, Radhanagar, Sarda, Rangpur, Sunatia, Haripur, Shantipur and Sonamukhi. They competed with Dutch companies for control over the supply of Bengal Silk in European market. They started filling their coffers with raw silk. They set up their trade centers in parts of Surat and Maslipathnam and a filature at Patna to decentralize the location of sericulture.

British East India Company was very much eager to exploit the inner potential of Bengal silk artisans in world market. They identified mainly two shortcoming of Bengal Silk- (i) the presence of different sorts of the threads in the same skein; and (ii) the fact that Bengali artisans did not cross filament of cocoons when they reeled the silk which made the silk lacking of roundness and lightness. In order to increase the volume of sales of Bengal silk, the Court of Directors drastically changed the Bengal reeling technology. In 1769, the company contacted with experts to introduce Piedmontese-technology to Bengal sericulture (Davini, 2008). The introduction of Piedemontese reeling method brought about a revolution in both Bengali cottage productions and marketing organization. To assess the impact of this Piedemontese technology, Moioli (1981) explained that Mediterranean low quality silk was driven out from the London market as the first wave of panic of this British experiment with

Bengal Silk was spread to the areas like Lombardy, the lower Rhone Valley, Calabria and Valencia. In 1681 the company invested £ 230,000 in Bengal Silk Industries. In 1698, Bengal silk fetched a peak price in London as the silk crop failed in both Italy and France. Within 1740, the English East India Company (EEIC) emerged as a greater trading company as compared to Dutch. The year 1813 was marked as the end of the monopoly power of the East India Company in terms of trade. But Bengal silk was still reigning in the export-basket of British traders.

Regarding British silk trade Bal Krishna(1942) remarked, *"This trade was, in fact, so vigorously pushed up that during the next five years [1680-81 to 1684-85] an unparalleled advance was made in the quantities to be procured in Bengal. In the earlier or subsequent history of the Company up to the Battle of Plassey(1757), such extensive amounts were ordered."* [Bal Krishna, Commercial relations between India and England, London, 1924, p.142]

The French Company also appreciated the merits of Bengal Silk yarn. In a letter written in 1660's Berneier[2] urged the French to concentrate on Bengal silk, that according to him would be as good as Lebanon Silk or Syria Silk with little improvement (*Indes Orientales : Correspondence General, 1666-1676).* However, the access of French traders to the Bengal silk market was not as vibrant as Dutch and English traders in the pre-colonial era.

3.3 Problems & Prospects of Artisanal Silk Industry during British Traders & Company Rule (1612-1858)

To begin discussing the situation of artisanal silk industry during the period 1612-1858, it is important to explain the rationale behind choosing this reference period. In fact, 1612 has been chosen as it demarks the arrival year of the British East India Company in India. As English East India Company (EEIC) played a dominant role in changing the trade and commercial policies of the country as a whole in later period of time, so it would be worth analysing to explain the growth of artisanal silk during this period. During 1612-1757, the East India Company set up various factory towns in coastal India with the consent of the native states mainly to strengthen its business interest while its competitors were Dutch and French companies. While after the Buxar war in 1764 and Battle of Plassey in 1757, it virtually became ruler of the Presidency and continued to remain so till its cessation of power by British Monarch in 1858. During 1757-1858, EEIC had adopted several policies to improvise the artisanal silk sector though the consequential adverse impact could never be undermined. This section would attempt to portray the chronological progress of the artisanal silk sector during the period 1612-1858. While the developments of Bengal Silk in the 17th century has been discussed in the preceding section, the 18th and 19th century development are explored below.

During 1870 to 1930, a national market emerged in a number of basic goods and services that were imperfectly traded before. Agricultural goods were amongst them. Labour which became more mobile than before was another. It was opined by many economists and historians that India's history and political economy was overwhelming and more powerful during this time. Handloom weaving industry was deeply influenced by the exposure to import substitutes. It was also explained by several commentators that industrialization in Britain meant deindustrialization for her colonies. There was a sharp contrasting view which states that creative impact dominates. In either view, the dominant source of change was long

distance trade. The sixty years between the opening of Suez Canal (1869) and the Great Depression (1929) witnessed an almost continuous growth of external and internal trade and changes in the nature of trade in India. Foreign trade became an immensely more powerful economic variable than before. Exports expressed as a ratio of national income increased from small amounts in pre colonial period to 10-11per cent in the inter war years. This ratio has been assumed to be a rough ratio of the importance of trade by many experts. In 1925, it was about 11 per cent of national income. The value of exports increased fifty times during1835 to 1925 and possibly over a hundred fold between 1760 and 1925.

However, raw silk production in India (precisely, in Bengal) continued to be an independent peasant activity and free from supervision and control by any higher authority, starting from its commercial introduction in 16th century till the adoption of Italian technology (Piedemontese technology[3]) in 1769, by the English East India Company (EEIC), The activity was dominated by a large section of poor farmers and sericulture artisans, applying rudimentary method of production and lacking sufficient capital to invest in it. The peasants harvested cocoons four to five times a year and the mulberry was cultivated on the best of the lands. The use of family labour made the activity more intensive despite having several quality related loopholes. The next stage of operation was reeling, which was again under the control of peasant-artisans (mostly the same person). The artisans had two choices regarding this particular activity. They could either use their own family labour (especially the domestic women) to reel the yarn or they could have them reeled in *Putney* by *Cuttani* (the reelers visiting the village market) during the harvest season. In *Putney* cocoons were reeled and then the merchant's agent brought them in manufacturing centers *(arang*) to rewind and sort it by the winders (naccuds) (Williamson, 1775; Mukherji, 1903).

The silk artisans of India (precisely of Bengal Presidency[4]) faced several hazards starting from lack of usury capital, technical know-how and quality-control supervision to external intrusion which acted as a hindrance in the development of sericulture as a dependable livelihood during the colonial period. The problems can be categorized under following heads:

- Incursion of Maratha (1740), Bengal Famine (1768-69) and intensive flood of 1787 hit silk areas particularly very hard. The Marathas had exclusive intention to destroy the silk centers of Bengal Province (Dimock and Gupta, 1965).

- Capital insufficiency was another reason which made the poor artisans getting exploited in the hands of *dadni*[5] *merchant.* EEIC was successful in conquering most sericulture artisans through a commercialization process imposed upon a subsistence domestic economy by making him dependent on usury capital (Davini, 2008). From 1790 onwards these artisans were forced to sell their cocoons to company's agents at a very low price. They were compelled to accept the lower price of the company because they had to pay higher rents for the land of mulberry cultivation. The silk artisans were left with no choice other than the market relation with EEIC (Mukhopadyay, 1995).

- The Bengal silk artisans failed to produce quality silk due to lack of supervision and quality control by the authority. During the Mughal and Nawabite period, the state's interest was centered around revenue collection from mulberry land. The merchants and bankers were interested about marketing and exporting and never tried to intervene in quality augmentation procedure. *Zamindars* and *taluqdars* preferred to cultivate rice

instead of mulberry and collect taxes from peasants on behalf of government (Dutta, 2000).

- Fluctuating costs of alternative crops made the sericulture farmers unsteady with his production. The farmers kept on changing his production crops which affected the expertise of the artisans and their power of precision with certain specific skill required in silk production. According to Chowdhuri (1998) peasants' decisions to enter and exit from the silk sector were purely rational as they wanted to allocate their resources in the best possible way. But this fluctuating behaviour had degraded the intensity of silk production by artisans to considerable extent. For example, at the beginnings of 1780, the peasants who entered the silk sector because of EEIC's lucrative offer a decade ago, decided to stop the production of silk.

- During the late seventeenth and eighteenth century (1689-1763), the war between France and American colonies had affected the EEIC's decision about investment in silk production. The rice shortages in Northern India at the same time raised the price of rice. This induced many farmers to reconvert their lands for rice production.

- EEIC decided to introduce the Piedemontese technology in Bengal in 1769, but the Bengal Famine (1768-69) had taken away one-third of agrarian Bengal population which made the technology temporarily ineffective for the labour scarce economy of the then Bengal. However, from 1789 to 1822, the Bengal population has shown an impressive growth rate of population from 22 million to 37.6 million (Bose, 1993).

- The village money-lenders (or *mahajan)*), who were inserted in the official list of intermediaries, made the life of sericulture farmers miserable to a greater extent. These *mahajans* were protected by the Company against any social injustice they had committed. They used to charge higher rates of interest on exchange of several consumption loans and the poor farmers usually got trapped in these loan net. Like company intermediaries the *mahajans* used corporal force to confine farmers incase they failed to give their produce. These kinds of torture led to inter-regional migration of farmers in many areas (WBSA, BoR, 1791).

3.3.1 East India Company's Incentive Policy for Sericulture Artisans

In order to encourage the sericulture farmers, especially in the context of depopulated Bengal economies, English East India Company (EEIC) introduced some policy incentives in their Regulation 1972. The company explicitly affirmed that coercion policy would not be exercised. The peasants who decided to enter the sericulture sector would receive favourable rent. This regulation contributed to the increase in mulberry cultivation in 1770.

In 1789, following the devastating flood in Bengal, a similar situation of diminishing sericulture interest was observed among the Bengal peasants. The company again tried to convince the farmers to return to sericulture by proposing the same regulation as in 1772. The most significant observation in this context is that the farmers this time clearly understood the policy of incentives better than before and they bargained for cash incentives (*taqavi)* this time (WBSA, BoR, 1789). Peasants became prudent enough to deal with these incentive policies in the context of depopulated areas. Very often they filed grievance petitions to the Collectors of Districts giving subtle threat of leaving their abode which was again sent to Board of Trade or Board of Revenues. Thus the peasants were able to turn the political economy of external power to their own advantage.

3.4 History of Silk Industry in India during the Colonial Period (1858-1947)

This section will elucidate the growth trajectory of the artisanal silk sector in India especially during the period under the British Raj, which commenced after the Indian Rebellion of 1857 and subsequent transfer of administrative right from EEIC to the British Monarchy. Though the process of extension of market economy had begun from early decades of 19th century, it gathered momentum only after 1850. Around this time the colonies of Europe were turning into suppliers of food and raw materials for the sake of the on-going industrialization process in Europe (Roy, 2000), while raw silk sector was one of the leading sectors for India. Peasants, artisans and merchants responded positively to this decision which resulted into increased export oriented production.

Around 1860, the usual unit of operation in weaving was the household, where the adult men were working as weavers and adult women on winding and sizing the operations and children as assistants in both weaving and winding. These factories employed mainly migrant labour and made money out of silk trade (ibid, 2000). Capital and labour involved in these silk manufacturing industries became increasingly mobile and there was migration from rural regions to new points of trade, as evidenced in Burhanpur and Surat. The weavers usually used to come from depressed or over populated regions.

However, from 1873-74 onwards the price of Bengal silk continued to fall in the international silk market and gradually the silk industry diminished down to nowhere before the end of the British colonial period. Though Bengal and Kashmir silk artisans shared the same fate of decline, the worsening situation of the former was greater than the later. On the other hand, the sericulture started rising with new vigor in Mysore under the supervision of Tipu Sultan during 18th century. Tipu made Mysore a leading silk producing state and took help of the foreign government to train artisans. Hanumappa and Erappa (1988) had elaborated how sericulture fuelled the rural artisans in this princely state. The technology was transferred from Bengal. Japanese and Italian silkworm strains were imported and experts were also hired from these countries (Navanty, 1990). Spread of disease during 1866 and the world depression in 1929 along with competitions from imported silk and rayon lead to downfall of Indian Silk Industry on the eve of World War-II. A tariff protection commenced from 1934 to save the industry from cheap imports of silk (National Commission of Agriculture, 1976). During the Second World War there was a temporary boom in the Indian silk industry due to the demand from the Allies for silk manufacture of parachutes. However, genesis and growth of silk sector in India would remain incomplete without illustrating the history of Kashmir silk, which will be taken care in the following subsection.

3.4.1. History of Silk Production in Kashmir

Kashmir had been the birth place of Indian sericulture in the 3rd and 4th centuries AD (Federico, 1997), though no well documented clarity was found whether the silk was home-woven or imported from China. The first documented silk in Kashmir was located in the praising words of the famous traveler Hiuen Tsang who visited India during 630-643 AD.

According to him, prevalence of mulberry sericulture was observed in Kashmir and the industry received adequate attention from the rulers and the governments.

However, since then the industry had decayed so much as to almost disappear till the period of King Bad-Shah. With the annexation of Kashmir by Mughal Mirza Hyder in 1540, the silk industry continued to produce quality product. After the Mughal Period (1585-1750), the silk industry again plunged into crisis as royal patronage of Afghans (1750-1842) was not similar like Mughal Emperors. Thus in the absence of institutional support and organizational capacity, the silk industry in Kashmir stagnated.

Under the British colonial rule, India's silk export-coffers were mainly filled by Bengal silk and partly by Kashmir silk. During 1823-1828, export from Bengal to England rose to 5.5% while considerable progress had been observed in production of Kashmir silk too (Federico, 1994). By 1835 the British East India Company ran over hundreds of filatures and exported 400 tons of raw silk. Maharaja Ranbir Singh was often credited for revival of sericulture in Kashmir. A modernization plan was first implemented by him in 1869 (Geoghegan, 1872). Receiving royal patronage private companies took over in the export trade and the Kashmir silk boomed in foreign trade till the 1870s when Bengal lost all of its foreign markets due to outbreak of silkworm epidemic diseases and technological stagnation.
In 1870, two filatures with 470 reels were set up at Raghu Nath Pura (Naseem Bagh) and Cherapura near Srinagar. About 127 houses for rearing cocoons were built there and the rearers were given special support for receiving cocoons. The Government owned the mulberries, distributed eggs, withdrew the cocoons (as penalty for the peasant incase they failed to reach the target), processed them in its own reeling plants and sold the silk. The system was devised to guarantee the silk growers and artisans a safe outlet for their cocoons and to maintain a high quality standard.

While the industry was showing signs of progress, pebrine, a silk-worm disease caused great devastation to silk worms in 1878. Due to spread of infectious disease of the silkworms in large breeding houses the silk project in Kashmir was abandoned after three years. It was resumed in 1890s with the style of centrally planned economy. All stages of production were under strict control of the British Government and its recognition to International market was well established. In 1892, the silk industry in Kashmir was organized on modern lines as a state enterprise under the leadership of Sir Walter Lawrence. In 1903, Mr. Thomas Wardle, an English sericulturist made a detailed survey of the industry and suggested various lines of improvement. Accordingly, machinery was purchased from Italy and a factory was set up at Rambagh in Srinagar. During the rule of Maharaj Pratap Singh (1905-1925), the silk industry of Kashmir underwent a drastic change and was exposed to modern and scientific approach. By 1907, ten filatures were set up and the artisanal industry was able to provide employment to 60,000 people who in turn used to generate silk income worth of £ 100,000. Despite the damage caused by fire to the silk factory in 1907 and 1913, the profits of Kashmir Silk factories went up from Rs. 3.6 lakh in 1902 to Rs. 12.5 lakh in 1919 (https://thecherrytree.in/once-the-largest-silk-factory-in-the-world/). This helped the Kashmir silk to push out Bengal silk from the South Asian market. Kashmir and Bengal silk started competing with each other and Mysore silk also became famous. Again, in 1908, for the first time in India the reeling of silk industry was done by using hydro-electric power. Kashmir silk received recognition in Western market and in 1910 nearly 50,000 households in Kashmir were involved with silk growing and about 80 tonnes was produced that year (ibid, 1997). Sericulture department in Kashmir earned huge profit immediately after the First World War.

However, from the second decade of the 20th century competition between China and European markets accelerated while the Great Depression further worsened the situation. Again, demand for silk was generated during Second World War which resulted high profits for the sericulture department. In 1937, the Rajbagh silk weaving factory was in full bloom. Thus by 1942, Kashmir had the largest silk factory in the world while quality of produced silk was comparable with those of Italy and France.

3.4.2 Trends in Export of Indian Silk vis-à-vis Global Trends (1820-1947)

After the closure of monopoly of English East India Company in1813, all British citizens were allowed to trade with India. Therefore analyzing the export trends from 1820 onwards would reveal the changes in trade pattern and volume from the previous era, i.e., during the monopoly era of EEIC. Again, we would like to segregate this time period into Company rule without monopoly in trade (1820-1860) and direct British rule (1860 to 1947). On August 2, 1858, the British Government passed the Government of India Act, through which the authority of India had been transferred from English East India Company to the Queen of England. Therefore the latter period would indicate whether direct British rule supported or ruined the Indian silk artisans in building trade relations with other nations. As a matter of fact, the Suez Canal was opened in 1869 which reduced the sea passage from England to India to three weeks in stead of three months. British women started coming to India and began forming their own society separate from the native society in India. More and more British goods were imported which started destroying many Indian crafts including silk.

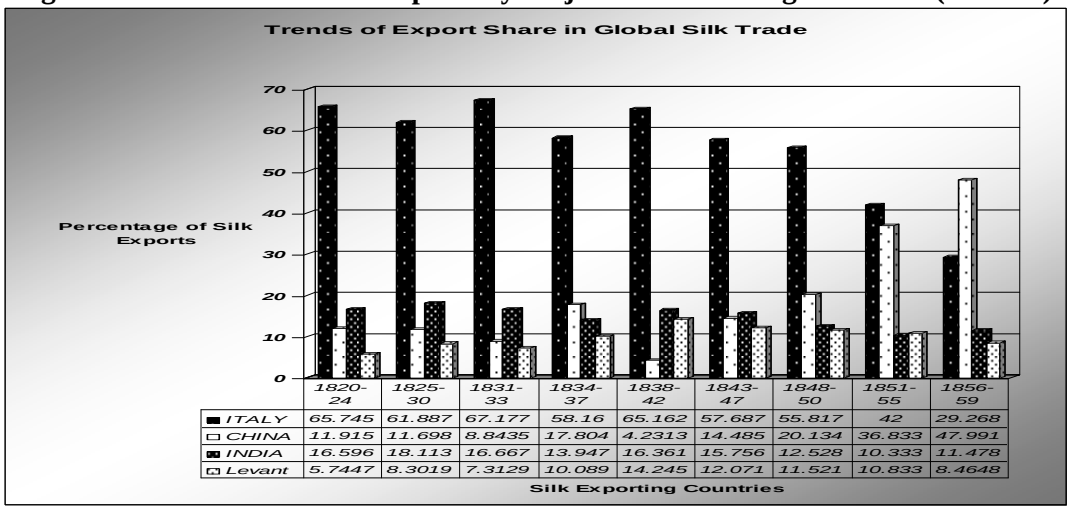
3.4.2a Trends of Silk Exports in India vis-à-vis Other Major Exporters during 1820-1859

During 1820-1860, the global demand for silk had increased from 23.5 thousand quintals in 1820-24 to 69.5 thousand quintals in 1856-59 (See Fig-3.1). With the expanding global demand for silk, China's share in global silk trade had risen significantly while Italy had shown a steep declining trend. India's export trend during this period had shown a fluctuating trend that hovered in the range between 11 to 18 percentage share of the global trade. Levant (Mediterranean Arab) had shown a marginal upward trend in its global share in silk trade. (See Fig3.2).

Fig-3.1Global Exports of Silk Goods during 1820-1859 (in quintals)

Source: Federico (1997)

Fig 3.2: Share of Global Silk Exports by Major Silk Producing Countries (1820-59)



	1820-24	1825-30	1831-33	1834-37	1838-42	1843-47	1848-50	1851-55	1856-59
ITALY	65.745	61.887	67.177	58.16	65.162	57.687	55.817	42	29.268
CHINA	11.915	11.698	8.8435	17.804	4.2313	14.485	20.134	36.833	47.991
INDIA	16.596	18.113	16.667	13.947	16.361	15.756	12.528	10.333	11.478
Levant	5.7447	8.3019	7.3129	10.089	14.245	12.071	11.521	10.833	8.4648

Source: Federico (1997)

3.4.2b Trends of Silk Exports in India vis-à-vis Other Major Exporters (during 1860-1930)

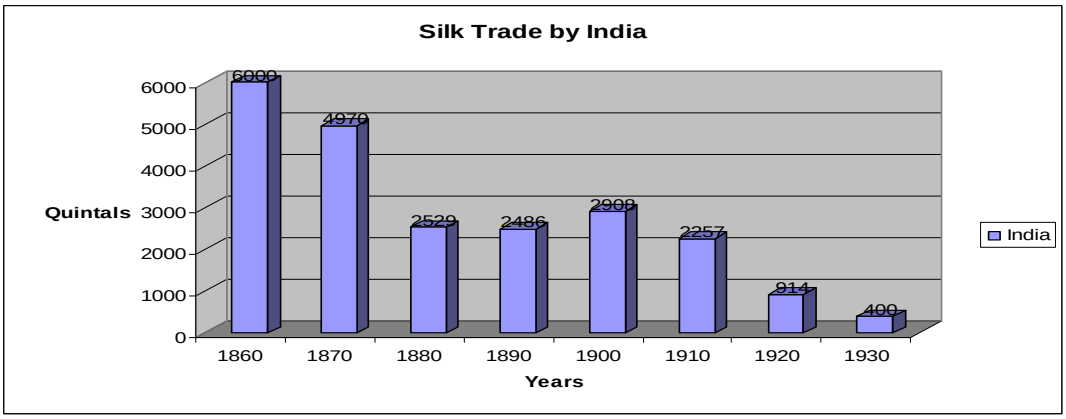
During 1860 to 1930, world silk trade had experienced certain ups and downs. The decadal CAGR (compound annual growth rate) over these period witnessed highest growth in world trade of silk in 1920-1930 and that was mainly because of silk trade boom in Japan (i.e., 10.45%) followed by Italy (i.e., 7.06%). Against this bright scenario of two leading exporters, India's position in silk trade had consistently deteriorated over the period of 70 years (See Table 3.3). During the British rule sericulture did not receive any incentive for expansion which was reflected in the growth statistics in silk-trade. 20th century witnessed a steep decline in growth rate mainly because of the passive role of the colonial ruler in advancement in silk trade.

Table3.1 Decadal Compound Annual Growth Rate in Silk Trade (1860 -1930)

Decade	Italy	Levant	China	Japan	India	Total
1860-70	-0.93	-2.87	-2.48	-1.61	**-1.86**	-1.97
1870-80	2.72	-5.13	5.28	7.84	**-6.53**	-8.57
1880-90	4.88	7.92	-0.12	3.74	**-0.17**	2.13
1890-00	1.45	5.11	1.82	8.18	**1.58**	2.83
1900-10	1.88	2.02	3.73	12.35	**-2.50**	5.38
1910-20	-5.54	-17.4	-3.02	1.59	**-8.64**	-1.83
1920-30	7.06	-2.0	3.96	10.45	**-7.93**	8.12

Source : Calculated on the basis of the data available in Federico (1997)

Fig 3.3 Silk Trade by India during 1860-1930 (in quintals)



Source: Federico (1997)

In 1860 India used to export 6000 quintals of raw-silk, which consistently declined in the following decades and ultimately within the second decades of 20th century India's position in global silk trade had practically vanished (see fig 3.3) . India's share of silk trade in global silk trade had declined from 8.1% in 1860 to 0.1% in 1930, while China's share in global silk trade was 51.5% in 1860, which also declined to 21.2% mainly because of the robust growth in silk trade by Japan. This indicates that amidst stiff competition Japan excelled, but India's relative position worse than that of China. During the 20th century, Japan had revealed a magnificent growth in silk trade withstanding its own silk crisis that occurred during the period of Great Depression, while dominance of China and Italy in silk trade had also contracted during this phase possibly because of the backlash of the Great Depression faced by US economy and its corresponding adverse impact. India's deceleration was marked because of the reason that it had experienced the abrupt down-fall in absolute terms. (See Fig 3.4 and also Table 3.4) Levant (i.e., the eastern Mediterranean regions) had also shown a declining trend in silk trade though the rate of deceleration was slower than India. India's textile policies were by that time were in the hands of the British Monarch whose policy doctrine was more for the interest of England and therefore improvement in artisanal silk industry seemed to be a distant dream during this period under direct British rule. This resulted in a sharp deceleration of the artisanal silk industry during the first half of the 20th century in India.

Fig 3.4- Silk Trade by Major Countries (1860-1930)

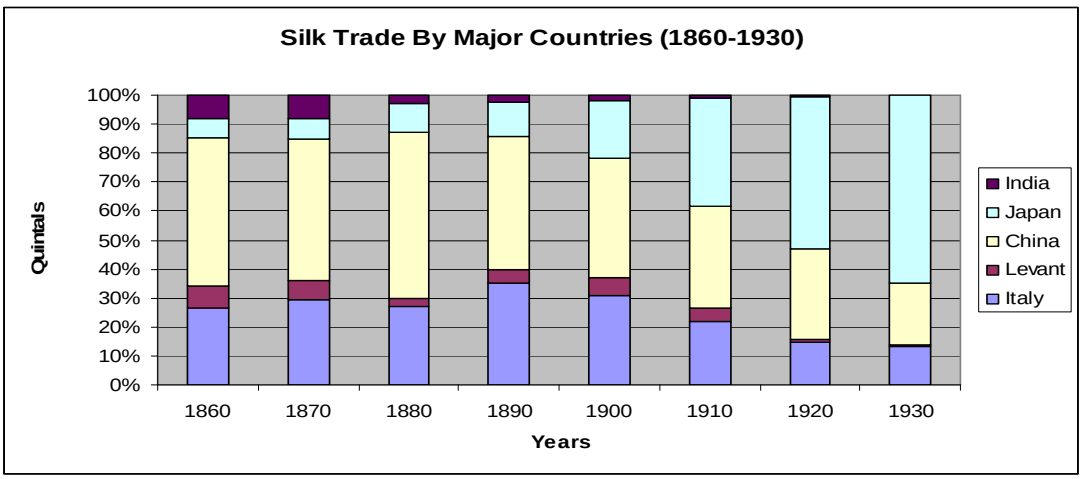


Table 3.2 Global Silk Trade by Major Countries during 1860—1930 (in quintals)

Year	Italy	Levant	China	Japan	India	Total
1860	19616	5510	38142	4850	6000	74118
1870	17857	4117	29666	4120	4970	60730
1880	23371	2431	49645	8770	2529	86746
1890	37658	5210	49040	12660	2486	107054
1900	43500	8579	58727	27790	2908	141504
1910	52396	10479	84760	89080	2257	238972
1920	29608	1541	62359	104350	914	198772
1930	58571	1259	92025	281940	400	434195

Source : Federico (1997)

3.5 Socio-economic Status of Silk Artisans in Colonial India

The colonial period witnessed debacle of several types of artisanal weavers within the textile industry and their reduction into a state of extreme vulnerability. Some of them continued in the industry, but increasingly as wage labourers, or under putting-out contracts. On the other hand, new trades provided other groups of weavers with opportunities for capital accumulation. Long-distance trade in silk-yarn, dyes, raw-silk and jari existed before the railways and steamships, but it turned out to be widely extensive and organized after 1870s. Silk and cotton clothes for domestic consumption was being traded over longer distances after the advent of the railways. These trades saw the entry of new mercantile classes, the participation of artisan groups in the material and cloth trade, and a general decay of systems of spot-sale such as hawking or fairs in favour of permanent markets and contractual sale in textile towns of India. Roy (1993) argued that these jointly contributed to the commercialization in handloom silk as well as cotton weaving sector of the textile industry.

In the interwar period, surveys of the industry, produced in the course of the Tariff Board enquiries (during the period 1926-40 for textiles), or the making of the Fact-Finding Committee report on textiles (1942), created a mixed impression about the growth of the textile sector as a whole. A segment of the industry went into depression, while other parts were doing well. The former offered smaller or more uncertain incomes, the latter higher or stable incomes. The generic coarse cloth belonged to the former economy while the gold-bordered silk sari to the latter. The first half of the 20th century witnessed in several provinces in India that the weaver handling silk or very fine cotton cloth had incomes three to five times greater than that of a weaver making cloths called `coarse' or `ordinary', which included clothes like Dhoti and sari ,i.e., generic men's and women's wear respectively (See table 3.5). The range in the original piece-rate wages in this coarse weaving was somewhat narrower, but silk offered greater continuity of work. Coarse weaving wages varied relatively little between regions, though they seem to have been low on average in the Andhra regions. There are two monthly time rates one from Sholapur town and the other from Madura. Both towns developed, in the interwar period (1919-38), quite extensive wage employment in local textiles. Both wages were higher than the minimum income of non-factory weaver (in coarse cotton) in these regions, but considerably lower than the maximum incomes (in silk). A range of money wage such as Rs. 6 to Rs.15, in which most coarse-weavers would earn in a month in these years, though employment intensity varied considerably between weavers and field

labourers. But a range such as Rs. 40 to Rs. 80, in which the south Indian silk weavers belonged, was decidedly above standards in agriculture. Rs. 40 was an income an experienced carpenter or blacksmith in a northern town might expect to earn per month while Rs. 80 was closer to what a qualified engineer could get in a modern factory. Income inequality among handloom weavers, in other words, corresponded to the difference between an agricultural labourer and a member of the urban middle class. Earnings from silk, fine cotton and exportable goods from the eastern coast could be compared relatively easily over different years in the long span of 1880 to 1940. With adjustments made for price movements, it suggests a consistent rise in trends.

Three specific cases of increase in real earnings are: Santipur (in Bengal) fine cotton weavers between 1890 and 1941; kaily (*or lungi*) weavers of the Andhra coast between 1912 and 1927; and Surat silk weavers between 1900 and 1927. Thus not only the average levels of living were much higher for silk or fine cotton weaving artisans than that of coarse cotton weaving, but also that levels and trends in earnings showed an upward trend (Roy, 1999).

Table 3.3 Approximate Monthly Earnings of Silk & Cotton Textile Artisans during 1925-27

Region	Place	Cloth Type	Earnings per Month
Bengal	Dacca, Rural	16s-20s sari/dhoti	Rs. 11-12/-
	Dacca, Rural	≥ 60s sari/dhoti	Rs. 18-20/-
	Rajbalhat	≥ 60s sari/dhoti	Rs. 40-50/-
Bombay	General	Coarse cotton	Rs.11-15/-
	General	Silk	Rs.23-28/-
	Sholapur, factory wage	8 yarn cotton sari, coarse medium	Rs.15/-
Coastal Andhra Pradesh	Eluru	20s dhoti	Rs. 6-9/-
	Pedana, Palakol	Exportable kaily/ rumal	Rs. 18/-
	Palakol	Fine sari	Rs.21/-
	Ponduru	120s sari	Rs. 33/-
Tamil Nadu	Jayankondam, Thoriyan	Ordinary Cotton	Rs. 11-12/-
	Madura, Coimbatore	Fine Cotton, Silk Turban	Rs. 26-30/-
	Madura, Wage Centre	Silk	Rs. 15-20/-
	Madura, Owner of 5-10 looms	Silk	Rs. 40-80/-
Southern Andhra Pradesh	Bellary-Kurnool wages	Coarse cotton	Rs. 7-15/-
	Bellary, Kurnool, Owner of looms	Coarse-medium cotton	Rs. 40/-
	Bellary	20s-40s sari	Rs. 14/-
	Bellary	Silk bordered sari	Rs. 22-30/-
	Pullampet	Silk	Rs. 12-23/-

Sources : Bengal, Report on the Survey of Cottage Industries in Bengal, 2nd Edition (Calcuta, 1929); S.V. Telang, Report on Handloom Weaving Industry in Bombay Presidency (Bomaby, 1932); N.G. Raga, The Economics of Handlooms (Bombay, 1930); K.S. Venkataraman, 'The handloom industry in South India', Journal of the University of Bombay (1935, 1936) and D. Narayana Rao, Report of the Survey of Cottage

Industries in Madras Presidency, Bellar District (Madras, 1925) as cited in Roy, Tirthankar (1999), Traditional Industry in the Economy of Colonial India, Cambridge University Press.

Alfred Chatterton, Director of Industries in Madras, (as cited by H.Maxwell Lefroy and E.C. Ansorge in *'Report on an Inquiry into Silk Industry in India'*, Vol. II,54, Calcutta, 1917) wrote about the coarse weaver: 'the majority of them have to work harder to make a bare living.' The statement suggests that coarser cotton weaving suffered a decline in real wages, possibly in the last quarter of the nineteenth century. However, information about the earnings of the more skilled and market-oriented silk weavers reveals their comparatively affluent status compared to the coarse weavers.

Roy (1999) derives a stylization from ethnographic data compiled in the castes and tribes anthologies of textile weavers of the major provinces in India. The analysis suggests that the nature of weaving and social status had a close association. Parallel to the hierarchy in earnings, there was a hierarchy of earners. These two hierarchies were correlated. Brief descriptions of four major social orders namely, the services castes, the Muslim weavers of north India, the Hindu cotton weavers, and the Hindu silk weavers - illustrate this point. Rural coarse weaving was performed largely by part-time agricultural labourers. In western and central India, coarse weaving was practiced by groups of people defined and seen as labourers. Such people can be called the `services castes', because their identity as makers and sellers of cloth was dependent on and secondary to their working status. Their occupation was almost entirely confined to the least skilled weaving. The Mahars (Dheds) and Gandas of central India, the Malas of Andhra coast, the Chamars of Punjab and United Provinces, who were primarily tanners, were known to practice weaving along with agricultural labour. Western India also had some settled tribal weavers who were occupationally not very different from the castes as mentioned above. The coarse weaving castes of the Gangetic plains, the Tatwas of Bihar, the Tantis of Orissa, and the Koris and Kolis of United Provinces, were somewhat more of specialist weavers. But they experienced continual infiltration into their rank by the menial castes, weaving being 'the highest occupation ordinarily open to the outcast section of the community'(Ibbestone, 1916). Here, the connection between tanning and weaving was especially close. The Chamars (hereditary tanners) of Punjab were known to weave as freely as the Mahars tanned hides. None was an especially skilled occupation, and all were off-season employment for people whose primary duty was agricultural labour.

In the colonial period, migration, monetization, and reform movements weakened the practice of customary services, whereas markets for cloth (both silk and cotton) were expanding beyond the boundaries of the village. Thus, towards the end of the nineteenth century, the industrial towns employed large numbers of erstwhile 'menials' in diverse 'lowly' services and industrial jobs. In contrast to this the main networks of textile production and trade that emerged in the middle of the 20th century from the mass migration of artisans rarely involved the marginal service castes. The rural coarse weaver did not command great craftsmanship. Nor did they have access to entrepreneurial resources such as business organization or credit. And there were explicit prohibitions as well, for example Mahars were not permitted to dye cloth.

In northern India, there was a large body of Muslim weavers, called Julahas, who were the most abundant of the Muslim castes in northern India. These weavers are believed to be the first Hindu occupational group to convert to Islam. They were spread from Punjab to Bengal, and migrated southward with the spread of Muslim power. In the nineteenth century, many

came to central India, to the Khandesh weaving towns of Malegaon and Ahmadnagar, and to Bhiwandi near Bombay, where they gave leadership to a 'powerloom' revolution from the 1940s. Further south in the Deccan, Muslim weavers became rarer, and, though called Julahas or, more often, 'Deccani Momins', they were mainly converted local Hindus speaking the local tongue. The Julahas were a heterogeneous group. In the village societies, they were lowly placed like all coarse weavers. They tended to be degraded by their peasant customers and occasionally by employers. The name 'Julaha' (in Persian language 'Julah' is known as 'Ball of Thread') became a symbol of rusticity (Chatterjee, 1908). But they were also present in the silk industry of the Awadh and Ahmadnagar. These were the towns where Julahas tended to claim high descent, and formed powerful associations. In eastern parts of the United Provinces, they acquired the notorious fame of being a 'turbulent race'.
Gyanendra Pandey (1991) has reasoned out this image of Julaha for long depression in the craft, and its subjection to Hindu traders. However Roy (1999) argued that Silk in the long run was not a depressed industry and this reputation of the Julahas had a local character. Another probable factor behind the image is that the silk weaver among the Julahas carried a pronounced sense of hierarchy and self-respect, which needed to be aggressively asserted, being opposite to the image of the Julaha based on the figure of the rural semi-skilled weaver. The latter image is reflected in numerous Punjabi Hindu proverbs.

On the other hand, in the South the services castes were rare, and weaving tended to specialize in the hands of four great castes who identified weaving as their traditional occupation, and all of whom enjoyed, by 'cleanliness' standards, a higher social position than the coarse weavers of northern or central India. The predominant Telugu-speaking weaver caste is the Padmasalis, the cotton-weaving branch of the broader category of Sali. They occur mainly in the present territory of Andhra Pradesh, from where a large number migrated into the Deccan towns such as Sholapur, to work in the mills, and supply capital and labour in handloom factories in the early twentieth century. The bilingual Kannada-Tamil Devangas occurred somewhat further south, in southern Andhra, Mysore, and northern Tamil Nadu (Edgar, 1909). Devangas dominated industry and trade in Salem, and in textile towns of the region of Tamil Nadu locally known as Kongunad. Neither caste-group was identifiable with specific products. But their main concentrations, such as Sholapur or Salem, did specialize. Sholapur was known for cotton saris and jacquard sheets, and Salem for fine cotton. Both groups migrated a great deal and such migrations splintered homogeneous communities into classes and subcastes in the towns to which they came (Sastry, 1925). Yet, they maintained a strong sense of identity, at the core of which prevailed the sense of being a skilled artisan. Less visible, but present, were guild-like barriers to entry into the craft that arose from the close association between critical skills and membership of informal collectives. With the passage of time, textile history recognizes these collectives as an important feature of the strategy of migrant weavers to establish themselves economically and redefine themselves socially (Haynes, 1996). Attempts to recreate a community and regenerate roots characterized the Julahas of Bhiwandi, the Padmasalis of Sholapur, and the Sourashtras of Madura, among others. These weavers possessed unique and valuable skills which the rural coarse weaver did not have; they were migrants and needed to stick together; and they faced a contradictory need to collaborate and yet compete between themselves. The social associations enabled collaboration of various kinds, while they also tried, via investment in common good, to preserve fellow feeling despite rising economic inequality. Almost everywhere, silk weavers enjoyed the status of the urban middle-class. As they transacted exclusively with urban elites, whether merchants or consumers, they were often in positions of power, and where power was derived from religion, they claimed Brahmanhood or the warrior (Kshatriya) status (Roy, 1999).

Since 20th century, Indian silk weavers started controlling a part of the trade in cloth and raw material. Contrary to the cotton trade, entry of non-artisanal group was rarer in long-distance silk trade. However, Bengal was the possible exception where the trade prospect was decaying at that period and mainly controlled by urban merchants. In the deep south, the Hindu silk weaver was working gloriously. Some south Indian places became famous for their dyeing and silk weavers owned these dye-houses. The main silk product of the southern town, the bordered sari, was especially skill-intensive and had stable and generating mass demand. The Julaha penetration did not influence much further southward of Bombay city, and, even in Khandesh and Gujarat, the Julahas rarely took up silk, or managed to break into the Hindu monopoly in silk. In Madura, the Sourashtras dominated the silk industries. They began as producers, but controlled trade in the twentieth century. They formed a small and relatively homogeneous group. Occupationally, almost two-thirds of the 'actual workers' in 1921 were engaged in textile trade and production. As with silk weavers elsewhere, Sourashtras carried a strong sense of identity. In their case, this sense was dominated by the memory of a migration from western India through Vijayanagar to Madurai, spanning several centuries and involved with the rise and decline of major regimes of south India. In Madura, they claimed high status, and were partially successful in resisting Brahman opposition to the claim. Consistent with the claim, the Sourashtras also invested a large part of their business profits in basic education. In the 20th century, the community was economically differentiated, the main division being that of between the traders and the weavers. And yet, there was remarkable stability of contractual relations and explicit or implicit cooperation in dealing with common problems (Roy, 1997). Some of these features like, the claim to status, the accent on education, cooperation, and the ownership of both fixed and working capital , can be found in other silk-weaving groups. Thus, Saliyans, a caste settled in Tanjore, made Brahmanic claims as they prospered in textile business. They were probably a breakaway from the Salis, and, showed how a group pursuing a distinct and superior kind of weaving can crystallize into a caste. The Patwegars of the Deccan were 'honest and thrifty people' whose children attended school till they were old enough to weave. The Koshtis of Khandesh, Sholapur, and Poona had customs similar to those of the Salis, but were ranked above them.

The Bombay Gazetteers of the 1880s located the silk weavers of Ahmadnagar Khatris between the Brahman and the main peasant castes in terms of wealth and power. These artisans worked both as weavers and moneylenders and many of them were landholders (Bombay Gazetter, 1884). The Khatris of Hyderabad State were distinctly wealthier than Padmasalis, the cotton weavers (Sahai, 1933). The basic hierarchies influenced how groups of weavers responded to the long reversal in fortunes. Between the 1911 and 1931 censuses, the proportion of Mahars and Gandas engaged in weaving declined sharply in central India. When they left the village, they tended to be employed as factory hands. Groups mainly rural or mainly engaged in cotton weaving tended to leave weaving more frequently. Thus, instances of Kaikkolars giving up weaving were more common than that of the Salis or the Devangas. The average Kaikkolar family abandoned weaving to become `coolies', a term that connoted general labour, including labour in handloom factories. On the other hand, the urban communities and silk weavers responded differently. When the silk weavers had to leave weaving, they tended to shift to skilled professions and trade rather than labour. The silk-weaving Salis of the Andhra coast, for example, dominated the tobacco trade when supply of the fine handspun yarn they used to weave dried up (Thurston, 1909). In general, among silk weavers and the major weaving castes in northern or southern India, the percentages engaged in weaving were usually higher than that in the services castes, and, while the percentages declined more slowly. They diversified, and innovated within weaving.

They migrated from depressed regions and resettled as weavers at points of flourishing silk-handloom trade (Roy, 1999).

In the course of such developments, Sholapur emerged as a major silk and fine-cotton handloom centre led by Padmasali weavers. The number of looms expanded from 2-3,000 in the 1890s to over 20,000 in 1950. Employment in textiles expanded correspondingly (ibid, 1999). A growth of equally impressive order occurred in Madura, led by the Sourashtras, and in Salem, led by Devangas and Kaikkolars. The weavers in these towns became artisanal as well as mercantile. Their engagement in trade was a relatively late affair. Market and technological information were available in these towns relatively easily, because many weavers interacted between themselves. Sometimes, such interactions took place in the associations. The information and the money accumulated in trade were invested in industry. The general direction of change was towards a separation of silk weaving, silk processing and silk dyeing on the one hand, and, on the other hand, towards a sustained improvement in quality and speed of each process. Originally, the three tasks tended to unite either in the family firm, or under various forms of communal pooling of labour. As the male migrant in Sholapur joined the poor weavers, the women and the aged became available to perform sizing and warping in a separate workshop.

The first Sholapur factories were pioneers in the use of the fly-shuttle slay. From the end of the interwar period (1919-1939), and accelerating after independence, there was a noticeable diffusion of looms mounted on frames rather than on pits dug in the ground, and fitted with overhead attachments that made woven designs much easier to implement. An important example of innovation in dyeing comes from Madura. In the middle of the nineteenth century, German and Belgian mineral dyes began to replace the Indian vegetable colours on account of cheapness and facility. But few Indian weavers knew how to handle these materials well. The result was a widespread decline in quality of colour usage. Pre-eminent among the few places which made the transition successfully was Madura. But here, the transition meant a growth of workshops owned and worked by Sourashtras in a quasi-guild situation. Thus the depressed space in handloom weaving consisted mainly of cotton cloth weaving artisans as opposed to silk; in coarser and plainer type of weaving as opposed to skilled decorative weaving.

3.5.1 Influence of Change in Consumption Pattern

Silk had been mainly a commercial and urban item which was frequently traded over long distances in the pre-colonial period. A form of patronage existed and silk weavers were often settled directly by those in power. But, unlike carpets, silk was not consumed mainly inside palaces. It was not a luxury in that narrow a sense, but a durable good consumed by 'the higher classes' (Watt and Brown, 1904). This demand, arising from `the rajahs, courtiers and zamindars', declined from the middle of the 19th century. An external trade in Bengal, nurtured by the East India Company, was also on the wane from somewhat earlier. The rich higher classes who could afford to compensate for these losses, tended to have quite different tastes. But there was still a large ritual usage of pure silk garments. The demand for cloths for ordinary use which utilized silk, such as silk-bordered fine cotton saris, or silk-weft cloth like *himroo* or *mushroo*, was also quite stable, and probably even expanded. Nevertheless, tastes were changing. The Fact-Finding Committee (1942) reported that, for certain occasions, a change of fashion had been taking place from heavy silk garments towards shorter, lighter, more cotton-based ones in most parts of India. Such a trend might mean a smaller demand for pure silk, but a greater demand for silk-bordered cloths. Pure silk weavers often did take

up silk-bordered cloths. This shift towards lighter designs coincided with a weakness for European patterns. Around 1900, all established silk towns followed sample books of English wallpaper designs, setting aside the dusty old mica sheets that contained etchings of the uniquely Indian ones. The illustrated trade catalogue from Europe invariably overran the practice of skilled crafts in India. This degeneration or slow-death of traditional/indigenous design was apparent in all classes of designed goods and mostly in silk textiles (Watt and Brown, 1904).

3.5.2 Expansion of Silk-Weaving across India in Colonial Period

Silk weaving was widely spread in southern India in the middle of the 19th century, owing to the existence of sericulture in the Kollegal area of Mysore. The raw silk trade was located in Mysore, Bangalore, and Kollegal towns, fanning out to several distinct weaving complexes. The most important were Bellary-Kurnool (which had a local demand, as well as a fair amount of trade with Hyderabad, Bombay-Deccan, Mysore, and the deep south), Anantapur (Dharmavaram town, whose cloth were traded mainly in Bangalore), North Arcot (Gudiyatam town, trading within the south), and a cluster of towns in the Tamil country (Tanjore, Madura, Kumbakonam, and Kanchipuram), where silk existed for a long time primarily for local usage, and vastly expanded in the early twentieth century. The proximity to another source of raw silk, Bengal, also supported a minor tradition in coastal Andhra (Godavari and Krishna districts, where demand was mainly local). In Madras Presidency, the main decline seems to have occurred in the southern Andhra region. This region was devastated by the 1876-78 and 1896-98 famines. Possibly due to its proximity to Vijayanagar and to patronage from smaller local principalities in the pre-colonial period, several towns of this region had developed into centres of silk weaving in the early 1800s. However, after the railways connected it to Bombay-Deccan in the northwest, and the Tamil region in the south, it began to regress steadily towards obscurity in the twentieth century. The censuses of 1901-31 are witness to the role this large region, along with parts of Hyderabad State, played as a source of migrant labourers for plantations and industry elsewhere in India, and even beyond. Many migrants were former weavers. Ranga (1930) recorded the unsettled conditions. From his account, it would appear that, from about the 1890s, the region was gradually moving away from silk that competed with products of mills as well as handlooms elsewhere in southern India. Silk cloth came from two sides, the Tamil country in, the south, and Bombay-Deccan, chiefly from Poona. In Bellary district, formerly the cloths of Kampli, Bellary, and Adoni were extensively used. But the local better classes preferred the southern product once they began to come in more easily after the railways.

Edgar Thurston (1899) reported ‘the weavers have been trying to weave cloths like those manufactured in the south’, with partial success. Similar examples come from coastal Andhra, and from Kurnool district, where Ayyampet, one of the famous silk carpet locations in India is situated and declined in the latter part of the 19th century. In the cluster of towns in the Tamil country it grew - evidently in Kanchipuram and Madura, and in Tanjore and Kumbakonam as well. On a smaller scale, Arni and Kollegal also got attracted to this new business. In Madura, for example, many Madras weavers formerly engaged in fine cotton shifted to silk. Much of the products made in the south were pure silk saris with borders of *jari*, the type known as `Kornad', a garment whose demand has proven remarkably stable in the long run. Within southern Andhra, survival was restricted to the small artisanal trading town, Dharmavaram. There were also a few successful silk factories, in coastal and southern Andhra, started by cloth merchants shortly before the First World War. Ventures in Uppada, Peddapuram, and in Rayadurg in Bellary are the main examples. Somewhat similar in nature,

but less documented, is the effect of Bombay and Madras products on the weavers of Hyderabad State. The state had apparently become a net importer of cotton and silk cloth in the interwar period (1919-1938). Local silk weaving had to live with competition from the far south, which became more intense over time. The reason for the popularity of imports was their better quality and standardization. The competition was fierce and caused much alarm among the officers of the state dealing with silk-industry. And yet, the impact was not entirely destructive on silk. The silk weavers of Hyderabad had both specific markets and specific skills. Examples of the former are the mixed cotton-silk cloths popular with the Muslims (*himroo* and *mushroo*) and brocades, both woven in Aurangabad. Examples of the latter are saris woven in Paithan town, and reasonably good quality *pitambar*, a Hindu dining and ritual robe. On the other hand, the Hyderabadi weaver seemingly expanded long-distance trade, and the scale of production. One sign of such changes was the factory owned by rich silk weavers who traded, and at the same time sub-contracted part of their orders. By 1942, 40 per cent of the 100,000 weavers in the state were employed in such establishments. Western India witnessed another local contest. In the middle of the nineteenth century, silk weaving here was in existence not only in the former capital Poona, and in major trading and manufacturing towns like Surat, Yeola, and Ahmedabad, but in fact in `most of the places in this Presidency.

Contrast to the above, the expansion of Bengal silk industry was considerably smaller, less skilled, and more rural than major silk-weaving complexes in other regions. It was not surprising that the rise of Benares adversely affected the prospects of Bengal products. In Bengal, ‘a Hindu lady who can afford to wear a Benares sari will not look at even a high-class Baluchar’ from Murshidabad (Mukherji, 1903). There was decline in smaller centres such as in Hooghly, Burdwan, Birbhum, and Bankura districts. The weaving industry came to be concentrated in Murshidabad district (Baluchar, Mirzapur, Khagra, and Islampur villages), owing to local sericulture. But, even here, the scale of trade was small, not only compared to Surat or Benares. The next section will vividly focus on the issues concerning rise and growth of artisanal silk industry in Bengal. Before venturing into the above, it is more important to reason out the issues of constrained factors regarding the smaller centre. Roy (1999) argues that three adverse factors were at work.

(i) Long-distance trade in silk created barriers to entry to the silk-trade. The need for capital, especially working capital, was greater than before. Risks increased, because of proliferation of principals and agents, and because the traded goods in silk were expensive. Silk, for all these reasons, required capital and information. These were easier to obtain in large assemblage.

(ii) As in the case of several decorated crafts, quality was a factor in the competitive success of brands of silk. In silks, quality mattered crucially in respect of dyeing, and, to cite K. S. Venkatraman (1935) in reference to Madura, `dyeing requires more skill than weaving'. Bigger towns had better infrastructure and common facilities such as dye-houses.

(iii) The consumer faced a choice between numerous local decorative styles, all traditional and closely similar to each other, and a new type of decorative capability which could, simultaneously, simplify old designs, standardize them into fewer ones, and create new designs. That there was indeed such a choice, and that preferences shifted from the former to the latter, was noted by the Fact-Finding Committee (1942).

Integrated trade initially caused the disappearance of many locational names for sari borders in southern India. The few which remained, later began to innovate and branched out on the foundation of a core decorative style with which the town was identified. As these towns grew in scale and reputation, trade information began. S. V. Telang (1932) estimated the average daily trade in silk cloth in Yeola at Rs. 10,000, and in Surat at Rs. 15,000, in 1932. Again, in 1941, when prices were much higher, Murshidabad district's trade was placed at Rs. 2.2 million a year or Rs. 6,000 per day, including both cotton and silk.

3.6 History & Growth of Artisanal Silk in Bengal in Pre-Independent Period

The practice of sericulture and manufacturing of silk in Bengal had perhaps begun in the 15th century, though no specific evidence has been found till date (Guha, 2003). Walsh (1902) narrated it by stating 'it is impossible to discover the date at which the silk industry commenced in Bengal, but it must be of great age.' But the silk industry was one of the earliest of all industries which preoccupied the servants of the East India Company in Bengal. The trade status of Bengal silk bears a glorious heritage, as it has been noted by many famous travelers and historians during the period of Great Moghuls. Bengal silk fabric allured British traders to initiate silk-trade. In 1612, Sir Thomas Roe in his embassy to 'Durbar' of Jahangir offered silk clothes of Malda and Murshidabad in order to receive trade approval in Bengal silk. However, his mission remained partially successful, as Jahangir had granted them the right to establish farms in the port of Surat but not in Bengal Presidency. Richard Hughes, the Chief of Patna Factory, reported in 1620 about the potentials of Bengal silk farms. He informed the Surat Council that the Bengal silk could be easily procured in abundance in Patna at a price 35% cheaper than that of Agra. He further pointed out that at Murshidabad an infinite quantity of 'choicest staff' could be had, at least 20% cheaper than in any other place of India. Though Bengal Silk was evidenced to be known as "Ganges Silk" in distant Italy as early as the 13th century, the East India Company started extensive silk trade in 1651 after receiving *Farman* from Prince Shah Suja.

The rural households of the then Bengal was mostly engaged in three stages of production: mulberry cultivation, silkworm rearing and reeling of yarn. They used to sell the raw silk to specialize weavers in nearby villages or towns and the trade volume was quite remarkable. The *Pundra* caste was the hereditary silkworm rearing caste and they practiced sericulture in Malda and parts of Borga, Rajshahi and Murshidabad (Guha, 2003). Pundra region in Bengal had started receiving importance almost equivalent to Benaras silk which possessed age-old reputation. As a matter of fact, the productive potentials of Bengal had attracted the European traders and from the modest beginnings in small trading posts, these English and Dutch Trading Companies came to dominate the trade. They gradually influenced the types of textiles produced and also organized a shift from textiles exports to the exports of raw silk, which was actually the requirement of far flung markets.

During the first wave of globalization, the progress of sericulture in Bengal was mainly trade driven which was clearly evident in the process of marketing organisation and production structure. The opening up of the Hugli Factory in 1651, the Kassimbazar Factory in 1658 and the Malda Factory in 1680 by the East India Company substantially helped them in conducting an extensive trade in Bengal (Chaudhury, 1975). In order to ensure steady supply of raw materials, the company made some strenuous efforts to increase the production of silk. The company expanded mulberry cultivation areas and silk factories and filatures. In a number of specialized villages scattered throughout the north western part of Bengal, peasants cultivated mulberry on their small plots of land, reared silk worms and reeled raw

silk within their households. In Kasimbazar, the principal market of raw silk, the *dadani merchant*[5] received the advances from Asian and European export merchants and distributed them to village producers. At harvest time, they collected raw silk from the peasants and brought it to the manufactories, where the export merchants could get the raw silk rewound and sorted by the native artisans before sending it to their home markets. Gujarati, Multani, Patna, Armenians and Europeans were the principal exporters while the Bengali dadani merchants specialized in the intermediation between the exporters and producers (Mukherjee, 2006).

Throughout the 17th century Bengal silk was the cheapest of all other silks including Persian and Chinese silk. In 1683, the Dutch company made a profit of about 200% in Bengal silk mainly due to its abysmally low price. The English company too made a profit of 250% in the sale of Bengal-silk brought by Maratha in 1695-96 (Chaudhury, 1975). Allured by this pay-off, the East India Company prohibited its servants in 1671 to deal in Chinese silk so that Company's monopoly in Bengal silk could be inflated. From the last quarter of the 17th century the Court of Directors urged to invest more and more in Bengal silk. "In 1675 they asked the Hugly Agency to take up twenty thousand pounds by exchange and invest in raw silk and repeated their instruction in their letter in 1676 (ibid, 1975). The court wrote in 1677 that the Malda goods had a great demand in the market. Thus a supply emphasis was laid by the Company on the trade of raw silk from Bengal.

In this way the foreign merchant driven growth of sericulture and silk industry kept on expanding till 1740 as it had attracted European companies for securing raw-silk and fabrics from Bengal, particularly of Malda and Murshidabad. From 1701 to 1740 raw silk import from Bengal was higher than that of China (see table 1). During 1740-50, no raw silk was imported from China to England.

Table 3.4 Raw Silk Import from Bengal & China by EEIC during 1701-1740

Years	Raw Silk Import from Bengal (in lbs.)	Raw Silk Import from China (in lbs.)
1701-1710	514364	317539
1711-1720	578004	55180
1721-1730	1046861	85303
1731-1740	1416911	77063
1741-1750	896052	NA
1751-1760	428072	12995338

Source: K.N. Chaudhury, Trading World of Asia and the English East India Company (1660-1760), Cambridge, 1978, pp 533-535.

During 1742-1751, the consecutive invasion of Maratha intruders destroyed the silk production and economic life of the artisans[6]. The Court of Directors finally took interest in this regard and suggested EEIC to plant mulberries and establish cocoon rearing farms as well as reeling and weaving units in safer place (another side of the river Padma[7]). The Maratha invasion resulted into a considerable decline in the growth rate of imports that had been observed during the decade of 1740-1750. Again Anglo-French conflict and the wars

with Nawabs of Bengal upset this splendid trade. During 1751-1760, East India Company's imports from China rose three times than that from Bengal. Bengal witnessed a serious recession in this phase. During the early phases of 18th century Bengal silk was so popular to British customers that a separate law was enacted to protect and encourage the woolen industry. However, that law could not affect the sericulture dependent economy of Bengal very seriously. As there was an increasing demand of raw silk in United Kingdom, sericulture received much more attention from the East India Company than the weaving of silk fabrics (Ghosal, 1966).

The Company got the 'Dewani of Bengal' in 1765. After the acquisition of Dewani, the Company took serious interest in raw silk business. The silk manufacturers were forced to work as silk winders to the Company's factories and they could not work elsewhere (Dutt, 1956). The ryots[8] were encouraged to undertake mulberry cultivation and the waste lands were given to them rent-free for two years.

3.6.1 Impact of Piedmontese (Filature) Technology on Bengal Silk

The major quality inadequacy with Bengal raw silk was its inequality in the same skin. The mode of assortment was also neglected. The Bengal artisans could not cross the filaments of cocoons when they reeled the silk, which resulted in lack of roundness and lightness indispensable to produce good thrown silk (Carlo Poni, 1981). The Court of Directors informed the Bengal Government that unless the defect got rectified the EEIC must throw out its exportation to England (Report on Silk, 1836). It was under these circumstances that the company decided to introduce the Italian method of reeling and spinning in Bengal, which came to be known as Piedemontese technology or Filatures. In 1769, the Company contacted with three managers – an Italian, a Frenchman and an Englishman to teach the native artisans about use of Piedemontese reeling machine and the management of filature.

The first filature in Bengal was built in 1770 and the first consignment of silk-filature that reached England was in 1772. It took about fifty long years for the Company to convert whole of its investment in silk into filature assortment. Introduction and consequent extension of this filature reeling method brought a revolution in Bengal cottage production as well as marketing organization of Bengal raw silk. EEIC had to struggle hard to make filatures acceptable in India. Although the entire project was beneficial for the rank and file, nevertheless it took much time to gain popularity due to traditional customs preferring orthodox artisans of Bengal. According to some historians, the conflict between original Bengal cottage system and the new Piedemontese filature system had caused friction and tension because of widely differing interests of several sections of people (Mukhopadhyay, 1995). Under the traditional Bengal cottage organization, the peasants had complete autonomy over the quality they wanted to achieve. They decided whether to obtain a fast reeled coarse silk or a finer quality manufactured through slower and more accurate reeling. These decisions were simultaneously influenced by quality of cocoons and market trends. They knew that demand from different communities of raw silk exporters varied with place where subsequently the silk were woven.

From 1790s onwards the peasants were forced to sell the cocoons to the company's agents at a very low rate. This force of commercialization had reduced the production cost of raw silk on one hand and also compelled the peasants to depend upon its agents by means of a debt bond created by the advance. Thus the peasants had no other market relation other than with the Company.

During the early colonial period, the Bengal mulberry cultivators demonstrated their capacity for improving their economic situation through entering silk sector when prices of other crops were low and abandoning silk sector as soon as the opportunity cost started rising. It was evidenced in 1780s, as the peasants who had entered into silk sector in the previous decade autonomously decided to stop their involvement with silk in the successive decades. Thus the social and demographic pressure drove the peasantry to turn the cultivation of high value and labour intensive crops to supplement a diminishing income from smaller plots of lands (Bose 1993).

The war between France and America[9] also left some impact on silk production inside India as the company took the decision to stop its investment in silk. At the same time there was rice shortage in Northern India leading to a rise in price of Bengal rice. This resulted in most of the mulberry cultivators converting their lands to cultivation of rice.

The Court of Directors in a painful letter wrote to the Bengal Government about the depressing situation of silk market in Europe. The Director decided to reduce the quantity of raw silk import due to fall in demand of silk throughout Europe. The company had a loss of more than 4% on raw silk and many of silk goods remained unsold. However, the silk manufacturers of England in their memorial to the court pointed out that the ready availability of Bengal raw silk would be beneficial to national interests if surplus raw silk could be successfully brought to use at the silk factories of England (Millburn, 1813). Ultimately, the Court of Director accepted the proposals and accordingly instructed the Bengal authority to increase their supply of raw-silk. During the year 1803, the supply of Bengal raw silk rose to nearly 150 bales a year. From 1803, the export of Bengal silk to England rose steadily, but the silk supplied by he private traders was not of good quality.

The rigorous enforcement of the Continental System (1806-1807) by Napoleon and the entire cessation of the customary importation of Italian raw silk into Great Britain helped to revive Bengal silk trade to some extent during the first decade of nineteenth century. The Bengal Government was asked to increase the annual export of Bengal raw silk by 4000 bales. The development in silk investment during this time was remarkable. Buchanan (1928) mentioned that in Purnea district about 47,000 persons got advances from factories of Malda, Murshidabad and Jungipur for the supply of cocoons and Purnea supplied around 44,000 maunds of cocoons to these factories every year during this time. In those days, important silk production centers were Kasimbazar, Jungipur, Malda, Kumarkhali, Rampur, Boalia, Rangpur, Radhanagr and Gonutea.

Finally, the Charter Act of 1833 compelled the East India Company to wind up its silk trade in Bengal and they had to withdraw in 1835. Presumably, this had a serious adverse effect on the silk industry of Bengal. However, the silk business lingered in the hands of the private traders. Cocoon exports were initiated from Bengal during 1870-71 and import of Bengal silk was considerably reduced. The once flourishing silk industry of Malda and Murshidabad, which was the glory of India became the worst victim of the British Colonial and industrial policy and thus caused economic distress among the people of the country. The market forces once encouraged the growth of silk industry during the pre-colonial period and early colonial phases and Bengal had gained economic stability through this industry (Anstey Vera, 1952). But, in the phase of full colonialism, India, which was the hub of a large part of the world's commerce, lost her position and the mulberry planters, the cocoon rearers, the silk reelers, the

weavers, the indigenous merchant men, all who were connected with this industry lost their financial base due to the economic dislocation caused by the colonial policy of the company. In the early 20th Century, Bengal silk was pushed out from South Asian market especially by its domestic rivals Kashmir and Mysore silk. By the 1930s, Chinese and Japanese silk started replacing Bengal silk even in its domestic space. In terms of employment this resulted in loss of economic opportunities to hundreds of silk artisans in Bengal. The area under cultivation of mulberry in Bengal fell from 54000 hectares in 1896 to 7000 ha in 1914 and 4000 ha in 1937. After partition in 1947, most silk producing areas of Bengal became part of West Bengal in India. Less than 10 percent of Bengal mulberry area was in Rajsahi, i.e., East Pakistan (presently In Bangladesh). At the time of independence, there was 4047 hectares of mulberry plantation area in West Bengal and annual production of raw silk was only 215MT.

3.7 Conclusion

We have analysed in the previous sections how from mid of the 17th century (1635-50) silk trade in India started flourishing when the demand for cheaper Bengal Silk began to rise in European market. Initially Dutch merchants were collecting the silk from domestic market for exporting it to European market and afterwards English East India Company (EEIC) took over the control of this silk trade spreading their tentacles in different parts of inside and outside of Bengal Presidency. However, the British traders understood that only low-priced silk could not retain their market status; so they had introduced Italian technology (known as Piedemontese Technology) of reeling in Bengal Sericulture in 1769. Bengal sericulture was never an ideal place for the implementation of Piedemontese technology and moreover Bengal economy at that period was going through several natural calamities and domestic disturbance as we have already discussed in this chapter. Even in the first half of the 19th century silk trade was prospering with a commanding pace. From 1813, after the loosing of EEIC's monopoly over trade, the company started selling its filatures. But the trade was still growing as the filatures were purchased by other British and Indian traders. The economic power of *dadani* merchant, money-lenders started growing from this period and they formed a new middle class while the situation of artisan and farmer class were worsening day by day. The socio-economic condition of artisanal classes in Bengal was wretched compared to their counter parts in other portions of the country, though silk weavers were universally earning higher income than the coarse cotton weavers in the colonial era. The condition of native artisans of Bengal further deteriorates under the rule of British Monarch. The orientation of the monarchy was never in favour of promoting this artisanal industry which caused further fall of the industry. Bengal silk was worst hit than Kashmir and Mysore silk, which had gone through a process of revamping under Maharaja Ranbir Singh and Tipu Sultan. In the later years Karnataka became the largest silk manufacturing state in Independent India. The next chapter would at length discuss the growth of the artisanal silk sector during periods of economic planning in Independent India and how several states contributed to that growth trajectory.

End Notes

1. This spinning technique is exactly similar which has been promoted by Mahatma Gandhi much later.
2. Francois Bernier was French Physical of Mogul Emperor Aurangzeb, who visited Kashmir and Bengal and wrote 'Travels in the Mogul Empire' where indication of silk, muslin, fine brocade was quite prominent.
3. Piedmontese technology was the improvised Italian silk-reeling technology which was introduced in Bengal by British East India Company in 1769.

4. Bengal Presidency was established in 1690 which comprised the areas now within Bangladesh and the present West Bengal, Assam, Bihar, Meghalaya, Tripura, and Orissa. It also includes all the British Possessions of the Central Provinces (Madhya Pradesh) from the mouths of the Ganges and Brahmaputra to Himalayas as well the Punjab.

5. Dadani merchant is a local community specialized in the intermediation between the producers and exporters of raw silk and silk textiles.
6. See Edward C Dimock & Pratul Chandra Gupta's 'The Maharashtra Purana. An Eighteen Century Bengali Historical Text', Honolulu: East-West Centre Press, 1965.
7. The Podda (or Padma) is the main distributary river of the Ganges and also the transboundary river between two Bengals, West Bengal and Bangladesh.
8. A ryot was defined as someone who has acquired a right to hold land for the purpose of cultivating it, whether alone or by members of his family, hired servants, or partners. It also referred to succession rights.
8. This war was, alternatively known as Quasi War, which was an undeclared war fought between US and France during 1798-1800 on the ground of some economic issues.