

Chapter V

Observations Up to 1947

5.1 A Review of the Organisational Structure of the Industry :

Starting with the premises that trade between India and Europe was a function, among other things, of price differential - a product of the difference in price of labour, - it was the profit motive of the East India Company that drew it to Bengal. At Malda they were struck by the cheap abundance of fabrics - cotton, silk and mixed; and hence their interest in Malda lay in cotton textiles, silk textiles, raw silk and the special variety of Maldahi cloth (mixed stuff). Certainly, such an interest of a foreign trading company, in a theoretical framework, means working of the foreign demand pull on the domestic producers, and as a result, the domestic industry must flourish generating higher income and employment. But, the structure of the artisanal industry in the relatively stagnant economy of Bengal, its interaction with the trading interests of the company and England and particularly the organisational structure and the system of 'investment' they introduced, prevented the silk manufacturing industry from attaining its normal course of development.

The structural form on which the commercial organisation for company's investment rested was : one head factory

near a major Indian port and a number of sub-stations in the interior of the country wherefrom procurement of goods for export would be made. This means that the East India Company moved their procurement centres near the base of production, and the cluster of weaving villages were drawn into the market net work linked with the international circuit. The commercial organisation provided the administrative framework for regulating their commerce.

Thus introduction of company's investment caused foreign demand reach the door of weavers and artisans, but the system of investment followed by the company was highly unfavourable to these manufacturers. The company depended upon a pattern of commercial transactions in which indigenous dadni merchants played a vital role in the flow of capital and goods through dalals and pycars. The company was dependent on the local commercial community at many points : Without Indian expertise it could not obtain the goods and without Indian capital it could not carry on investment. But, the company was not only dependent on such native commercial community, but it shaped them to its own need. At Malda, the absence of big dadni merchants in the beginning of the company era proves that the weavers and producers here attained a higher degree of independence. The company developed for itself a class of strong middlemen in the region and made the artisans serve its commercial organisation through these middlemen. The freedom of silk weavers and producers were

completely lost in the commercial interests of a foreign company. As the company's commercial organisation became more and more elaborate, and as the company won more and more political power in Bengal, it began to play a more dominant role in its relation with the local business community who now turned bantias and found collaboration highly profitable. Such a commercial partnership drove the actual producers to the wall.

On the part of the artisan, since silk production and weaving were industries of high valued inputs, meeting the bulk demand was beyond their means; and they had to be dependent on the pycars for their working capital. The advancing system was also detrimental to the growth of individual artisan, because it led to a lack of accumulation of capital in his hands in spite of increased demand for his output. This together with a loss of free market or open sale prevented the growth of capitalistic enterprise or independent producers in the silk industry of Malda as perhaps in other parts of the country. Production decisions were forced upon the industry by the company according to its own requirements; and hence level of output could not be a general indicator of prosperity either of the industry or of the sections of population engaged in production. Thus the individual small producers were impoverished by the trade policy of the company; this combined with its land and revenue policies proved to be of great hardship for the

rearers.

The filatures which were opened by the company for the purpose of large-scale production of good quality raw silk suitable for Europe, also failed to function as capitalistic enterprise. The features of separation between capital and labour or exploitation of labour¹ were present, but these filatures depended for their supply of raw material on the same dadni or contract system and established a complete monopoly in the market for cocoons which were being produced under a land system unsuitable for the market economy. When the East India Company ceased to operate, the private European firms continued the same method; and so, when these firms stopped business the large filatures had to be shut down, because the class of entrepreneur had not grown. The local commercial community with their legacy in company's system of investment had by this time emerged as a mahajan class at all stages of silk production. Their transition from middlemen to mahajans was inevitable. Hence, it is the colonial production relation which prevented the growth of the silk industry along capitalistic lines. As these mahajans and traders operated and managed an organisation of production which by itself was stagnant and since the foreign market was gradually snapped, silk industry of this region registered a decline ^{in absolute terms} within fifty years from 1835 when the East India Company backed out. Seeds of decline were inherent in East India Company's policies.

5.2 The Course That Followed (1886-1914) :

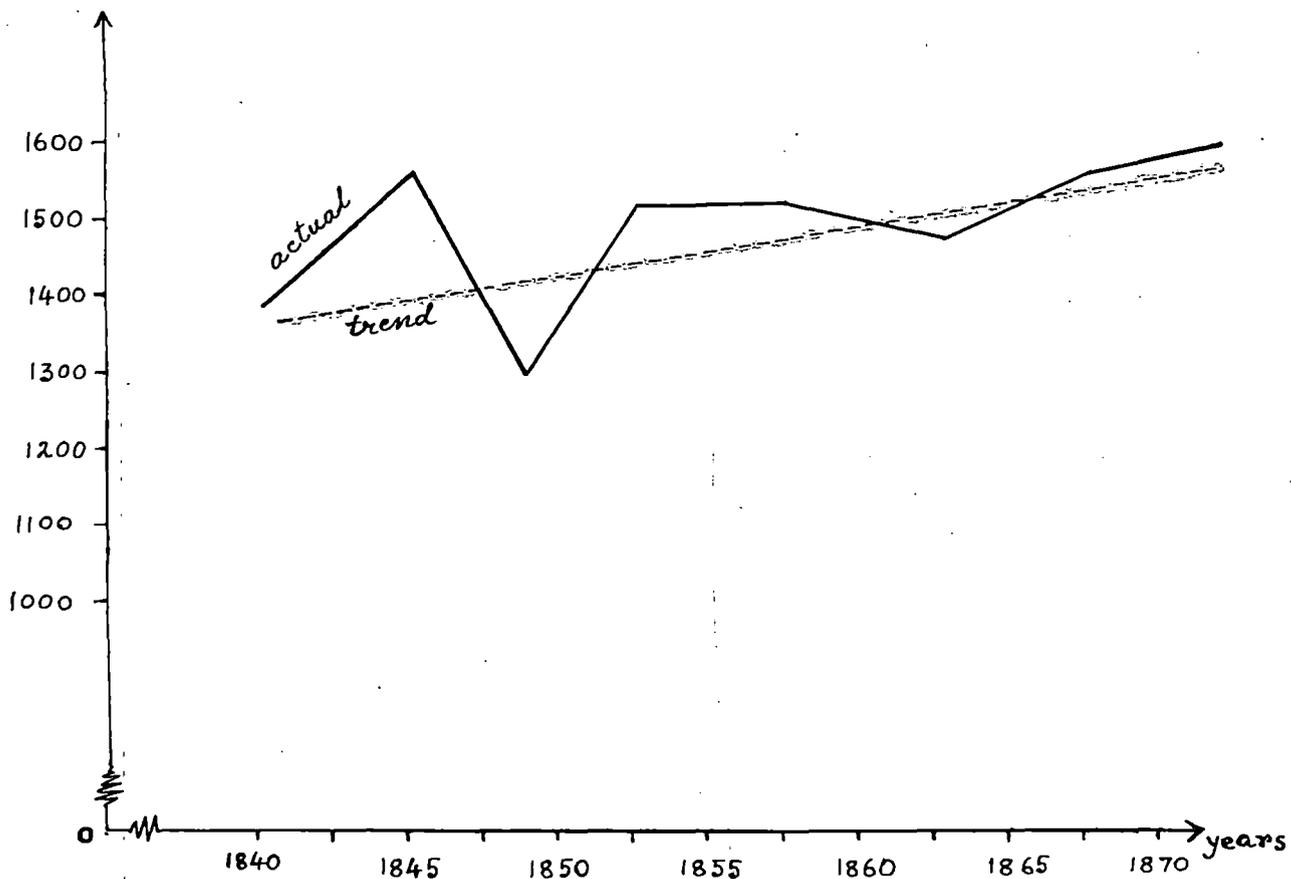
(a) A decline

In 1886 and 1887 two conferences on the silk question were held at Calcutta and in 1886 silk products of Bengal were displayed at an Indo-colonial exhibition.² But, now after two hundred years of British domination on the industry, Bengal had little to display. The question which occurred to the conferences was the problem of a languishing industry and also an effort to sort out the cause of the threatening trend. The largest problem which was focused by the manufacturers at the conference came as an attack against the zamindars fixing high rent for mulberry land in Malda, Rajshahi and Murshidabad. Such rent was the most excessive in Malda, - as high as Rs.16 per bigha, which was even higher than the average of English rents; but land used for growing rice in the plots adjoining the mulberry land used to be rented at 12 annas to 1 rupee per bigha.³ It was also pointed out that such high rents for mulberry land began since the prosperous years during the American Civil War. However, this was not the total picture of the forces causing a decline as we have already noted. Mr. Morey of Robert Watson and Company pointed out in the conference that low price of silk and failure of cocoon crops were among the reasons.

The industry during the last 200 years had been export oriented and its fluctuations had been tied up with the fluctuations in the foreign market. In the circumstances,

GRAPH I

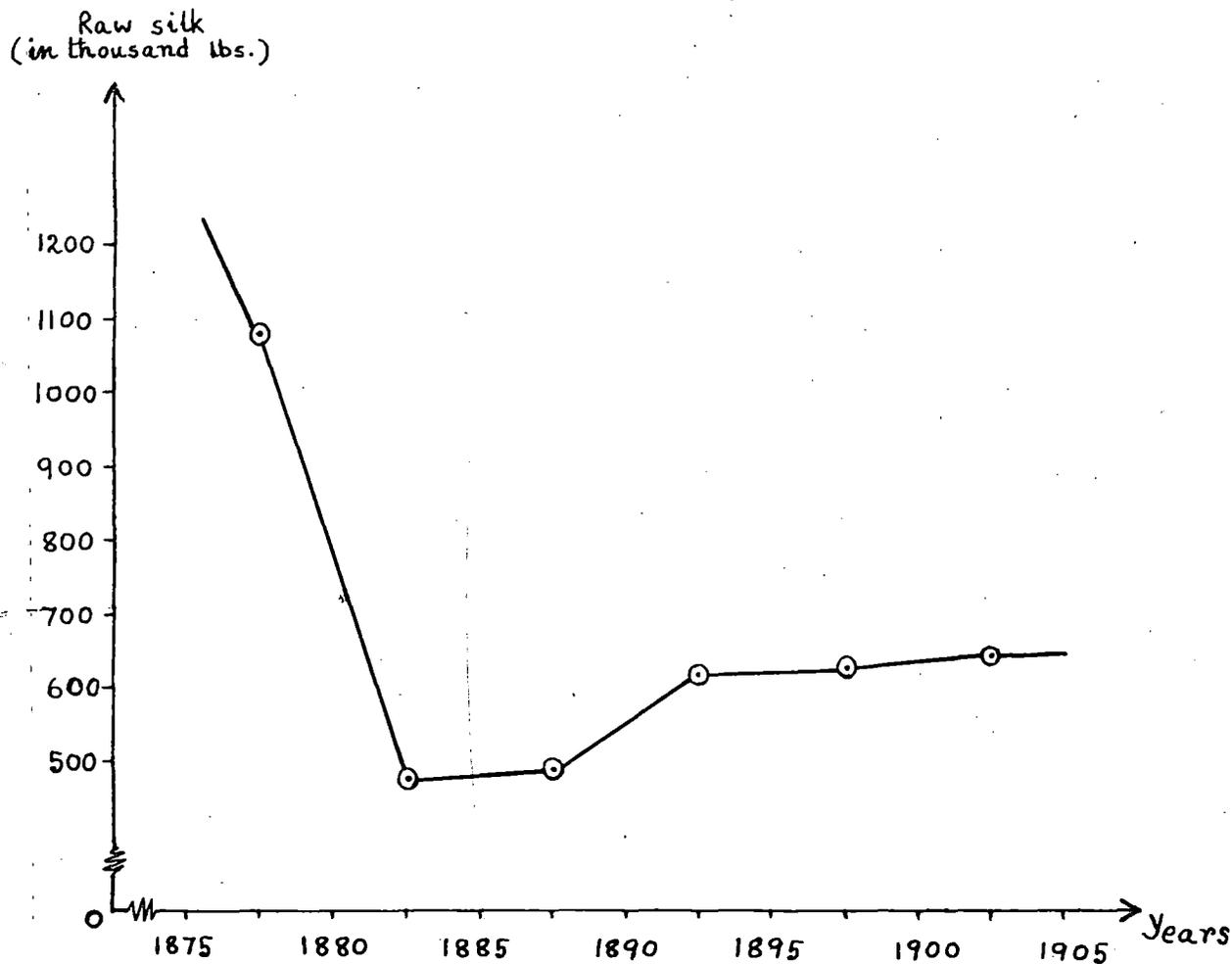
Raw silk
(in thousand lbs.)



EXPORT TREND - BENGAL RAW SILK

Drawn on the basis of average figures supplied by Geoghegan quoting Collector of Customs (Some Account of Silk in India, P. 31) - Please see Table VI also.

GRAPH II



EXPORT OF BENGAL RAW SILK

Drawn on the basis of average figures given in N. G. Mukherjee - A Monograph ..., P. 31-32.

depressing condition of the silk industry of Bengal can be best studied from the time series Graphs I and II showing export trends of Bengal raw silk. The trends demonstrate conclusively that after the departure of the East India Company, Bengal raw silk had been experiencing a slowly rising trend in exports and the actual levels were at a high pitch; but after mid-1870's exports declined absolutely and since early 1880's the levels of exports continued to be much lower than the levels of early '70s. In an export-based industry this is the basic symptom of a general decline. N.G. Mukherjee observed with an optimistic note that during the last decade of the 19th century there had been a considerable change in the direction of raw silk exports from Bengal, - instead of a unilateral export to England volume of export increased towards France and Italy as a result of a competition among these countries.⁴ Such a trend might explain, to some extent, a slight rise in exports during the period; but such a rise was insufficient to arrest the decline of the industry. On the other hand the directional change could not be an explanation to the general decline because such a directional change actually began from the 40's as we have seen earlier.

The decline in raw silk exports from Bengal shown in Graph II was mainly caused by the "decaying vitality of the British silk manufacturing industry" which N.G. Mukherjee himself has admitted.⁵ The fact is that England was failing.

in competition with France, Italy and the new champion Japan. Japan continued to sweep the world market with both raw silk and manufactured silk products; and the quality of her silk products became a threat to the European manufacturers. Bengal failed to achieve any qualitative improvement; and hence, in spite of a directional change, Bengal could neither stand the fall in exports to England nor could she capture a sizable portion of the European market. European demand for Bengal silk was shrinking.

It is also an important observation by N.G. Mukherjee about Malda region in the wake of the 20th century that the native side of the industry had a tendency to revive since 1880's which the European side of the industry had been decaying. He followed Porch in this regard and the claim was more an explanation to show the success of his own experiments than a reality. On the other hand, the symptoms of revival were, in fact, symptoms of regional specialization, and in the face of decay of the semi-capitalistic European enterprises the possibility of the industry to flourish was inevitably doomed. In terms of the statistical information supplied by both Sir George Watt and N.G. Mukherjee on the basis of census figures of 1891 and 1901 it is apparently seen that total population employed in the silk industry increased during the decade from 42,896 to 43,477.⁶ But such an increase is rather a symptom of Malda's specialization in mulberry cultivation, cocoon rearing and reeling in the native ghais than a symptom of expansion of the industry

as a whole. Because, during this decade the number of people employed in mulberry cultivation and cocoon rearing increased at the cost of a loss of employment in large filatures and looms.

(b) Condition of weaving

During the last decade of the 19th century a general expansion of the silk weaving industry of Bengal was witnessed in spite of a decline in the export of such fabrics. This was caused by an increase in domestic demand; and the demand condition was further accentuated by the popular values during the Swadeshi Movement since 1905. One favourable condition for such a general development was the fall in raw silk price. But, the condition of weaving branch of the industry in Malda registered no sign of expansion in the wake of such a general development in Bengal. This signified Malda's specialization in raw silk. It should also be noted in this context that the costliest varieties of ornamented and embroidered silk fabrics used in Bengal came from Benaras looms which procured raw silk from Malda and other centres of Bengal.

In Malda the weaving branch had already declined to insignificance; but the practice of weaving silk fabrics, particularly the mixed varieties, somehow continued. N.G. Mukherjee found the industry 'almost defunct' in Malda, and he was unable to supply specimens in the district monograph

Table IX

Silk Cloths and Mixed Cloths Woven in
the District of Malda, 1903

Sl.No.	Item (Name of the variety)	Price	
		Rs. - As.	to Rs. - As.
1.	Maldahi Gultishi Katar	4 - 0	7 - 0
2.	Maldahi Udakatar	4 - 0	7 - 0
3.	Maldahi Belkhali Fuldar	9 - 0	10 - 8
4.	Chaki Mujlahar	9 - 0	10 - 8
5.	Sada (Bleached)	8 - 0	9 - 8
6.	Nangfuli	9 - 0	10 - 0
7.	Fulam Senaja	10 - 0	11 - 0
8.	Kadamfuli	14 - 0	16 - 0
9.	Chand-tara	10 - 0	13 - 0
10.	Pattadar Seraja	8 - 0	10 - 0
11.	Sarhor Seraja	8 - 0	9 - 8
12.	Bulbul Chasma	9 - 0	10 - 0
13.	Maldahi Katar Hirašana	6 - 0	8 - 0
14.	Maldahi Katar Kalbali	6 - 0	8 - 0
15.	Masru	3 - 0	6 - 0
	(a) Lalsahana		
	(b) Sikiar		
	(c) Qundlal		
	(d) Malichur		
16.	Chanfulia	10 - 0	11 - 0
17.	Kashida	10 - 0	11 - 0
18.	Dhuties (5 yds x 44/46 inches)	10 - 0	15 - 0
19.	Thans for Coating (10 yds x 44 ins)	20 - 0	25 - 0
20.	Uranis (3yds x 1.5 yds)	5 - 0	7 - 0

Source : N.G. Mukherjee - A Monograph on the silk fabrics of Bengal, Calcutta 1903; p.53.

while he supplied a lot of such samples from Murshidabad. But, he has given us a good description of the silk cloths woven in the district of Malda. According to him, in the early 20th century Malda manufactured silk saris, dhutis, handkerchief, sheets and pieces of coating, uranis, chaddars etc. of various sizes; the special process of naksha and weaving could be found in the mixed varieties. Reminiscent of the once-glorious industry we get in his monograph an exhaustive list of such articles - made of silk or silk and cotton, along with their prices in 1903 (Table IX).

All the peices in table IX were not uniform in size (e.g., Maldahi Gultishi Katar was of 3 yards x 32 inches while Kadamfuli and Chandtara were 6 yards long), and the price list should be viewed against the general price of silk yarn Rs.15 to Rs.16 per seer. However, so many varieties and non-uniform sizes indicate that Malda was maintaining traditional weaving but on an uneconomic scale. In the midst of traditional technology and pattern of weaving the important changes that took place was in the use of dyes. Use of indigenous dyes⁷ decreased rapidly since the close of the 19th century, which were replaced by the aniline dyes (artificial) introduced by the German firms; bleaching with indigenous materials continued.

Report of N.G. Mukherjee on the number of weavers in the district (in terms of 1901 census) is somewhat misleading: according to his statement there were "over 2,500 silk

weavers" in Malda, while Hunter stated the number on the basis of 1872 Census to be only 287.⁸ Such a rapid growth in the number of weavers taking to silk weaving was impossible in view of the languishing state of the industry. Also important is to note that such weaving was confined to a small pocket of the district in the early years of the 20th century. The confusion on the part of the census workers in enumeration of weavers was natural; because, excepting naksha weaving, silk weaving used to be pursued occasionally by the cotton weavers on the same loom. It is only naksha weaving that required separate loom for silk; but very few weavers of Malda now possessed such looms since a naksha loom cost Rs.30 to 40 against Rs.4 to 10 for an ordinary loom.⁹

Maxwell-Lefroy in his report put four systems in the organisation of weaving in India¹⁰ :

- (i) The single weaver (and his family) who sells his product locally or to a dealer.
- (ii) Master-weaver who employs weavers in their own houses but who advances materials, pay wages and sell the product.
- (iii) Handloom factory in which the owner erects the building, buys machinery and pays for labour and raw material.

(iv) Mills (e.g. of Calcutta and Bombay) employing power in the factory.

Among these, the first system is the oldest organisation of artisanal industry, and in Malda this was the only system found in silk weaving during the early 20th century. Both Lefroy and N.G. Mukherjee observed that the weavers were almost completely dependent on the mahajans. Mukherjee found weavers vending and hawking their silk cloths in the villages and towns of Malda district, and sometimes the weavers carried their bundles of silk cloth down to Calcutta by train before the pujas, i.e. in September-October. But these examples were seldom and silk goods were not sold at the local hats; only one or two shops in Englishbazar town sold silk fabrics. The major part of the silk cloths produced in the district were sent out by the trader-cum-money lender community for sale to Bombay, Calcutta, Jaipur, Mirzapur etc. These mahajans supplied the thread and also made advances to the weavers for the purchase of thread and support of their families : In lieu of advances the mahajan forced the weavers to sell their product to him, offered merely cost price and charged heavy rates of interest on the advances. The earning of the weaver was reduced to his wages only (4 to 6 annas per day). Mukherjee is justified in one of his comments about silk weaving in Malda, "So long as this state of things continues, it is hopeless to expect that the industry will flourish."¹¹ For the improvement of

Malda weaving Mukherjee stressed the need for creating demand for the fabrics both within the country and outside. But any expansion of expected demand was perhaps unable to change the condition of weavers and create a climate for an increase in investment so long as the mahajani system was there.

(c) Raw silk

As a result of competition from China and Japan price of Bengal silk declined to a great extent in the European market since the 80's and 90' of the 19th century. Such a decline in the price of raw silk was not matched by a proportionate fall in the price of cocoons. The European concerns with large fixed cost on filatures could not continue profitably. It is because of the existence of a large native side of the industry that the European firms could not force down the price of cocoon. These companies first tried to reduce establishment charges by concentrating their work in a few factories; and finally since the early years of the 20th century they virtually closed down their factories. By 1915 Louis Poyen and others wound up their business from Malda; and silk filatures in other districts were also closed down. When the East India Company abandoned their filatures, they were taken over by the private European companies; but now, no native firm was found eager to take the charge of the large filatures producing superior quality of raw silk. One reason behind this was certainly the dull export market; but the other reason was that the native capital-owners were

engaged in the mahajani form of business in raw silk, and they lacked in enterprise to run filatures on capitalistic line. The result was a complete closure of the filatures, and Malda now had to be content with its khamru silk and the mahajans. There was a temporary set back for the cocoon growers attached to the European filatures; but the shock could not be severe for the industry, because (i) withdrawal of the European firms was slow, (ii) the mahajans were prepared to grab the poor rearers, and (iii) soon the First World War itself was an impetus in the form of an extended demand.

As against the closure of European filatures the encouraging feature since 1880's in the Indian silk industry was the opening of Bombay weaving mills.¹² This could be a parallel source of demand for raw silk from Malda; but Bombay depended on raw silk imports from China and Japan, and as these mills expanded, Indian import of raw silk increased against smaller such exports. The single silk textile mill at Calcutta grown just before the War (I) was also not a good buyer of raw silk from Malda. The possibility of turning out superior quality raw silk was doomed in Malda before the First World War.

(d) Regional specialization

By this time regional specialization was complete in Bengali silk production. The trend began, as we have noted

earlier, since the middle of the 19th century and was accelerated towards the close of it. In districts other than Malda and Rajshahi sericulture either was stopped or became insignificant in the early 20th century, because sericulturists were taking to other pursuits. The census figures of 1891 and 1901 as well as various reports in the first two decades of this century will reveal the nature of the specialization that took place :

Decline of Sericulture	Expansion of Weaving
Burdwan Division -	
Abandoned in Burdwan, Hoogly, Midnapore.	Birbhum, Bankura
Insignificant in Birbhum, Bankura	
Presidency Division -	
Rapid decline in Murshidabad. In other districts abolished.	Murshidabad
Rajshahi Division -	
Insignificant in Rangpur, Dinajpur, Bogra.	

In Midnapore it is tasar weaving that expanded; the district thus went out of the map for mulberry silk manufacture. According to a report from the Collector of Murshidabad (1872) sericulture and silk reeling declined in the district since 1830';¹³ and a kind of geographical division of labour developed since the weavers of Murshidabad depended

on Malda for the supply of silk thread.¹⁴ In Rajshahi district silk reeling industry remained but cocoon production decreased to such an extent that the European firms had to depend since 1890's on cocoons imported from Malda.¹⁵ It was also reported that the raw silk industry began to languish since the closing years of the 19th century and in 1916 no European filature could be found in Rajshahi.¹⁶ Mulberry cultivating part of Dinajpur had already been included in the district of Malda, and in 1863 J.L. Sherwill found no trace of sericulture as trade, profession or manufacture in the district of Dinajpur.¹⁷ It is only in the district of Malda (Bhagalpur Division) where an increase in mulberry cultivation and cocoon production was registered. Thus a regional specialization took its shape in the silk industry of Bengal : Murshidabad, Birbhum and Bankura specializing in silk weaving while Malda and to some extent Rajshahi specializing in sericulture and raw silk production.

This, however, does not mean that mulberry cultivation was not given up in Malda; rather, there is evidence of mulberry cultivator switching over to other crops in this district also. As early as in 1878, Baboo Bhobaneswar Singh, Deputy Collector (Settlement) Malda writing to the district Collector on the settlement in Shergheer Panchanandapur Estate¹⁸ stated, "... the sorts of lands as entered in the chitta and according to which rent roll has been prepared are incorrect and unfair viz., that the lands not growing

mulberry have been sorted as mulberry lands ..."; and he also pointed out, "... mulberry lands have been made to grow other crops...". On an enquiry into certain objection, he reported, "... in some cases I have found no trace of mulberry having been grown on the lands recorded as mulberry growing lands." In fact mulberry cultivation was fast concentrating within the district in a few continuous areas like Bholahat, Sibgunj, Kaliachak, ^{Su}Rejapur, Englishbazar, Old Malda and some adjoining parts of Muchia-Bulbulchandi. In such areas mulberry cultivation expanded during these decades while it was given up in other areas of the district. In a census of mulberry cultivation in 1913 it was found that the same process of simultaneous adoption and rejection continued in Malda, but it had slowed down. On the basis of last five years' average, it was estimated that mulberry cultivation had been given up in about 350 acres, while new cultivation of mulberry was adopted in about 311 acres in 1913.¹⁹ Thus, Malda's specialization occurred in two degrees : First, Malda specialized upto raw silk producing stage against Murshidabad, Birbhum and Bankura; and secondary, a concentration of the silk industry took place in the southern part of the district; - the thanas practising sericulture more or less surrounded Englishbazar.

(e) Experiments

In the background of a silk worm epidemic caused by pebrine in 1870's attention of all concerned as well as the

government was drawn to the control of epidemic and improvement in rearing. After the unsuccessful attempt to experiment with mulberry plantation and rearing at Berhampore Central Jail in 1882, N.G. Mukherjee, Assistant Director to the Department of Agriculture was deputed in 1888 to be sent to Europe to study rearing and reeling eradication of disease discovered by Louis Pasteur.²⁰ After his return, Mukherjee was engaged for several years since March 1888 in experimental rearing of pure seed (i.e. cocoon seed) and demonstrating the scientific method of rearing. The experiments were initiated jointly by J. Wood Mason, Superintendent of Indian Museum and N.G. Mukherjee. Small nurseries were established at several places - Alipur, Murshidabad, Rajshahi, Malda etc., and the initial results were regarded as encouraging so that the government sanctioned Rs.3000 per annum for the purpose of conducting the seed centres and imparting training to the rearers.²¹ It was the intention of the government that the nurseries be ultimately handed over to trained rearers to carry on without further assistance from the government.

Mukherjee himself claimed great success of the experimental nurseries between 1888-1896 in fulfilling objectives like controlling epidemics, teaching the rearers of Pasteur's method, achieving less uncertain cocoon crops etc. He extensively quoted reports of P.C. Lyon, Director of Agriculture Department and other Europeans to establish :

- (i) that the ^{worm seed} ~~seed~~ produced under his instruction was a great improvement over ordinary seed;
- (ii) that the cultivators were gradually appreciating the new seeds; and
- (iii) that his pupils in independent charge of private nurseries, originally started by him, were making their business pay.²²

In these reports and comments a special mention was made of the Kagachira Nursery in Malda. This nursery was managed by Dandadhar Das, one of Mukherjee's trainees, and it earned a high reputation in the districts of both Malda and Murshidabad. It was found in some cases that rearers travelled long distances to obtain worms of a good breed. It was observed that Mukherjee was more successful in Malda than anywhere else.

However, the involvement of the government was confined to Rs. 3000 per annum only and N.G. Mukherjee had to establish his success so that the grant was not discontinued. In 1903 he reported successful working of 15 seed rearing stations by professional rearers in 5 districts of which 7 were situated in Malda alone. In Rajshahi a separate sericultural school was established under the patronage of a few local zamindars. On the whole his scheme became known as a successful one which was able to rouse some interest. There was, of course, no reason that one or few individual

efforts on European lines would be of great success, and completely different opinion regarding the development policy of Mukherjee was also available.²³ However, such evaluation of Mukherjee's scheme bearing a rigid and narrow policy as well as of its failure came during the First World War.

On transfer of N.G. Mukherjee in 1898 to Shibpur Botanic Garden, silk merchants of Bengal formed themselves into a committee to carry on the scheme already initiated under government patronage. Between 1898 and 1906 this 'Bengal Silk Committee' chalked out various plans to carry on rearing stations and nurseries on a wider scale :

- (i) construction of 9 special nurseries directly under the committee in charge of trained subordinates.
- (ii) appointment of a Superintendent and four supervisors in the districts of Murshidabad, Malda, Rajshahi and Birbhum, to train rearers in their own houses;
- (iii) free gifts of microscopes and other necessary appliances or selling them at cost prices to selected rearers; etc.

Bengal Silk Committee sought to raise for themselves a fund of Rs.5,000 per annum by selling bonds guaranteed for three years; and they proposed a government subsidy of Rs.3,000 per annum. The subsidy was granted and it was raised to extent of Rs.6,000 and subsequently to Rs.10,000.²⁴ However,

the scheme did not proceed as expected. In our opinion, it was not possible to achieve success on a wider scale within the prevailing economic organisation of the industry and without direct government interference. In Murshidabad progress was slower, and in Birbhum or Midnapore the scheme seemed impotent. In the plan, the attention of the Committee was particularly directed to the district of Malda where the best cocoons were available and the best rearers in Bengal lived; accordingly the scheme was relatively successful in Malda. But here too the rearers did not always rear properly and could not avoid the temptation of selling bad seeds. It was also inevitable that the benefit of scientific rearing and appliances could be reaped by rich farmers or mahajans, not by ordinary poor and illiterate rearers overburdened with debt.

In 1906, as a result of silk traders' representation to the government, a committee under the chairmanship of the Director of Agriculture, was appointed to consider the question of a decline of the silk industry in Bengal.²⁵ The committee emphasised again the production of pure seeds and recommended among other things, model rearing houses, extension of mulberry plantation, extension of scientific rearing and above all direct control of the government. Meanwhile in 1905, N.G. Mukherjee was sent on deputation to Kashmir and Mysore to conduct investigations into improved method of silk reeling. In his observation, the inferior

quality of Malda silk was attributed "not to any defect in the reeling machine but to the poverty of Bengal cocoons".²⁶ In April 1908 Agricultural Department of the government of Bengal took up sericultural operations. A special committee was appointed to assist the Director of Agriculture; the director was its chairman and the members represented the European and native firms 'interested in silk industry of the Province'. The Superintendent under the Bengal Silk Committee was appointed Superintendent Sericulture by the government. Government also felt the necessity of a Central Nursery at Berhampore in addition to the nurseries in the silk growing districts.

Old nurseries were taken over by the government from the previous Bengal Silk Committee; but the government was not eager to run numerous seed stations all over the silk producing districts. It very soon followed the old policy of encouraging and depending on private rearers, while operating a few nurseries of its own. The argument was put like this,

"... I have discovered, however, that in France, Italy, Japan and China, Government in no case attempts to supply the entire seed required. The principal quantity is supplied through professional rearers working under Government supervision. Further, it is most important that the existing professional silk-worm rearers should not be ruined by the action of the Government. This would be what would happen

if the scheme as originally conceived were carried into effect."²⁷ Such a logic was forwarded by the government in view of the recurrent losses incurred in running the nurseries.²⁸ Although the government was against opening of newer nurseries, special importance was attached to the two government nurseries opened at Piyasbari and Amriti in Malda, which had been evidenced in the above letter from Blackwood.²⁹ The capital cost of Malda nurseries was Rs.40,000 each, which was equal to Berhampore Central Nursery and higher than other nurseries. Other cost-revenue data at a glance has been mentioned below (as they stood in 1914)³⁰ :

Seed rearing stations : (Malda)	Capital cost on mulberry (Rs.)		Average Annual Recurring Cost (Rs.)	Revenue (Rs.)	
	Incurred	To be incurred		Probable for 1914-15	When completed
Piyasbari	4,000	4,000	9,796	3,000	4,500
Amriti	4,000	Nil	9,696	2,000	4,500

The cost figures are exclusive of the cost of disinfecting the houses of professional rearers as well as cost of expert supervision. What is interesting about the above data is that when the government itself failed to make the nurseries economically viable, it expected private rearers to adopt such a scientific approach to seed rearing and make profits. Government policy to leave mass-scale scientific seed rear-

ing with professional private rearers was the policy of an escapist.

(f) A review of the causes of decline

All the official and semi-official attempts to study the causes of decline in sericulture and raw silk industry in Bengal during the first two decades of the twentieth century mainly considered the following factors behind the ^{diminution}~~diminution~~ :

- (i) increased cost of mulberry cultivation and worse plant being cultivated;
- (ii) better value of land for other crops as compared to mulberry;
- (iii) defective rearing and degeneration of worms;
- (iv) spread of pebrine;
- (v) relative increase in agricultural wages other than mulberry cultivation and cocoon rearing;
- (vi) defects in reeling operation;
- (vii) want of knowledge of market conditions and of proper organisation.

Stress varied from one study to another, but it was only R.R. Ghose who emphasised the seventh point and opined

that this deserved highest attention.³¹ In general the studies emphasised the technical aspects of the industry and finally recommended improvements in rearing and reeling. Lefroy went further to recommend legislative measures like protective import duties. But in our opinion, in the face of international competition unless superior silk at cheaper rates could be produced there was little chance of the industry getting revitalized. The organisation of the industry under the mahajani system was the largest obstacle to be overcome in this respect. Factors like wage increase in staple agricultural crops was actually of little importance, because (i) such an increase was never rapid in the labour surplus agrarian economy, (ii) rearers also engaged the ^{female} ~~female~~ and child members of the family in rearing operations, which was not possible in all other agricultural crops. When a general decline in Bengal silk is considered, factors like attractiveness of alternative crops was a factor no doubt; but this cannot explain the whole issue, which is evident from the case of Malda where sericulture did not recede. Even in the case of Malda the industry started with a set back from the early 20th century. The set back was not quantitative; it was rather a technological reversal. The large-scale filatures were closed down, smaller private filatures or country ghais remained, while the organisation of the industry was based on adverse land relations and the mahajani system. In the face of rising cost of living the general distress of the rearers and their total dependence on

the mahajan for finance, raw material, appliances, employment and market created an atmosphere where the silk industry could not flourish. It is interesting that the above investigations did not totally overlook the organisational barrier, and in different contexts they concerned themselves with two vital problems : unfavourable rent structure and the mahajan. Even in 1903 rent for mulberry land in Malda was the highest and the rearers found "it impossible to get on without incurring debt."³² From the silk weavers to mulberry cultivators the mahajans dominated on all stages, and N.G. Mukherjee also thought that the industry would be prosperous if the artisans could be "relieved of this burden". Lefroy in 1916 observed that the mahajans as a class were "too prosperous" and the want of capital and organisation among the artisans bound them to the mahajani system.³³ R.R. Ghose remarked that the sericulturists were "over head and ears in debt". "They work more for the benefit of the parasitic money lenders who take out from them their real interest in the work."³⁴ He also suggested formation of co-operative societies and banks for "freeing them from the clutches of these vampires".

In our opinion, these unemphasised observations and comments contained the true picture of the industry and reflected the basic factor restricting the development and growth of ^{it. The spread of mahajani capital and lack of growth of} capitalistic enterprise provided an organisation within which any superficial attempt to modernize must be futile. The parasite of pebrine was perhaps less harmful

than the parasite of mahajan.

5.3 From 1914 to 1947 :

Since the First World War India entered into the phase of modern industrial development; because it is from this period that modern large-scale factories were expanding faster than ever. But the remnants of village handicrafts were not wiped out as a result of the emerging industrial evolution, because of the structure of the rural economy, unchanged living condition in the villages, lack of communication, speciality in the works of artisans, slow and limited industrialization and various other factors. Indian Industrial Commission (1916-18) headed by Sir T.H. Holland also observed the vitality of the old domestic industries as one of the most striking features of Indian industrial life and pointed out the survival of these industries in the face of factory competition both Indian and foreign.³⁵ Malda and its immediate vicinity did not experience the direct effects of modern industries. On the other hand, sericultural operations are so special in nature that it is impossible to set up the industry in the urban areas. Thus the silk industry of Malda region did not come into direct conflict with the new era of large factories in terms of resource and labour use etc.

A few other important aspects and trends in the Indian economy had some relation with the silk industry of Malda. For example, the Report of the Royal Commission on

Agriculture (1926-28) emphasised agricultural research and gave some attention to the co-operative movement. Both of these had some relevance to sericulture and the silk industry. Similarly, the war impetus as well as the depression of 1930 struck both Indian agriculture and export oriented handicrafts. The Provincial Governments in 1937 undertook extensive programmes for reforms and rural reconstruction; their nation-building zeal was interrupted by the exigencies of the Second World War. The War with accompanying problems of supply, the escalating demand for food and raw materials, the famine and haphazard price control, all led the rural economy to a position where the middlemen were benefited at the cost of distress of basic growers. The trend had its impact on the silk growers also, and on the eve of 1947 the condition of the silk industry as well as of the farmers and artisans was no better than their condition prior to 1914.

(a) War-impetus - World War I

The Holland Commission on Indian industries (1918) pointed out in a very precise manner the effect of export potentialities of the War incurred on economic changes in the rural areas. The commission reported, "we find an increasing degree of local specialization in particular crops, especially in those grown for export".³⁶ The industrial scene of Malda studied in the Survey of Cottage Industries in Bengal (1984) reflected similar potentialities.

Our earlier observation regarding the inter-district and intra-district specialization in sericulture, silk reeling and weaving is substantiated by this survey. Silk reeling was found to be the most important industry of Malda district; and such reeling was conducted entirely on country ghais; - there was, of course, some variation in the scale of operation. This industry was found to be the occupation of two thanas only, Kaliachak and Englishbazar, where 1,787 basins were engaged; and the reelers depended entirely on the local production of cocoons.³⁷

From the pre-war days, besides the normal use of silk as an article of dress, demand for silk for its industrial use was expanding, e.g. as electrical insulating material (since silk is a non-conductor of electric current). During the World War I there was a sudden spurt in the demand for silk as it was employed in large quantities for surgical dressings, cartridge bags, balloons, parachutes, chords etc. R.C. Rawley remarked "There was hardly any branch of warfare in which silk goods were not in demand in some form or other".³⁸ This extraordinary war demand was responsible for a great rise in the prices of raw silk and an overall extension of mulberry cultivation in India. But, expansionary effect of the War on Malda was less significant as compared to other parts of India - Kashmir and Mysore. Kashmir had already established a complete government monopoly from the cultivation of mulberry to the

marketing of raw silk, had minimised the chance of disease and had completely modernised its reeling process. Thus Kashmir was naturally the best prepared for taking the fullest advantage of the rise in demand. War demand particularly meant demand for superior quality raw silk. In fact both Bengal and Mysore were caught unprepared; but Mysore could show greater energy in effecting necessary improvements (particularly since 1920) in order to take advantage of the new opportunity. The Malda industry with its stagnant and traditional organisation turned out inferior silk and was generally ignored by the foreign buyers. R.C. Rawlley categorically mentioned the existence of too many middle^{men} and brokers as a prime barrier to the question of economy in the raw silk industry of Bengal.³⁹ When Kashmir silk began to establish its reputation even in the face of competition from China and Japan, Bengal silk was found increasingly unsatisfactory in both England and France. Bengal raws were consumed only in sewing, ribbon and crape weaving industries in Europe. This limited utility prevented price of Bengal raw silk from getting appreciated in the world market during the war boom.

Since the temporary war-impetus had less significant impact on the silk industry of Malda; the Survey of Cottage Industries noted a very unsteady condition of the industry in 1924; but the report failed to make any detailed estimate of the yearly out turn of silk in the district of Malda in

the absence of proper statistics. Weaving branch of the industry now comprised of a negligible part of the entire industry in Malda district. "A microscopic part of the total silk produced is consumed by the silk weavers of the district. The approximate consumption of the district is 55 maunds only".⁴⁰ From the report of this survey we come to learn that the local merchants had innovated a new method of disposing of raw silk by post to merchants in different parts of India and also to Ceylon; but the bulk of Malda's silk went to south India.⁴¹ About 400 maunds of raw silk usually went to the weaving industry of Bankura; and the weavers or merchants of Murshidabad had their supply direct from Malda. This information gives us an impression that both textile and other industries in some parts of India depended on the raw silk supply from Malda. A very interesting point about postal despatch should be noted; the business was conducted entirely on a credit system which raised a great obstacle to fresh parties, merchants or weavers, willing to take up this business. The survey specifically mentioned a new firm under the title of Khan Brothers & Co. whose proprietors were all influential local gentlemen of Malda. It was trying to organise marketing of silk on the advantageous terms to local reelers, but could not push sales as they were unable to take the risks of credit business.

The practice of postal despatch and credit business was acceptable to the merchants at the receiving and,

because (i) it saved them from sending agents to Malda, (ii) it gave them an opportunity to maintain monopoly in their own areas of business. From Malda side, the business of selling raw silk was entirely in the hands of Marwari merchants who functioned as mahajans vis-a-vis the reelers. As compared to other parts of India, the modus operandi of the local merchants was, however, different in Malda and Murshidabad.⁴² The local merchants were known as aratdars who in Malda got quotations for Canton silk or general market price through their agent at Conjeevaram and fix the selling price of a standard variety of local silk. A contract is then entered into with the reelers on the basis of that rate; and obviously the reelers get less than the market price on account of the advancing system. The account with the reeler was adjusted only after the disposal of the silk procured from him, and the reeler after the delivery of his produce had to wait for the sweet will of the merchant-mahajan while the merchant was not responsible for any loss or shortage. It was likely that these merchants deceived the reelers. There was room for fraud, misrepresentation and exploitation at various stages owing to the peculiar accounting system, different weights, lack of finance and marketing ability of the reelers and the peculiarity of moisture absorption possessed by silk which changes its weight with varying degrees of moisture. Under ordinary circumstances the reelers could not know their exact position in the market, as sales were entirely in the

hands of the merchants. Generally, a large advance to the reeler varied between Rs.400 and Rs.500, and usual rate of interest was 15 per cent. But, the price paid to the reeler was so low that sometimes the merchants could afford to call his advance interest-free; the reeler had further to pay towards commission, profits and charges, for charity and various other items. Since Conjeevaram weight and Malda weight differed and since railway freight per maund was smaller from Malda than from Mysore, the selling expenses were lower for Malda merchants than for Mysore merchants.⁴³ Hence, Malda captured a larger ~~share~~^{share} of the south-Indian market. Malda's dependence on south India for sales is also evident from the fact that pricing by Malda merchants was based on the market conditions in south India, as we have just seen.

This type of organisation in raw silk marketing reveals that (i) local price at Malda was to some extent governed by Chinese imports; (ii) the war impetus was not directly effective at Malda, but she expanded her trade to south India, while Kashmir and Mysore was busy meeting the expanded foreign demand; (iii) unlike Kashmir, collection and marketing by merchants at Malda was on primitive lines. As regards (i) about it is to be noted that since 1915 China more or less continually exported to India mostly coarse varieties of her raw silk. Malda had to compete with Chinese silk in the south-Indian market, and we have already

seen that quotation for Canton silk determined the price of Malda silk. China put further attention to the Indian market after the failure of American demand in 1929. Like the petty reelers, the cocoon producers were also heavily indebted to their purchaser - the village mahajan. The entire system of producers' bondage with the class of mahajan stood on the way of the industry's response to a temporary rise in demand.

(b) Remnants of the weaving branch

The survey of cottage industries in Bengal (1924) also portrayed in good details how, in spite of her specialization in raw silk production, Malda maintained some remnants of the weaving branch of the industry. Here too the mahajani system was the cause of the weavers' plight, and even in the face of rising demand for silk fabrics the weaving branch of the district was rapidly dwindling away to antiquity. According to the Report on the survey, traces of three kinds of silk weaving could be found - Katar (mixed fabrics), Matka (woven from silk waste) and pure silk. Of these three, the first kind (i.e. katari) was almost lost. Only a few mahamedan weavers of Sahapur, Bala and Nageswarpur villages in Englishbazar thana area practised such weaving as a subsidiary occupation during only a few months of the year. Otherwise these people were cultivators and/or cotton weavers; they were also engaged in mango business during busy mango season when the looms were closed down. These

weavers produced katari cloths as working partners of the mahajans who supplied raw materials and family expense. The accounts were adjusted at the end of the season and the weavers got normally 25 per cent of the sale proceeds as their wages. Average income of a weaver (assisted by the members of his family) was about Rs.25 per month.⁴⁴ The mahajans sold the goods through brokers and the usual market for these products was the Middle East; - exports were made by Bombay merchants.

Matka weaving was concentrated in two areas. - (a) villages Goyeshpur and Jote within the Englishbazar thana, and (b) villages Narattampur, Mohanbag, Sibnagar and Dewan-jagir in Sibgunj thana close to Englishbazar. The first area had 3 establishments with 13 fly-shuttle looms and one country loom engaging 40 weavers on monthly wage basis, while the second area engaged 44 families and 68 looms. All these weavers generally purchased matka yarn from Jalalpur in Kaliachak area. These yarns were woven into saris with red boarders, dhutis, chadars and thans to the extent of 20,000 yards valued roughly at Rs.55,000 annually. Most of the weavers sold off their produce to the local mahajans with a reduction price up to 50 per cent. On an average, a weaver helped by a female member of the house earned Rs.12 to 14 per month. It is in the case of matka textile than a considerable portion of the produce used to be consumed locally. The rest was to Rajshahi and Calcutta. Mahajans and wholesale

dealers dispose of most of the produce. However, there was enough scope for improvement in the quality of such cloths and the yarn as well.

Pure silk weaving was also concentrated in the same weaving region of the district - from Sahapur to Sibgunj,⁴⁵ but only in 5 villages. The extent of the industry may be conceived from the following table⁴⁶ :

Villages	No. of families	No. of looms	Yearly out-turn (No. of pieces)
1. Puratan Alidanga	12	23	850
2. Nutan Alidanga	11	19	700
3. Sibgunj proper	1	3	75
4. Dewanjagir	12	28	975
5. Hazaridanga	20	39	1,500
Total	56	112	4,100
Value of annual out-turn = Rs.84,000			

These weavers used silk thread produced within the district unlike their counterparts in south India who supplemented domestic supply of raw material by imported varieties. The produce comprised of mainly saris with plain and designed borders as well as some quantity of dhutis and chadars. It was only in the case of pure silk weavers that a few families were found to be working independently of the mahajans; for others, mahajans controlled their life. But still, pure silk

weavers enjoyed higher average income : one weaver helped by one female earned Rs.24 to 25 per month. One or two weavers were stated in the report to be fairly rich; in fact, they owned large land holdings and they were mahajans themselves. Like matka cloths a part of the pure silk produce was locally sold and the rest was sent to Rajshahi and Calcutta by the mahajans.

A closer look at the details provided by the survey of cottage industries (1924) reveal a few important aspects of the weaving branch of the silk industry of Malda (including all the three varieties). First, it should be emphasized that excepting two villages in Jote-Arapur area attached to Old Malda and in the northern suburbs of Englishbazar, all the silk weaving villages lay in the area Sahapur to Sibgunj - attached to the south-eastern side of Englishbazar. All the villages in both the areas were traditionally famous for weaving since the pre-British days; and at the same time, the weavers engaged were also traditional weavers - both Hindus (tantis by caste) and Muslims. It has been pointed out earlier that raw silk production had already concentrated to the area south of Englishbazar. Plotting all these areas on the map of the district we find a southern and south-eastern cluster around Englishbazar the seat of English trade.

Secondly, neither the weavers nor the looms mentioned in the statistical abstracts were exclusively engaged in silk

weaving alone; the silk-weavers had other pursuits - cotton weaving or else, and the same loom used to be engaged in both silk and other sorts of weaving. In general, exception a few weavers in pure-silk, the economic condition of the weavers was poor. The situation explains to some extent why silk weaving more or less completely disappeared from the district in 1940's. For the mass of poor weavers engagement in a production using costlier raw material implying higher debt burden for him proved to be useless; for the few well-to-do weavers silk weaving was not the prime source of their income and wealth, which was land or otherwise, and they had no hesitation in the post-Second World war period to abandoned the less significant productive activity in their economic life. During the inter-war period silk weaving was carried on more as a traditional or habitual economic activity than as a regular productive operation on an economic scale.

Thirdly, the remnants of silk weaving maintained with some allied economic activities which were also lost with the abandoning of weaving. There is no doubt in it that these subsidiary activities were almost negligible in terms of number of men employed or their income; but they existed in the inter-war period as a part of the extinguishing tradition. For example, there were a band of 15 workers in the weaving locality whose business was to make the warp for the weavers; wages of such men was about 12 annas per day. Similarly another special class of workers did the twisting of yarn; -

10 persons helped by 10 boys; - wage of a man with a boy came to about Rs.1 a day. Weavers of Malda also dyed their own yarn of all colours except black which they did in Murshidabad.

Fourthly, the organisation of production was so structured that the mahajans dominated as in the case of raw silk production and as a result of which the prospects of growth was sealed. Growth of private enterprise either in the line of independent weaver or capitalistic entrepreneur would have saved weaving from extinction, particularly in the case of pure silk textiles for which there was a growing internal market. To some extent, tradition thwarted the marketing prospect of Malda textiles in various other ways. For example, all katari goods were woven in thans of long-practised measurement - 8 yds. 27 inches, which was unsuitable for the much altered conditions of market. Since the mahajan was not an entrepreneur nor an order-supplier merchant he had little business to interfere with such specifications.

Fifthly, from the survey of 1924 it is evident that in terms of aggregate almost 50 per cent of the silk textile produced in the district was consumed locally. This is significant, since expansion of internal market meant both of the local market and of the market outside Malda. Under the circumstances, extinction of silk weaving from Malda in 1947 cannot be explained by her own specialization or the

growth of Murshidabad weaving centre alone. One very important fact is undoubtedly the inclusion of Sibgunj thana area into East Pakistan.

(c) Experiments : co-operation

During the inter-war period, experiments by the policy makers were made with the silk industry of Malda along two major directions - (i) economic : provision of a parallel economic or financial organisation through the establishment of co-operative societies, and (ii) scientific : provision of research, extension services and training facilities, supply of proper seeds etc. Both the attempts were more or less ineffective in breaking the good old stagnation and the vicious structure of the industry. The second experiment along with some supplementary proposals will be discussed in the sub-section 5.3(f) below; at this stage we just have a review of the co-operatives only.

The plight of the silk producing people in Malda had been long drawn and since the early 20th century need for co-operative societies was discussed. The stress on organising co-operatives as a suggested way out for improvement was renewed in 1920's. Peddie,⁴⁷ a very enthusiastic District Collector, took initiative in this matter. Initially, co-operative societies were planned as credit societies advancing loans to both sericulturists and reelers, but later on establishment of reelers' societies (producing raw silk)

was the main target. In 1922 Malda District Central Co-operative Bank resolved (resolution dated 30 June 1922) that it was prepared to organise two silk-societies in the district provided that :

- (i) About one lakh of rupees necessary to finance the societies will be available as loan from the Federation of Co-operative Banks or any other source at a rate of interest 6 per cent per annum.⁴⁸
- (ii) A cash credit of at least Rs.50 thousand be granted immediately.
- (iii) A specially qualified officer be deputed by either the Sericultural or Co-operative Department for proper supervision of the societies.
- (iv) At least 12 members join each society and the amounts advanced should be covered by assets.

From the experiences the District Central Co-operative Bank had already gathered from financing a few reeler members of existing agrarian societies, the Bank included stock of reeled silk as the most important item in the asset side. Hence, regarding the fourth condition, the Bank sought authority from the Registrar, Co-operative Societies for supplying raw silk against orders from the Registrar. Such a system would have enabled the financing organisation to have a command over the produce of the societies; and a kind

of co-operative linkage could well be established with the weavers' societies in the districts of Murshidabad Bankura and Birbhum. It was also considered that such marketing arrangement by the Bank or the Co-operative Department could have made the societies viable. But in practice the required co-operative net work was absent and in the marketing of raw silk the major difficulty was that the competitor Marwari merchants were engaged in credit sale which became the general practice in the silk market. On the other hand, in the absence of a detailed inter-district co-operative linkage and widespread net work of societies, the marketing arrangement seemed much like a replica of the mahajani system - the creditor commanding the out-turn of the debtor.

Overcoming the difficulties was not easy, and establishment of two reelers' societies in Malda took shape after a few years; solution to the problem of linkage was attempted by organising simultaneously the Bengal Co-operative Silk Union in 1927. But, the story of their effectiveness continued to be disappointing. Particularly in the face of declining silk prices and increasing foreign competition during the great depression years, the viability of the societies could not be properly judged. The Report of the Tariff Board 1933 found only one silk co-operative society in Malda, and that too not in good health.⁴⁹ For decade to come co-operative movement failed to bring about any significant change in the traditional system of silk manufacture in

GRAPH III



INDIAN EXPORT OF RAW SILK

Drawn on the basis of LEAGUE OF NATIONS
STATISTICAL YEAR BOOK 1930-31, quoted in
Report of Indian Tariff Board 1933, p.5

Malda.

(d) The trend

The survey of cottage industries in Bengal in 1924 depicted the Malda scene at a particular point of time after World War I; but to understand the trend of the industry of Malda it should be viewed against the international and national perspective. Report of the Indian Tariff Board (1933) analysed, on the basis of available international statistics, the relative average shares of different countries in world silk production and consumption during 1920-29 as follows :

	<u>Production</u>	<u>Consumption</u>
Japan	65%	U.S.A. 70%
China	20%	Rest 30%
Italy	10%	
Rest	5%	

The trend of world production disclosed by these data showed that production had decreased during 1920's in Europe and India while it went up rapidly in China and Japan, - at least exportable surplus in these two countries increased enormously. On the demand side, U.S.A. became the single largest consumer and hence the Wall Street crisis of 1929 had severe impact on all the silk producing countries. Fluctuation in Indian export is evident from Graph III.

This graph reveals that while exports to the world market from Japan and China increased steadily during 1920's Indian exports declined when the War impetus was over, and after a temporary revival during 1926-27, declined sharply again. In fact, during 1920's both post-war boom and phenomenal prosperity of the largest consumer U.S.A. sustained high demand for silk and silk products in the international market; but, India failed to share the advantages. The temporary revival of Indian exports in 1926-27 can be explained both by improvement in the quality of Kashmir silk and decline of Italian production. That Indian exports started decreasing from the year preceding Wall Street crisis was a phenomenon to be explained by the presence of her Asian competitors. From 1929 onwards there was no scope for the Indian industry to thrive, since against falling international price of silk her export price rose as a result of sterling depreciation.

World price of silk declined severely in 1930-31. Towards the end of 1930 price of raw silk was 40 per cent lower than at the beginning of that year and only 1/7th of its record value in 1920; at the end of 1931 silk prices were the half of what they were at the beginning of the year and 1/10th of the record prices obtained in 1920.⁵⁰ It may be noted that silk prices fell proportionately more than those of cotton and wool. This was perhaps due to greater elasticity of demand for silk as it is an article of luxury. In 1932 the rate of price cut was checked to

some extent because production was curtailed in some countries, notably in China and Italy, and there was some improvement in demand. During the same period of 1930-32 price of Indian silk rose ^{in the world market;} but this aspect did by no means reflect any special demand for Indian silk, it was purely nominal and was due to the linking of the rupee to sterling and the consequent depreciation of rupee in terms of gold. This invariably gave a distinct advantage to Chinese silk competing with Indian silk.

China was not only competing with India in the foreign market, she now threatened the indigenous Indian producer by a very unequal competition within the internal market of India.⁵¹ India not only lost her own share of the world market, her weaving establishments were now attracted to the better quality of foreign raw silk, - Indian raw silk production faced a crisis. At the same time, artificial silk which suited people's straitened purses better, flooded the Indian market. Entry of Chinese raw silk into the internal market of India was not new. We have already seen import of Chinese silk by the south-Indian weavers in the early 20th century. Even in 1886, Wardle, incharge of the Silk Court in the Indo-Colonial Exhibition (Calcutta), observed the use of superior Chinese raw silk by Indian manufacturers.⁵² But, now the intensity of Chinese competition became damaging to the Indian industry. Chinese export of raw silk in India prior to 1929 mostly consisted of coarse qualities, because her best silk were

sent to Europe and America. But after the failure of American demand, China began to send to India unusually large quantities of high grade filature silk at a price uneconomic to the producer of Indian hand-reeled silk. The Chinese government also gave bounty to encourage export of raw silk. An compared to Malda⁵³ the situation was less damaging to Kashmir and Mysore, because silk industry in both of these provinces under complete or partial state assistance had already improved the quality of their silk while Malda produced inferior variety only. On technical aspect can be cited : In 1933, the Tariff Board found no power-driven filature in Malda, while Mysore had three French type and Kashmir had five Italian type power-driven filatures engaged in raw silk production.⁵⁴ Along with the Indian industry losing ground in the world market, Malda had special reasons to suffer from the export shock. In the twenties Malda silk, because of its inferior quality, was generally used in Europe for making silk hats and some types of ribbon; and in the early thirties these articles went gradually out of fashion thereby incurring a great loss of export market to Malda.

Markets outside India for Malda silk was thus lost altogether; the attraction of the European manufacturers to the use of silk waste was remarkably inadequate to compensate for the loss in any way. In the internal market Malda could not overcome her weaker competitive position in relation to

either Chinese raw silk or raw silk from Kashmir and Mysore. As a result the market for Malda silk in different centres of India, viz., Nagpur, Sholapur etc. ceased for some time; despatch to Benaras had practically entirely been stopped according to the Industrial and Traders Association of Benaras and the Director of Industries, U.P. Various examples of big transactions to these centres being stopped were available.⁵⁵ Messrs. Nagindas Fulchand, a leading merchant of Benaras, who dealt with 40 per cent of Malda raw silk closed their business at Malda in 1933 and started trading in Chinese silk. Similarly Mr. Chinai, a Bombay-based trader had three branch agencies at Malda, Jangipur and Rajshahi; in 1933 only one agency was working at Jangipur for observation only, without doing any business. In 1934, the District Collector of Malda collected figures indicating a most disheartening state of the silk business at Malda. Prices of Malda raw silk fell below average and in 1934-35 price of Malda hand-reeled silk varied around Rs.4/- per lb. While the fair price for inferior silk recognised by the Tariff Board was Rs.5/-; at the same time ex-duty price of foreign silk in India was slightly below Rs.3/- per lb.⁵⁶ Such price a position not only injured the reelers but also the rearers of Malda. The power looms in the silk weaving mills of Calcutta, Bombay and Mysore used insignificant proportion of Indian raw silk and no Malda silk. Thus demand for Malda silk outside Bengal went remarkably down excepting a part of

south-India. The only consumer of Malda raw silk became the handloom weavers of Bengal; but the rank of Bengal as a producer of silk goods was far below that of some other centres like Mysore. According to the census of 1931, the annual value of silk goods produced in Bengal and Mysore were Rs.18.42 lakhs and Rs.48 lakhs respectively.⁵⁷ Under the pressure of international demand conditions as well as of competition from China on the one hand and Mysore and Kashmir on the other, the Malda silk industry was left to a condition absolutely without any prospect of growth.

(e) The case for protection

Although Malda was the worst sufferer, the Indian silk industry in general was shocked by the fall in world purchasing power and foreign competition. It was represented to the Government of India that imports constituted a grave menace to the existence of the indigenous sericultural industry of this country. It was therefore decided by the Department of Commerce, Government of India that the claim of the industry for 'protection' should be the subject of an enquiry by the Tariff Board under the Presidentship of Mr. Fazal Ibrahim Rahimtoola. The Board was requested to examine the following questions and to make recommendations⁵⁸

- (a) whether having regard to the nature and extent of the competition of raw silk from foreign countries, the claim of the sericultural industry to protection could be

established; and

- (b) if the claim was found to be established, in what form protection should be given and to what extent.

In particular, the Board was requested to consider how its recommendations would affect the handloom weaving industry.

The Board, after a detailed scrutiny made out a case for protection of the silk industry in terms of the following⁵⁹ -

- (1) silk production as an old established industry was to be safeguarded from extinction,
- (2) the industry might be localised but was of general importance,
- (3) it had important place particularly in the agricultural economy, it was important as subsidiary occupation and also as a supplier of raw material to the weaving industry,
- (4) it had natural advantages, advantages of labour and power and specific advantage of a potential market.

About the fourth point above, the Board observed that India

in 1933 consumed about double the quantity of raw silk she produced; and all the articles which were manufactured from imported silk could be made from Indian silk. That was the only direction in which, the Board opined, market for Indian raw silk might be extended. In this sense the Board ruled out the possibility of promoting export of Indian raw silk in the near future; the contraction of foreign market for silk, the Board analysed, was consequent upon the economic situation all over the globe. "We regard the decline as permanent and expect the industry to meet it by an adjustment of the cost of production" - the Board commented.⁶⁰ Accordingly, while recommending import duty as the measure of protection, the Board reported :

"The object with which we propose the duty is to afford the industry time in which to re-organise itself, to reduce its cost of production by cheapening mulberry leaf, eliminating loss in cocoon production, and improving the efficiency of its reeling methods, and to introduce some degree of method and system into its marketing."⁶¹

In course of its analysis the Board also emphasised that government assistance in India was essential for the agricultural industry. This was evident from the fact that the industry was at its best in those parts of India where it received the greatest help and encouragement from the state,

viz., Kashmir and Mysore. Greater co-ordination among Kashmir, Mysore and Bengal was also advised.

On the basis of various cost and economy aspects and cost differential with imported silk - the Board, however, recommended for a period of five years, different specific and ad valorem tariff rates for all kinds of silk articles imported - from silk textiles to cocoon. In the case of raw silk the proposed duty was Rs.2-6 annas per lb. or 50 per cent ad valorem whichever is higher : import duty applied to all classes and qualities of raw silk and the same ad valorem duty was applicable to cocoon imports. Attempts to cost reduction and quality improvement were encouraged and the Board in this connection made some supplementary proposals,⁶² e.g.,

- (i) need for compensating the weaver for the increased cost of his raw material,
- (ii) improvement in technical methods and marketing,
- (iii) Imperial Sericultural Committee to be set up as a branch of the Imperial Council of Agricultural Research, etc.

It was stressed that the success of China or Japan was largely due to measures adopted for improvement in the technological aspects of the silk industry.

The Government by the Indian Tariff (Textile Protection) Amendment Act of 1934 granted protection, for the first time, to the sericultural industry for a period of five years, and it was subsequently extended for another year by the Second Amendment in 1939 pending consideration of Tariff Board's Report of 1938. But, the Tariff Act, while accepting the principles of protection imposed duty rates below those recommended; - in the case of raw silk the duty was 25 per cent ad valorem or a specific duty of Rs.0-14 annas per lb. Accordingly many quarters were dissatisfied with the act, considered protection to be insufficient and proposed enhancement of protective duties.⁶³

In our opinion, enhancement of duties was not the unique solution, particularly in the case of Malda. Because the problem was not the protection of an infant industry, it was the saving of an old established industry from extinction; and hence more important was production and sale of raw silk on an economically viable basis. On the other hand, it was of little avail to protect the sericultural industry unless the silk produced was of the sort which the Indian weaving industry wanted and unless the sericultural industry was likely to produce as much silk as the weaving establishment in aggregate was prepared to use. Under the circumstances, it was unlikely for the Malda silk industry with its existing organisational framework, to rise above the drifting situation only with the help of a protective

umbrella; and we have already pointed out in sub-section 5.3(d) above, that business in 1934-35 was dull and stagnant without any visible prospect of change.

(f) After protection

Even the inadequate protection given to the sericultural industry by the Tariff Act of 1934 was able to reduce import of raw silk to some extent; but for obvious reasons Malda experienced insignificant effect of such a policy. The second Tariff Board on protection of the sericultural industry was set up in 1938 and this Board recommended enhancement of duties on both raw silk and silk fabrics.⁶⁴ But before action could be taken on the report of this Board, the Second World War broke out, and the government deferred their decision on long term policy. The tariff duties on silk were, however, extended from time to time by Tariff Acts until the end of March 1947. In fact, outbreak of the war rendered tariff protection unnecessary, and the Second World War proved to be a real impetus for the Indian silk industry in general and Malda in particular, however temporary that might be. The altered role of the government was specially effective to bring about a change.

A change in government attitude could be visible since 1937 in the hands of the Bengal provincial government. Although in 1936 Bengal had very little to exhibit in the All India Industrial and Agricultural Exhibition,⁶⁵ an ambitious Five-Year plan for industrial development of

Bengal was chalked out in 1937 which included the silk industry in a big way. The Plan for the silk industry proposed a scheme for development and thorough reorganisation - mulberry cultivation, cocoon production, reeling and weaving, marketing and standardization, not excluding training and financial facilities or establishment of a Central Silk Institute. The whole scheme was arranged in three stages⁶⁶ - (i) mulberry cultivation and sericulture proper, (ii) reeling of raw silk, and (iii) manufacturing and weaving; of these stages the first two were particularly relevant to Malda.

Reduction of rent on mulberry land was proposed, but actual experimental work and researches in mulberry cultivation as well as improving the race of cocoon worms were started on a very small scale with the help of the University College of Science, Calcutta. The reeling branch was planned to be developed as a capitalistic industry; - quality of cocoons, skill of reelers, use of suitable machinery, co-operative or other forms of organisation, unintermittent reeling throughout the year, conditioning houses along the Japanese model, standardization, transport cost were the aspects which were covered. Such an elaborate and overambitious plan was beyond the capacity of the provincial government to execute and as the War broke out in 1939 there was no opportunity to implement the scheme in such a form. Because the Government of India was now interested in increased supply only.

Table XAverage Price of Raw Silk Per lb.

Date	Price of good quality filature silk	Price of inferior silk
	(Rs. - As. - Ps.)	Rs. - As. - Ps.
1943 December	41 - 14 - 0	17 - 9 - 0
1944 January	43 - 0 - 0	16 - 6 - 0
March	44 - 0 - 0	22 - 0 - 0
August	90 - 8 - 0	30 - 0 - 0
December	60 - 0 - 0	27 - 0 - 0
1945 January	72 - 0 - 0	19 - 8 - 0
March	112 - 0 - 0	25 - 5 - 0
April	118 - 0 - 0	29 - 8 - 0
May	72 - 0 - 0	22 - 0 - 0
June	71 - 0 - 0	22 - 8 - 0

Source : Government of India, Department of Industries and Supplies; Report of the Silk Panel, 1947; p.5.

The War impetus took a many-pronged shape : First, there came a total cessation of silk imports to India. Secondly, war brought with itself the urgent, new and imperative demand for silk. Thirdly, since the large war requirements were mainly of good quality filature silk, Government specially stimulated the development of filatures and gave sericulture an incentive unequalled in the past. Fourthly, along with the diminution of imported silk textiles and other consumer goods, the purchasing power of some classes of people in the internal market increased. As a result of such increased demand conditions, both internal and external, the price of all categories of raw silk shot up to unprecedented heights. The highest price rise was of course visible in filature silk, which itself was a reflection of war demand. From the sequence of time in Table X it is evident that the price movement was directly related to the war demands. Since the war mainly needed better quality filature silk, price for such silk rose proportionately faster and the gap between the two prime grades of silk widened. This is why Government encouraged the production of filature raw silk and directly purchased such silk from the producers on the basis of cost of production.

Apart from stimulating filatures the Government executed another important policy during the war - a long outstanding proposal for setting up a sericultural research station. The need for establishment of a Central Research Station was first impressed upon the Government in 1918 by

the Imperial Institute, London. The Second All-India Sericultural experts Conference held in Lucknow in December 1940 stressed the same need. With co-operation of the Bengal Government the Central Sericultural Research Station at Baharampur (district Murshidabad) was established late in 1943 with a sub-station at Kalimpong. It was easier for the government to convert the central nursery into Central Research Station. The work of the Station was carried on in four different sections, viz., Biological, Botanical, Biochemical and Pathological. Of them the Biological section was the most important initially, and it started collecting different worm races from various parts of the world and reared them with a view to acclimatize them in this country, obtain suitable races for different regions, and hybridize. Supply of disease-free worm seeds to rearers was the main objective, but various experiments were also made to study climatic variations on silk worms, diseases of the worms, seed storage technique, improved cultivation of mulberry etc. The scope of the Research Station was limited and after five years from the date of its inception the station was found to cope with 20 per cent of the rearers' demand.⁶⁷ Malda, however, was in an advantageous position because of her nearness to the Research Station.

As a result of the war impetus and the initiative by the Government of India as well as the Bengal Government, Malda experienced development of her silk industry in two

major directions. First, the extension of sericulture : such extension was evident from the extension of mulberry cultivation. Acreage under mulberry rose in Bengal from 8,893 in 1939-40 to 15,516 in 1945-46;⁶⁸ and given the specialization among districts in silk production and weaving, most of this extension occurred in Malda. This definitely was an indication that sericulture now turned to be a profitable pursuit compared to other cash crops. But, this does not mean that the additional profits raised the standard of living of the basic growers; because the organisation of the industry remained unchanged, and there was no scope for the profits being shared in higher proportion by the actual sericulturists. Rather, the famine condition and the general scarcity reduced the standard of living of the common rural folk. Secondly, the number of filature basins increased in a bid to meet the nature of new demand. Power driven filature establishments like those of Kashmir or Mysore were not set up in Malda, but simple filatures were established and the number of filature basins in the district increased during the was as follows⁶⁹ :

1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
100	120	140	180	1,231	1,735

Development of filature silk was a new basis for optimism in a situation when little significance was left for raw

silk from Malda both in the national and the international markets.

It was, however, difficult to expect much from the abnormal ^{war} ~~was~~ situation. Because, as the war-impulse was exhausted the problem became how to safeguard against a possible collapse, the industry which the state encouraged to expand for its own purposes. If the industry would have been left unsupported at this stage, a shrinkage or even a collapse along with consequent unemployment was probable. It was a good sign that the Government of India in 1947 appointed a Silk Panel with R.N. Rao as its Chairman. The Silk Panel confined their enquiry into sericulture proper, i.e. from cultivation of mulberry to production of raw silk and spun silk; utilization of raw silk was considered to come under a separate panel for the weaving industry. The recommendations of the Silk Panel were mainly directed to :

- (1) Improvement of mulberry cultivation;
- (2) Adequate supply of disease-free seed and improvement of quality;⁷⁰
- (3) Control of silk worm diseases;
- (4) Improvement of rearing, reeling, organisation and marketing, the need for sericultural co-operatives being stressed;

- (5) Development of spun silk industry and full utilization of by-products;
- (6) Inter-Provincial and states co-operation in regard to these objectives, - setting up a Central Silk Board of India to bring together the knowledge and interests of all silk producing parts of the country.

The policy of protection was executed half-heartedly. State initiative during and after the war increased expectations; but how far such initiative could be productive depended on many 'ifs', the most important one was, of course, government's ability to restructure the organisation of the industry.

Notes and References to Chapter V

1. Wages of the spinners at Malda residency remained stagnant at Rs.2.5 per month over the period from 1792/3 to 1822/3 although prices of consumption articles nearly doubled during this period.

S. Bhattacharya in Cambridge Economic History of India, Vol.II (ed. by Dharma Kumar), Delhi 1982; p.288.

2. Special Silk Court at the exhibition was set up with the help of the Bengal government and Bengal Silk Committee. The purpose of the Silk Court was collection of silks and information as might tend to awaken the attention of the manufacturers and to bring prominently forward the question of silk production to the notice of the public. Wardle, an expert silk dyer who took charge of Indian Silk at Paris Exhibition of 1878, came to India to take charge of the Silk Court in the Exhibition of 1886.

Proceedings of a Conference on Silk held in the Office of the Revenue and Agricultural Department of the Government of India, at Calcutta, on the 8th January 1886; Govt. Publication 1886; p.1.

3. Proceedings of a Conference on Silk ... etc., at Calcutta 1886, Ibid.; p.5.
4. N.G. Mukherjee - A Monograph on the Silk Fabrics of Bengal, Calcutta 1903; p.32.
5. N.G. Mukherjee - A Monograph on the Silk Frbrics of Bengal, Ibid.; p.62.
6. Sir George Watt - The Commercial Products of India, London 1908; pp.1014-15; and

N.G. Mukherjee - A Monograph on the Silk Fabrics of Bengal, Ibid.; pp.70-71.

In 1911 census the number dropped to 42,548 again.

7. In the indigenous method silk threads were bleached and dyed before they were woven. Buchanan and Hunter have described the numerous dyeing materials such as : Turmeric and jackwood (for yellow), Safflower (for rose red), Manjit (for red) as well as iron, wheat flour, butter, alum, terminalia chebula etc. for different shades. Materials were mostly grown within and in the immediate neighbourhood of Malda region.

8. N.G. Mukherjee - A Monograph on the Silk Fabrics of Bengal, Op.cit.; p.45, and
W.W. Hunter - A Statistical Account of Bengal, Vol.VII, London 1876 (or Indian Reprint 1974); p.100.
9. N.G. Mukherjee - A Monograph on the Silk Fabrics of Bengal, Ibid.; p.101.
10. H. Maxwell-Lefroy - Report on an inquiry into the Silk Industry in India, Vol.I, Calcutta 1916, p.141.
11. N.G. Mukherjee - A Monograph on the Silk Fabrics of Bengal, Op.cit.; p.66.
12. Bombay mills with steam power used to weave silk fabrics for the Burmese market.
W.W. Hunter - Imperial Gazetteer of India, Volume IV, London 1881; p.578.
13. L.S.S. O'Malley - Bengal District Gazetteer (Murshidabad), Calcutta 1914; p.128.
14. J.H.T. Walsh - A History of Murshidabad District, London 1902; pp.105, 112.
15. Sir George Watt - The Commercial Products of India, Op.cit.; pp.1014-15.
16. L.S.S. O'Malley - Bengal District Gazetteer (Rajshahi), Calcutta 1916; pp.108-9.
17. J.L. Sherwill - A Geographical and Statistical Report of the Dinagepore District (1863), Calcutta 1865.
18. Letter No.17 dt. 25 February 1878; Collection XXIV - Settlement. (MC-RR).
19. H. Maxwell-Lefroy - Report on an inquiry into the Silk Industry in India, Vol.I, Op.cit.; p.18.
20. N.G. Mukherjee was a graduate in Agricultural Science from Europe. While East India Company's experts paid attention to reeling, Mukherjee concentrated on nurseries. A total approach was still lacking.

21. Note on sericulture in Bengal, A pamphlet published by the Deptt. of Agriculture, Bengal, 1908-09; pp.1-2.
22. N.G. Mukherjee - A Monograph on the Silk Fabrics of Bengal, Op.cit.; pp.16-18.
23. "The Pasteur ideas regarding disease were accepted blindly, without investigation, without reference to the wholly different conditions. For thirty years disease-free seed has been issued, but no disease-free race exists at present even."
H. Maxwell-Lefroy - A Report on an inquiry into the Silk Industry in India, Vol.I, Op.cit.; p.28.
24. Note on Sericulture in Bengal, a pamphlet (govt.) Op.cit.; p.2.
25. The committee was appointed in the Government Order No. 1062 T-R, dt. 18 June 1906.
26. N.G. Mukherjee - Suggestions on the improvement of silk reeling in Bengal; Calcutta 1906; p.8.
27. Letter from J.R. Blackwood, Director of Agriculture, dt. Calcutta 7 June 1916, quoted in
H. Maxwell-Lefroy - Report on an inquiry into the Silk Industry in India, Vol.III, Calcutta 1916; p.14.
28. 'Statement of Profit and Loss' in Note on Sericulture in Bengal, a pamphlet (govt.), Op.cit.; p.7.
29. Nurseries at Berhampore (Murshidabad), Piyasbari and Amriti are still existent.
30. H. Maxwell-Lefroy - Report on an inquiry into the Silk Industry in India, Vol.III, Op.cit.; pp.16-22.
31. R.R. Ghose - Decline of the Silk Industry in Bengal and how to arrest it, Calcutta 1915; p.4.
32. N.G. Mukherjee - A Monograph on the Silk Fabrics of Bengal, Op.cit.; pp.7-8, 13-14.
33. H. Maxwell-Lefroy - Report on an inquiry into the Silk Industry in India, Vol.I, Op.cit.; p.5.

34. R.R. Ghose - Decline of the Silk Industry in Bengal and how to arrest it, Op.cit.; p.33.
35. Report of the Indian Industrial Commission, Calcutta 1918; p.193.
36. Report of the Indian Industrial Commission, Ibid.; p.3.
37. Report of the Survey of Cottage Industries in Bengal, Department of Industries, Bengal, Calcutta 1924; pp.83-85.
38. Report of the Indian Tariff Board regarding the grant of protection to the sericultural industry, Delhi 1933; p.6.
39. R.C. Rawlley - Report on an inquiry into the utilization of Indian Silk in Great Britain and France, Calcutta 1918; pp.67, 79.

For other observations particularly pp.9-10, 15, 45-46, 65.

40. Report on the Survey of Cottage Industries in Bengal, Op.cit.; p.85.
41. From postal information the survey gathered that raw silk from Malda was sent to so many centres as Berhampore (Ganjam), Trichinopoly, Triplicane, Masulipatam, Trivancore, Conjeevaram, Salem, Secunderabad, Belgaum, Surat, Sujanagar (Gurudaspur), Mobarakpur (Azimgarh), Bijnour, Amritsar, Anantpur (M.S.M. Rly.), North Arcot, Madras, Bangalore, Tanjore, Bhandra, Chittagong, Bankura, Benaras, Kayts (Ceylon) and other places. The largest part of such despatch went to south India.

Report on the Survey of Cottage Industries in Bengal, Op.cit.; p.85.
42. Practically very little business was done by the merchants of Malda on commission basis business was conducted on outright purchase basis and their profit lay in the use of mahajani power and capital.

The Report of the Indian Tariff Board regarding the grant of protection to the sericultural industry, Delhi 1933; pp.119-121.

43. Conjeevaram 72 tolas = 1 seer
Malda 81 tolas = 1 seer
44. Report on the Survey of Cottage Industries in Bengal,
Op.cit.; p.90.
45. After 1947 most part of Sibgunj thana has fallen into
East Pakistan, now Bangladesh.
46. Source : Report on the Survey of Cottage Industries in
Bengal, Op.cit.; p.94.
47. After whom the present Silk Reeling Institute of Malda
town has been named.
48. On enquiry the Bank found that societies would not take
a loan on more than 9 per cent interest; hence keeping a
margin of 3 per cent the Bank sought funds not exceeding
6 per cent rate of interest.
49. Report of the Indian Tariff Board 1933, Op.cit.; p.121.
50. Report of the Indian Tariff Board 1933, Op.cit.; p.7.
51. Burma also faced a similar problem of menacing Chinese
competition into her internal market since 1920's and
more since early 1930's.

C.C. Ghosh - Report of the sericultural operations,
Burma (for the year ending 31 March 1933), Rangoon 1933,
p.1.
52. Proceedings of a Conference on Silk etc. at Calcutta
on the 8th January 1886, Op.cit.; p.6.
53. Bengal Raw Silk had laready become synonymous with
Malda silk.
54. Report of the Indian Tariff Board 1933, Op.cit.; pp.29,
83-84.
55. A.N. Sen - The inadequacy of protection to Silk Industry,
Calcutta 1935; p.9.
56. In March 1935 such price of foreign raw silk (mainly
Chinese) was 2 rupees 9 annas only.

- A.N. Sen - The inadequacy of protection of Silk Industry, Ibid.; p.3. Also p.6 for the level of Malda silk price.
57. Report of the Indian Tariff Board 1933, Op.cit.; p.102.
 58. Resolution of the Government of India in the Department of Commerce No.607-T(1) dated 3 December 1932.
 59. Chapter XII of the Report of the Indian Tariff Board 1933, Op.cit.
 60. Report of the Indian Tariff Board 1933, Ibid.; p.165.
 61. Report of the Indian Tariff Board 1933, Ibid.; p.166.
 62. Chapter XIV of the Report of the Indian Tariff Board 1933, Op.cit.
 63. A.N. Sen, Inspector of Technical and Industrial Institutions, Bengal, wrote - The inadequacy of protection to Silk Industry, (Published by Govt. of Bengal, Industries Deptt.), Op.cit.
 64. Report of the Indian Tariff Board on the continuance of protection to the Sericultural Industry, Bombay 1949; p.3.
 65. The fabulous exhibition was held in Lucknow from December 1936 to February 1937. Bengal demonstrated among other things 5 looms weaving silk and cotton along with some exhibits on the sericultural process.

Proceedings of the Eighth Industries Conference (Lucknow), Delhi 1937; p.96.
 66. S.C. Mitter, Director of Industries, Bengal - A Five Year Plan for Industrial Development of Bengal, Calcutta 1937; pp.51-56.
 67. An abridged report on the working of the Central Sericultural Research Station, Berhampore (1943-48), Govt. Publication 1950; p.1.
 68. In Mysore the extension of acreage under mulberry was faster - 30,000 in 1939-40 to 78,000 in 1945-46.

Report of the Silk Panel 1947, Govt. of India, Deptt. of Industries and Supplies; p.6.

69. Report of the Silk Panel 1947, Ibid.; p.15.

70. The Silk Panel observed that Malda's basic problem on the technological front was the provision of better worm seeds. Government experiments with hybridization were yet to yield satisfactory results.

Report of the Silk Panel 1947, Ibid.; p.9.