

Trade and Non-Agricultural Production in Bengal : 1750-1800

Dissertation submitted to the Jawaharlal Nehru University
in partial fulfilment of the requirements
for the award of the Degree of
MASTER OF PHILOSOPHY

SIDDHARTHA RAYCHAUDHURI

**CENTRE FOR HISTORICAL STUDIES
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067 INDIA**

1990



JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI-110067

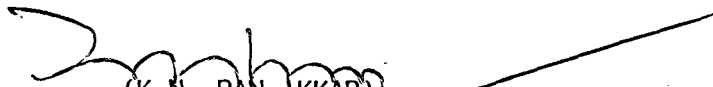
Centre for Historical Studies

School of Social Sciences

CERTIFICATE

This is to certify that the dissertation entitled "TRADE AND NON-AGRICULTURAL PRODUCTION IN BENGAL: 1750-1800" submitted by Mr. SIDDHARTHA RAYCHAUDHURI in partial fulfilment of the requirements for the Degree of Master of Philosophy has not been previously submitted for any other degree of this or any other University.

I recommend that this dissertation should be placed before the examiners for their consideration for the award of the Degree of Master of Philosophy.


(K.N. PANIKKAR)
CHAIRPERSON


(K.K. TRIVEDI)
SUPERVISOR

CHAIRPERSON
Centre for Historical Studies
School of Social Sciences
Jawaharlal Nehru University
New Delhi - 110067.

CONTENTS

Acknowledgements

Introduction

Chapter I : Trade, Markets and Non-Agricultural .
Production in Bengal

Chapter II : The Monetary System and Trade in Bengal

Chapter III : Trade, Production and the Bengal Economy:I

- The English East India Company's trade
and the cotton goods industry in Bengal

Chapter IV : Trade, Production and the Bengal Economy
: II

- The English East India Company's trade
and the raw silk industry in Bengal

Concluding Remarks

Bibliography

ACKNOWLEDGEMENTS

The present study owes its existence to the stimulating and incisive guidance of my supervisor, Dr. K.K. Trivedi. At every stage of this work, he made valuable suggestions, clarified certain points and encouraged me so that I could get through the labyrinth of complexities of 18th century Bengal. My debt to him is immense.

I am also grateful to Prof. Harbans Mukhia, Dr. Dilbagh Singh, Dr. Muzaffar Alam and Yogesh Sharma, among others, for their invaluable comments and advice.

I take this opportunity to thank J.N.U.; National Archives of India, New Delhi; Teen Murti Library, New Delhi; West Bengal State Archives, Calcutta; National Library, Calcutta; and the Central Library, Burdwan University, Burdwan, for providing me with reading and other facilities at all stages of this work and also the U.G.C., for their financial assistance. Special thanks are also due to Mr. K.V.Ravichandran and the A.P. Computers, New Delhi for typing my dissertation with utmost care and precision.

I am also indebted to my friend, Saurabh Bandhyopadhyay, a research student at the I.T.D., J.N.U., who, from time to time, helped me in clarifying the use of certain economic categories and also in making the numerical calculations. Other friends, particularly, Sutapa Bandyopadhyay, Samiran Chakrabarti, Soumyendra Bhattacharya, Shubhadeep Chaudhuri, Srinivas Raman and Keoyan Sultani extended cooperation and assistance throughout the writing of this dissertation. I sincerely thank them all.

Finally, no words are adequate to express my gratitude to my parents who have helped me in a variety of ways and remain as a constant source of inspiration and encouragement.

New Delhi,
Date: 20/7/90

Siddhartha Raychaudhuri
SIDDHARTHA RAYCHAUDHURI

Introduction

Since the mid-1960s there has been a growing interest among economic historians in the problems of trade and development in the economies of the Third World. In this context what has attracted particular attention is the structure and composition of India's international trade in the 18th and 19th centuries and the impact of this trade on the domestic economy. Opinions on this subject are diverse and often contradict each other.

My concern, in this dissertation, is to study certain aspects of trade and non-agricultural production in Bengal in the 2nd half of the 18th century, to analyze their interaction and to examine the impact of this interaction upon the Bengal economy during this period. My region of study comprises of the area under present day West Bengal and Bangladesh. The rationale behind taking up a study of Bengal in this period is the important position that Bengal had in India's international trade since the later decades of the 17th century. Since then, Bengal became the main theatre of activities for the European companies, especially the English East India Company, and this in turn led to the colonization of India by the British, in course of time. In this context, the 18th century deserves special consideration. This is because, as Peter Marshall¹ has

1. Peter Marshall, East India Fortunes: the British in Bengal in the 18th century, (Oxford, 1976).

noted, during the 18th century, Bengal occupied a central place among European, more particularly, British interests in Asia, by the early decades of the century a very large volume of trade was being transacted between Britain and Bengal; in the later 18th century British political power grew to the point where Bengal became the first substantial area on the Asian mainland to pass under direct European control; and once the British had secured Bengal's resources they could sustain their other Indian settlements and extend their territorial empire in northern India and South-east Asia. I have taken up the second half of the 18th century as my period of study because this was the time in Bengal when, the crucial changes were taking place. It was during this period that a series of treaties, concluded between the English Company and the successive Nabobs of Bengal gradually transferred powers and functions into the hands of the company until in the days of Cornwallis, British sovereignty in Bengal came fully into being. Naturally, these changes in the political and administrative spheres also affected the economic sphere as well both in the short and the long terms and has given rise to a number of controversies.

There have been a number of works on the economic history of Bengal of the 2nd half of the 18th century. I do not intend here to make an exhaustive survey of the existing

literature on this subject. Rather I would like to point out certain broad trends in the historiography and try to situate my dissertation in this context.

As with the case of Indian economic history of the 18th and 19th centuries, here also we can detect two broadly opposing schools of opinion. But one thing common about them is that both were addressed to a certain theme, i.e., a lack of improvement, even absolute decline as some saw it, in the standards of living in Bengal in this period. On the one hand, were the nationalist writers - R.C. Dutt², Dadabhai Naoroji³, R. Palme Dutt⁴ and others - who, ascribed Bengal's and India's 'poor' economic performance to European, especially British imperialism. Before the arrival of the European powers, they argued, India's and particularly Bengal's 'thriving' economy equalled the most advanced economies of the time. Thereafter, however, its economy suffered a series of setbacks whose effects were not reversed until independence; the economy was plundered by European traders and trading companies, especially the

-
2. R.C. Dutt, The Economic History of India in the Victorian Age from the Accession of Queen Victoria in 1837 to the Commencement of the Twentieth Century (London, 1956, 8th imp version).
 3. D. Naoroji, Poverty and Un British Rule in India (London, 1871).
 4. R. Palme Dutt, India Today.

English East India Company, funds collected by taxation imposed upon the local population were drained to finance the activities of English East India Company, its personnel, etc., traditional systems of land tenure were destroyed with much damage to agricultural productivity; the peasants were forced to part with their entire surplus; and little was done by the state to promote economic development; and so on. On the other hand, there was another group of writers who contended that economic progress in India (and Bengal) was impeded severely by certain indigenous cultural institutions and beliefs, of which the caste system, the extended family, the religious belief-system and village self-sufficiency were among the more prominent share elements, together with uncontrolled growth of the population were seen as overwhelming obstacles to modern economic growth.

The views I have discussed so far, actually represent two extremes in the historiography on this subject. However, there are some slightly moderate views which I will presently describe. But one thing common about all these 'moderate' views is that all of them portray Bengal as undergoing a general economic decline in the 2nd half of the 18th century. Here, I will take into account only two or three of the historians who are representative of this

school of opinion and try to point out very briefly their central arguments.

First, let me take Prof. N.K. Sinha's work on this subject⁵. Sinha analyses in details the internal and external trade of Bengal; the production of the different export commodities, the condition of the manufacturers, etc., the activities of the various European companies, especially, the English East India Company; and the impact of the English Company's trade and its political authority on the trade, production and financial sectors of the Bengal economy in the 1st volume of his work which is more relevant for my topic. This work represented a major breakthrough in the field of Bengal's economic history in terms of the volume of useful data and the penetrating analysis and insights that Dr. Sinha put forward. However, if one has to pick out the central theme of this book, then one finds that Dr. Sinha tends to draw the picture of a general economic decline for Bengal during this period. This becomes very apparent when he says that "in Bengal the Company and its men practically established a monopoly in the manufacture of cotton for export and raw silk. Many of the objectionable features of such a system developed - compulsory labour and restriction of trade in other directions. Bengal, which was

5. N.K. Sinha, The Economic History of Bengal, 3 vols. (Calcutta, 1965-68).

the resort of merchants from all nations for the purchase of its manufactures, was unprotected and unprepared for the economic impact which was soon to begin. Faced with the alternative between turning the corner and extinction, the people of Bengal, with their sapped vitality, were not in a position to turn the corner."⁶ Another important theme in N.K. Sinha's work is the question of the drain of wealth, which was one of the most important reasons for the 'stagnation' of the Bengal's economy and its 'impoverishment'. Sinha argues that 'the real value of the Bengal possessions for the English was their ability to furnish a large annual investment to Europe, to give considerable assistance to the treasury at Canton and to supply the wants of the other Presidencies. As a consequence of the heavy drain of wealth due to these causes, with the addition of that which was occasional by the remittance of private fortunes, there was great diminution of the current specie, and a langour spread over the cultivation and general commerce of the country."⁷ What can be noted here is that Sinha places much emphasis on the shrinkage of money in the economy as a result of the drain of wealth and its consequent adverse effects on the economy - a typical 'quantity theory of money' approach.

6. N.K. Sinha, op. cit., vol.I, pp.237-238.

7. Ibid.

In fact this point has also been stressed by another major writer on this subject, Dr. Sabyasachi Bhattacharya⁸. This is apparent when he says that 'the cessation of the large silver inflow from England and new treasures from foreign nations, combined with the drain to China for the tea trade and the linkage of silver as a result of the repatriation of profits by English private traders, caused bullion scarcity and monetary problems' in the Bengal economy and contributed to its decline.⁹ Bhattacharya also draws a picture of economic decline of Bengal in this period. He attributes this mainly to the 'domination effect' of the English East India Company on the Bengal economy. According to him, this domination was exercised in the following ways:¹⁰

(1) domination of the market as the biggest single buyer, (2) extra-market means whereby supply of export goods, and terms on which such goods were obtained were controlled. Restrictions were imposed, informal or legal, on the freedom of the producers, and (3) in order to reinforce the above controls, machinery for the procurement of export goods was so devised as to either subjugate or exclude Indian trading

8. S. Bhattacharya, "Regional Economy: Eastern India", in The Cambridge Economic History of India, Vol.III, pp.270-295.

9. Ibid, p.289.

10. Ibid, pp.287-289.

capital from spheres chosen by the company. According to Bhattacharya, this sort of a structure led to depression of the income and living standards of the manufacturers leading to a decline in production of the export commodities, extrusion or subordination of indigenous capital and trade and a general decline of the Bengal economy.¹¹

So far we have discussed two works which argue that Bengal in this period underwent an economic decline and this was primarily caused by the English East India Company's trade activities and political authority.

Now, let me mention another work which also speaks of economic stagnation and decline in Bengal in the 2nd half of the 18th century but from different perspective. This is the book by Dr. Amal Tripathi entitled, 'Trade and Finance in the Bengal Presidency'.¹² This work deals mainly with the relations between the East India Company's government and the private British capitalists in the Bengal Presidency from 1793 to 1833. The author aims at analysing in detail the nature of the interconnections between trade and finance, that is, between imperial and economic expansion, 'during a period of transition from monopoly to free trade',

11. Ibid, pp.287-294.

12. Amal Tripathi, Trade and finance in the Bengal Presidency (1793-1833), (Calcutta, 1956).

and period which also saw a rapid development of the British Empire in India. However, Tripathi also makes certain points about the state of the Bengal economy in general during this period. For example, he says that 'one cannot deny that the trade with Britain, benefited the Bengal economy.'¹³ Also, he argues, that with the growth of trade the value and volume of the produce of the land, increased.¹⁴ The period he is talking about is between 1793 and 1833. His other concern is about the 'drain' phenomenon. One significant point he raises is that even if there was drain of wealth, there were some direct and indirect benefits to industry and agriculture in Bengal. Tripathi quotes Buchanan-Hamilton (1807), W. Fairlie (1813), Rammohan Roy and Dwarkanath Tagore (1829) to conform the benefits it conferred on the countryside.¹⁵ However, Tripathi argues that the late 18th and the early 19th centuries represented a period of economic decline. For him, the causes of economic disintegration had begun to operate in her political, economic and social system before the British assumed the sovereignty of Bengal. There is a kind of inertia in the common life of Bengal in the pre-British days that 'impact of a complex alien administration and a superior economic

13. Ibid, pp.252-253.

14. Ibid, p.253.

15. Ibid, p.256.

system naturally proved ruinous to this rotten edifice''.¹⁶
But the trade and the land revenue structure also gave rise to new social classes in the early decades of the 19th century. According to Tripathi, had India followed a protectionist policy from 1833, there could have been an industrial revolution in Bengal under British management, in this period.¹⁷

Another work of quite a different nature is that by Peter Marshall¹⁸. The book depicts the pursuits, to their own advantage, by industrial British subjects in Bengal, some of them employed by the English East India Company, and some not in its service. Marshall traces in detail how the British subjects were able to build up a network of so-called private trade within Bengal itself and by sea throughout Asia which gradually supplemented the Company's activities in course of the 18th Century, and in the 19th century replaced them together. While discussing this process Marshall also makes a few observations about the phenomenon of the 'drain of wealth' from Bengal. He has estimated that between 1757 and 1784, an average of over L.500,000 was repatriated annually by Englishmen from Bengal

16. Ibid. pp.258-259.

17. Ibid, p.266.

18. Peter Marshall, East India Fortunes: the British in Bengal in the 18th Century (Oxford, 1976).

This was the real drain of wealth. So, as Marshall argues, the bulk of the drain process took place in the form of bills of exchange payable in London, Copenhagen or Amsterdam rather than in specie or goods. Marshall has also questioned the traditional interpretation of the impact of this 'drain' on the Bengal economy. He suggests that there could also have been some positive effects on the economy in terms of more production and employment caused by the increase in Bengal's foreign trade, which has otherwise been seen by the traditional historians as only a vehicle of the drain of wealth. However, he emphasizes that before reaching any conclusion on this aspect, a great deal more of information on income and employment in Bengal during the late 18th century has to be found out.

So far I have made a brief survey of the literature on certain broad aspects of trade and economic development in Bengal in the 2nd half of the 18th century. Let me conclude this survey by making a few points about a slightly specialised work concerned with the relationship between trade and non-agricultural production in Bengal in our period. This is Hameeda Hossain's book¹⁹ dealing with the East India Company's trade and the organisation of textile production in Bengal between 1750 and 1813. Hossain's

19. Hameeda Hossain, *The Company Weavers of Bengal: The East India Company and the Organisation of Textile Production in Bengal, 1750-1813.*

central thesis runs as follows. Upto the early 19th century, as the export sector had evolved in response to overseas demand, it had provided a profitable commerce to European commercial enterprises. This had induced the East India Company to involve itself directly with the system of procurement and production. Yet this interaction did not contribute to the development of the production sector, for in the last decades of the 18th century it was unable to keep pace with the expanding demand. It coincided with the period when the East India Company emerged as a major buyer of textiles and acquired political and administrative power. It was thus able to influence economic activity and to provide a centralised direction to trade and production. It restricted access to markets, thus limiting the artisan's freedom to work. Its system of legal obligations bound the weavers to the company and altered their status. Thus, in spite of the increased procurement targets, the results were a reduction in output, deteriorating conditions of producers and a decay of the arangs. Hossain denies that this decline in the cotton goods sector was due to changes in the demand conditions Europe or any other external factors. Rather, she argues that the pressures developing within the supply organisation were primarily responsible for the decline or stagnation in cotton goods production in Bengal in the last decades of the 18th century.

What I am trying to do in my dissertation is to study some aspects of trade and non-agricultural production in Bengal in the 2nd half of the 18th century and to analyse the overall impact of these on the company as a whole. I will attempt to test some of the established notions

on this subject against the available evidence. If it is found that some of these notions are questionable, then I will try to offer certain alternative viewpoints regarding the economic life of Bengal in the 2nd half of the 18th century. Regarding the methodology I shall adapt in pursuing my study, it can be said that an attempt will be made to use the tools of economic analysis and draw upon quantitative information simple statistical techniques in order to interpret the available evidence.

It can be seen that most of the works on trade, production and the economy of Bengal in the 2nd half of the 18th century have stressed mainly on two aspects: (1) the institutional aspects, eg., the Company government's policies, methods of procurement of export goods, the monetary and credit structure, etc. and (2) the drain of wealth. These two aspects are important in their own ways

but relying on them solely for analysing the economy can have problems, because they may conceal other important (and perhaps, more fundamental) developments. Especially, with the publication of the 'General Theory of Employment, Interest and Money' by John M. Keynes, it has been found that for explaining the working of an economy, the more important objects of analysis are income, expenditure and output. According to Keynes, the effective demand in an economy determined the level of employment in it. The effective demand in the economy acts through the propensity to consume and the rate of new investment to set a ceiling on the level of economic activity. Keynes also assumed that aggregate consumption is a relatively fixed proportion of the aggregate expenditure in the economy. So, given that consumption will adjust to any level of income, the level of employment is determined by the other component of aggregate expenditure, i.e. investment. The investment, in turn, is determined by the relation between expected marginal fields of assets and their marginal costs of production. Keynes further noted that the price level at any time depends on the total volume of expenditure relatively to a given volume of total output. Again, expenditure depends on income. Fluctuations in price level are due to fluctuations in income rather than the quantity of money, assuming total output is constant. But the level of output is not

constant; it tends to fluctuate with income and expenditure thus it is seen that for analyzing an economy, income, expenditure and output are more fundamental than any other aspects. I shall use some elements of the Keynesian macroeconomic framework for the purpose of economic analysis in my dissertation.

The plan of my dissertation will be as follows. The first chapter deals with the structure, composition and direction of trade (both internal and external) in Bengal during the 2nd half of the 18th century. The production systems in two selected non-agricultural production sectors, namely, the cotton goods and the raw silk industries, have also been described in this chapter. In the 2nd chapter, I have studied certain aspects of the monetary and credit system in Bengal during the period and try to examine the nature of the impact of the English East India Company's government on this system. The 3rd and 4th chapters are entitled, 'Trade, Production and the Bengal Economy, Parts I and II'. Here I have tried to trace the interaction between trade and non-agricultural production in Bengal and analyse the impact of this interaction on the Bengal economy. I have basically done two case studies. In the 3rd chapter, I have studied the mutual interaction between the English East India Company's trade and the cotton goods industry in Bengal and the implications of this for the entire economy.

The case of the English Company's trade and the raw silk industry in Bengal has been analysed in the 4th chapter. The interaction and the impact have been studied with respect to three main variables, viz., the real outlay/output of the commodities, the employment levels in the different sectors and in the economy and the total real income generated in the respective sectors and in the entire economy. This section is followed by some concluding remarks.

Before going into the main body of dissertation, I would like to mention one or two fundamental propositions about the Bengal economy in the 18th century. The first proposition is that Bengal in this period was a labour-surplus economy with considerable unemployment and underemployment. This becomes evident from the works of authorities like Irfan Habib²⁰, Tapan Raychaudhuri²¹, Sushil Chaudhuri²² and Harbans Mukhia²³. It implies that Bengal

20. Irfan Habib, 'Potentialities of Capitalist Development in the Economy of Mughal India', Journal of Economic History, 29.1, March, 1969;

The Agrarian System of Mughal India (London, 1963); Sections in the Cambridge Economic History of India. Vol.I.

21. Tapan Raychaudhuri, "The Mid-Eighteenth Century Background" in The Cambridge History of India, Vol.II.

22. Sushil Chaudhuri, Trade and Commercial Organisation in Bengal, (Calcutta, 1975), Chapter 8, A Resume.

23. H. Mukhia, articles in H. Mukhia and T.T. Byres (ed.). Feudalism and Non-European Societies (London, 1985).

during this time had considerable unutilized labour in the economy. The 2nd proportion is that in Bengal between 1750 and 1800, the population level did not rise much. This is evident from the studies²⁴ of Durand, Sen Gupta et al., Bhattacharya and Gujral.

I have pointed out earlier that the region with which I am concerned about here, comprises of the present day West Bengal and Bangladesh. In the 18th century, this formed one of the most important regions in India as far as trade and manufacture are concerned. It was blessed with many fine rivers that issue out into the sea or the Bay of Bengal between Point Palmiras and the Arakan coast. The most important among these rivers was the Ganges with her two main branches, i.e., the Padma and the Bhagirathi and numerous other channels. Another important river was the Brahmaputra, the lower portion of which flowed across eastern Bengal. On the banks of the river systems were found delicate grooves and fruitful lands, yielding a variety of agricultural items. The rivers and their channels were lined with numerous large and small towns and villages. The important towns in this region included among others,

24. The Cambridge Economic History of India, Vol.II, pp.464-466.

Murshidabad, Kasimbazar and Malda on the north, Dacca, on the east, and Calcutta on the west. The main mode of transport for goods and men in Bengal was by boats. Here, a difference can be noticed between the lower Gangetic delta where carrying trade in boats was conducted almost throughout the year, and the regions north of Murshidabad; in the upper reaches of the Ganges and its tributaries in the north there was a seasonal cycle. The boats used were of different sizes and types. The transport system over land was in a dilapidated state and this further accounted for the heavy dependence on boats for cargo carrying. The commonest mode of carrying goods by land was oxen carrying backloads and, next in order carts drawn by oxen. A small portion of the livestock was exclusively engaged in the conveyance of goods. This category included traders' oxen carrying backloads, oxen used in carts for carrying goods, and buffaloes and horses used for similar purposes.²⁵ The chief articles of trade and consumption produced in Bengal included rice, sugar, cotton goods, raw silk and salt petre.²⁶

25. S. Bhattacharya, "Regional Economy: Eastern India - 1" in *The Cambridge Economic History of India*, vol.2, (Cambridge, 1982).

26. *Ibid.*

One last point that I want to make here is this. I have taken the year 1800 as the terminal point of my period of study. It is true that the year 1800 did not represent any turning point for Bengal in the politico-administrative sense. But in the economic sense, I think, the year has a significance because the phase of economic growth in Bengal terminated around 1800. After that, the adverse effects of the British policies were felt strongly in Bengal and the economy started to show signs of economic stagnation and decline.

The findings of this study are based on primary source materials and documentary evidence consisting of manuscripts and records maintained by the company's officials who were in charge of commerce and revenue in the districts and rural areas. Most of these manuscripts and unpublished records are preserved in the National Archives of India, New Delhi, and the West Bengal State Archives, Calcutta. Apart from these, a number of printed records, Parliamentary and official papers, travel accounts and contemporary sources as well as secondary works have also been consulted.

CHAPTER I

Part 1 : TRADE AND MARKETS IN BENGAL (1750-1800)

I.1.i. COMMODITY COMPOSITION AND DIRECTION OF TRADE

I.1.i.a INLAND TRADE

The movement of goods inside Bengal reveals an interesting pattern. In this section, I will try to present a general description of how the producing regions of various goods were linked to the different markets and how the markets were linked to each other. For this sort of an account, I will broadly follow the district-wise break-up of Bengal as it were in the 19th century. One can note that this is just for convenience. In a later section, I will try to build up a more integrated picture of trade in Bengal and then outline certain basic features on the basis of this evidence. This account will not however, cover all the 'districts' of Bengal. Only the districts important for trade and manufacture will be considered.

First let me discuss the trade in the districts of Chittagong, Noakhali and Tipperah. The chief imports of Chittagong were salt and earth-oil. The principal export was rice. Earlier, it used to export a great deal of cloth but by the second half of the 18th century this had declined considerably. The rice trade was quite prosperous and it was chiefly in the hands of Indian and some European merchants. The bulk of the rice came from Tipperah, Noakhali (including

the chars of Sandwip, Hatia, etc) and the Island of Dakshin Shahbazpur, belonging to Bakarganj. It was brought down by beparis (traders) in boats and during the cold season whole fleets of these could be seen making for the mouth of the Karnaphuli from the northward. These beparis were not generally men of capital; they purchased rice in small quantities from the producers and brought it down in their own boats. On arrival they dealt with the merchants direct. Business was done to a certain extent through brokers, but under the immediate superintendence of the merchant. Very little rice grown in the Chittagong district was exported; for the produce of the district was not much more than sufficient for local consumption. The ships that took the rice were generally European but some Indian owned ships were also there. These ships either came in ballast or brought salt, earth-oil and timber. The rice was sent mostly to Galle, Colombo, Cochin, Bombay and other Indian Ports.¹ Country built vessels traded from Chittagong to Narayanganj with earth oil, salt, cotton, betel nut, etc, bringing back tobacco, hemp, ghi, sugar, oilseeds and other country produce. There was a small export trade to Akyab in turmeric, onions, garlic, mustard-seed, hemp etc. Coconuts,

1. W.W. Hunter, A Statistical Account of Bengal, Vol.VI, pp.188-9.

shells and sundries were brought in country bottoms from Ceylon, the Maldives and the Laccadive Islands. Coconuts were also brought from Dakshin Shahbazpur and other islands in the estuary of the Meghna.²

Besides the town and port of Chittagong, the chief seats of trade in the district were Cox's Bazar, Mahajan's hat, Nazir's-hat and Roaja-hat. Nearly every village had a permanent hat or market, which was held on two days in each week, and was resorted to by the people of the neighbouring villages.³

The district of Noakhali possesses an extensive river-coast, extending from Raipur to the month of the Big Pheni, a distance of about 200 miles. It was therefore favourably situated for the growth of commerce; but yet the trade of the district was not very extensive and little enterprise was shown to extend it. The traders in the towns and other parts of the district were reported to be outsiders, chiefly from Dacca, Tipperah, Sylhet, Bakarganj and Faridpur. There was a great disinclination among the local population to joint trading. Each man preferred to do business singly on his own account and as a result, the transactions were of a

2. *ibid*, p.190.

3. *ibid*.

petty nature. The danger of navigating the large rivers and the drying-up of the streams in the cold weather were also great hindrances to trade.⁴

TH-3498

The principal articles of export were rice and betel nuts which were consigned to Chittagong, Calcutta and other places. Petty traders carried small boat-loads of rice and betel nuts from one local market to another. The produce was bought up by traders on a larger scale, who exported and sold it for profit. The betel nuts which were intended for Calcutta were prepared differently from those exported for consumption by the Maghs in Chittagong, Sylhet, and the neighbourhood. For the former market, the nuts were merely dried in the sun; while for the latter they were first steeped in water, and they thus became more expensive. Coconuts were produced in less abundance than betelnuts, but still a considerable number were exported. The coconuts of Sandwip were chiefly exported to Chittagong and Akyab; those of parganas, Bhulna and Kanchanpur to Maimansingh, Sylhet and Dacca. However, coconut oil was not produced in this district. There was also some trade in cow and buffalo hides. Chamars from up country were involved in this business and exported it to Calcutta and Dacca.⁵

4. W.W.Hunter, op.cit., Vol.VI, p.321.

5. ibid, p.322.

The district obtained earthenware, cotton and hill-bamboos from Chittagong; iron-plates, bell-metal, cloth, salt, sugar from Calcutta; molasses, sugar, oil, tobacco, grain, musuri from Dacca, Tipperah and Bakarganj. During the rains, also, dried fish was brought from Sylhet and salted fish from Dacca and other places and sold to vendors, who retailed it throughout the district. Lime was imported from Sylhet. As the passage from that district through the large rivers was considered exceedingly dangerous, the journey was made in the rains, when all the small rivers and canals were open. Lime was therefore imported only in the rainy season and at other times it often commanded fancy prices. Shuranga and Kunda boats, 'dug-outs' made in the Chittagong Hills and imported, were used for traffic within the district. They were hewn out of large trees and carried from 10 to 30 maunds of goods, but were not suited to the larger rivers. The boats used for trade with other districts were the balams and kosh boats, which carried from 200 to 800 maunds (7 1/3 tons to 29 1/3 tons). Nearly all the trade of Noakhali was carried on by means of permanent markets, and there were no fairs of any importance. Some of the important markets in the district were Diwanganj, Gopihanj hat, Begamganj, Dharmaganj, Lakshmipur bandar, Rahim-ud-din Patwari's hat, Sudharam Bose's hat, etc.⁶

6. *ibid*, pp.323-4.

Next we come to the district of Tipperah or Kumilla. The principal export item was rice. About one third of the entire produce of the district was exported. The bulk of this went to Narainganj in the Dacca district. It also went to Faridpur, Pabna, and perhaps one or two other districts. In many cases the rice dealers sent representatives to the large bazars or to the agricultural villages, to buy rice on the spot; in other cases the local mahajans (money lenders) bought it or received it in payment of their loans and exported it when they had collected a sufficient quantity. The rice from the south-east of the district, which had no water communication with the western parts, was carried to Chittagong by boat and was there absorbed in the export trade by sea. In the north-west it was often sold through the aratdars or brokers. After rice, the next important item was betelnut. This trade was in the hands of the well-to-do classes. Betelnuts went south to Chitagong, west to Dacca, north to Sylhet and sometimes even as far west as Mirzapur. Other exports consisted of sugarcanes, coconut, bullocks, fish oil, dried fish, hides, mats, bamboos, timber etc. The principal imports of the district were sugar from Calcutta and Dacca; timber, cotton, bamboo from Hill Tipperah; cloth, cotton goods, spices, iron, lead, salt from Calcutta; gram, brass and copper utensils from Dacca; tobacco from Rangpur,

etc.⁷ The principal trading towns and villages were : Kumilla, Gauripura, Lalpur, Jafarganj, Companyganj, Nanuarhat on the Gomti, Chanduria, Brahmanbaria, Ramchandrapur, Nasirpur, Phandauk on the Titas; Baghmara and Hajiganj on the Dakatia; Chandpur on the Meghna; Sachar and Danagodha on their respective rivers; Kutir bazar and Bholachang on the Borigang, etc. Trade was carried on principally by means of fixed markets and there was only one fair in the district which deserves notice. This was held annually in the month of November, at the Panchpukuria on the Gumti river, about 22 miles west of Kumilla town. The fair lasted for seven days, and a considerable traffic in cloth, rice and other articles was carried on.⁸

We now come to the district of Dacca, one of the most important trade and manufacturing districts of Bengal. The principal exports consisted of Kasidas and embroidered cloths, other piece goods, and muslin, sent to Europe, south east Asia, Bassarah and Jeddah; indigo, safflower to Calcutta; skins to China; hides to Calcutta; betelnuts to Rangpur, Assam and Arakan Pegu; soap, shell, bracelets and copper utensils to different parts of the country. The articles received in exchange into the district included rice,

7. *ibid*, pp.419-20.

8. *ibid*.

tobacco, timber, salt, silk etc. The towns of Dacca and Narainganj also acted as marts for the the produce of the surrounding districts; grain and oil seeds were imported from Sylhet, Maimansinh and Tipperah, chiefly to Narainganj, for transmission to other parts of the country. The trade in the district was almost carried on in the towns or in the markets held on fixed days at the villages. A number of fairs were held at different places at particular seasons of the year, such as those held at Munshiganj, Dhamrai, Manikganj, etc. With the exception of few Musalmans or Christians, all the merchants in the district were Hindus. Those that belonged to the city, exported their goods to Calcutta and those who were natives of the upper provinces carried on a traffic with that part of the country by means of the Ganges. The cloth merchants used to go to Calcutta in November to dispose of their investments. It should be noted here that the trade in the cotton goods was the most important among all exports from the district and good deal of petty trade was also carried on by small joint-stock firms, consisting of a number of individuals to whom the merchandise belonged and also of the owners and the crews of the boats, who instead of wages received a certain percentage share of the profit of speculation.⁹

9. W.W. Hunter, op.cit., Vol. V, pp.113-4.

In the district of Bakarganj, trade was carried on principally at the permanent markets. Trade was also conducted through a number of fairs such as the Kalisuri fair, Kulsokati fair, Lakhutia fair, etc. Rice, areca-nuts, coconuts and sundari timber were exported to a very large extent. There was also considerable export trade in pan leaves from the Madaripur sub-division. None of the manufactures of the district were exported with the exception of pottery. The principal articles of import were salt, tobacco, oil, oilseeds, pulses of various kinds, cloth etc. The district enjoyed a surplus of exports over imports but the export surpluses was mostly extracted by non-resident traders and land holders.¹⁰

In Faridpur district, the principal articles of trade were rice, pulses, oilseeds, molasses, sugar, coconuts, betelnuts, ghi, salt, cotton, iron, timber, spices, brass, ball-metal, etc. The important seats of commerce were Bhanga, Gopalganj, Boalmari, Sayyidpur, Madhukhali and Kamarkhali. The minor trading villages were Jamalpur, Salimpur, Dhanchi, Godarbandar, Panchuria and the station of Faridpur. The district trade was carried on by means of permanent markets and fairs held in this district did not have much commercial importance. With the exception of sugar

10. *ibid*, pp.215-6.

and gur, which were largely exported, the local manufactures were not sufficient to meet the district's wants. Nearly all the articles had to be obtained from the other districts. The imports consisted of the necessities and luxuries of life with the exception of rice, sugar, gur, onions, and pulses.¹¹

As far as the district of Maimansinh was concerned, the chief articles of import from other districts of Bengal were cotton, betelnuts and chilies from Tipperah; cotton from western Bengal; coconuts from the southern districts; and refined sugar, cotton goods, etc., from Calcutta via Narainganj. The principal exports included rice, indigo, reed mats, hides, brass and copper utensils, cheese, ghi, etc. Tobacco and some muslins were also exported. The following is a list of more important commercial and trading markets : 1) Nasirabad ; 2) Dhapuria, a large mart for grain ; 3) Sambhuganj, where all descriptions of commodities were bought and sold ; 4) Jamalpur ; 5) Nalitabari, the most important mart in the northern part of the district; 6) Suban Khali; 7) Husainpur ; 8) Bhairab bazar ; 9) Karimganj ; 10) Kaliachapra, a market principally for grain; 11) Kishoriganj; etc. The trade in the district was chiefly

11. *ibid*, pp.339-40.

carried by means of permanent markets but also partly through fairs. Important fairs were the Jhulan fair held in Kisorganj in the month of August and the Dol fair at Husainpur in March. These fairs were visited by traders from Dacca, Tipperah and Sylhet as well as by merchants of the district and a considerable business was carried on in cloth, hardware, spices, shoes and miscellaneous articles.¹²

We now move on to Rajshahi district. The products of Rajshahi, which also includes the chief articles of export trade were rice, silk, indigo, and ganja. The principal imports received in exchange of exports were cloth and cotton goods, sugar, ghi, timber, salt, oil, spices, grain of various sorts, etc. The district trade was carried on chiefly by means of fixed markets in the towns and larger villages; assisted also by periodic fairs such as the ones at Premtoli, Manda, Bagha, etc., held on the occasion of some religious festival. All these fairs formed temporary centres of trade. In this district, the local manufactures as well as the crops were in excess of the local demand and were largely exported to the neighbouring districts.¹³

Next comes the Rangpur district. The chief articles

12. *ibid.*, pp.461-2.

13. W.W. Hunter, *op.cit.*, Vol.VIII, pp.87-88.

exported from Rangpur were rice, tobacco, ginger, turmeric, mustard seed, silk cocoons, chilies, potatoes, bamboos, sugar, ghi, etc. The articles imported into the district included cotton, salt, opium, iron, lead, brass and bell-metal utensils, sugar etc. The produce of the district available for export was chiefly bought up by brokers, who travelled about the country making advances to the cultivators on the crops and after the harvest, carry the produce to large grain marts, principally to Dacca and Sirajganj. Large stores and warehouses were situated along the banks of the principal rivers such as the Brahmaputra, Tista, Darla, etc., where the goods were stored until they could be conveniently transported. The tobacco trade was almost entirely in the hands of the Maghs, who shipped the produce to Calcutta and Chittagong. Mustard seed and rice were exported to Assam, and to the eastern districts of Bengal, by way of Sirajganj. Silk cocoons were exported to Bogra and to Taherpur or other parts of Rajshahi. Dacca took chilies, potatoes, satranjis, and oats while Calcutta imported indigo. Of the imports, cotton was chiefly imported from the Garo hills, through Goalpara district. A considerable quantity was brought to Salmari and other markets on the eastern borders of the district, and then found its way into the interior. From the northern hills, the imports consisted of timber, Bhutia ponies and blankets.

The most important of the permanent seats of commerce was Mahiganj. A large number of Marwari merchants resided here and carried on a thriving trade in every description of produce. Banking operations were also carried on by one or two houses. The principal trading villages or produce depots included Goramara, Akbarbandar, Nisbetganj, Badarganj, etc. Two annual trading fairs of considerable importance were held in the district, one at Darwani, at which cattle and horses formed the principal articles of sale.¹⁴

We now come to the Dinajpur district which was more or less an agricultural district with few manufactures. A little coarse cloth was made for home use; and in some parts a coarse but very durable cloth called Mekli was made from the wild rhea grass. Gunny cloth was woven in the northern parts of the district but this was a manufacture of the coarsest description. Rice, tobacco, gunny cloth, salt and molasses were among the chief articles of trade in this district. The principal seats of commerce were Raiganj, Nitpur, Goraghat and Kumarganj; but there were numerous large produce depots scattered throughout the district along the river banks. Besides the permanent markets, a considerable proportion of the district trade was carried on at large annual fairs, the principal of which were the

14. W.W. Hunter, op.cit., Vol.VII, pp.307-8.

Nekmard, Alawa Khawa, Dholdighi and Sontapur fairs.¹⁵

Next we take the district of Jessore. The export of the district was chiefly sugar, both dhulua (moist, reddish and half refined) and paka (white and granular). Indigo, rice, pulses, oil and sundarban products, such as timber, honey, shells, etc, also formed important articles of external trade. The imports were chiefly salt, and cloth. Rice for exports was principally obtained from the reclaimed lands in the Sundarbans. The chief rice mart was Chandkhali, from which the grain went northwards by the Kadabak and the Bhadra. A great deal of rice was imported into the district from Nalchiti in Bakarganj, to supply the marts of Phultala, Naopara, Khajura, Kaliganj and Basantia, situated in the sugar tract, where rice was not grown to any considerable extent. Cloth was imported from Boalmara hat, 16 miles north of Lakshmipasa, and situated in Faridpur district to which mart, many Muslims of the Faraiji sect, weavers by trade (jolas), brought their cloth for sale. Westland states in his report that during the Durgapuja, L 500 worth of cloth was sometimes sold in a day. Salt was chiefly imported from Calcutta and the salt boats got return cargoes of sugar to Calcutta. In 1791, the Collector, according to Westland, estimated the paddy produce of the district at 900,000

15. *ibid*, pp.410-11.

maunds, or 658,928 hundredweights, of which half was exported westward. Besides this, 150,000 maunds or 109,821 hundredweights passed through the district from Bakarganj, and the trade was still in the same direction. Of Kalai and Musuri, also, considerable exports were made to Calcutta. Coconuts were also largely cultivated in the south of the district, and a large quantity was exported. About 30,000 maunds of tobacco were grown in the district and of them, 10,000 maunds were exported to Calcutta. Of cotton, 2400 maunds were produced in 1787, besides 3600 maunds which were imported for local manufacture and a small quantity of thread was also imported in 1791 from Bhushna, for the weavers in Jessore. From this, 148,100 pieces of cloth were yearly manufactured. In 1791 the sugar produce was put down at 20,000 maunds, of which half was exported to Calcutta; the greater part of this was date sugar. The trade in the district moved mainly by water and transport over land was not very developed. It was carried on chiefly through permanent markets. The principal centres were Jessore town, Murali, Sen's bazar, Fakirhat, Kesabpur, Manoharganj, Khulna, Kaliganj, Jhanidah, Gopalpur, etc. In 1794, Alinagar (Naopara on the Bhairab), Kumarganj, Fakirhat, Chandkhali and Henkellganj are mentioned as principal places for grain trade. A considerable trade was also carried on through fairs, some of which were held at Trimohini, Kapilmuni,

Balrampur, Bodkhana, Chitalmari, Maheswarkund, Morrellganj, etc.¹⁶

We now move to the districts of western Bengal. Of these we will take two of the most important districts as far as trade and non-agricultural production were concerned, namely, Malda and Murshidabad.

In case of Malda, the principal articles of export from the district were raw silk and cocoons, silk cloths, indigo, brass metal work, rice and other kinds of grain, pulses, and fruits, especially mango. The chief silk mart was Amaniganj hat, where buyers came from the neighbouring district of Murshidabad and Rajshahi to make their purchases. Tuesday was the usual hat day and on that day silk was sold often to the value of from Rs.20000 to Rs.50000. Minor silk markets were also held at Bholahat and Kasimpur. The cocoons and the raw silk from the native filatures were chiefly exported to Murshidabad, while the raw silk wound in the European filatures were sent to Calcutta for export to Europe. The woven silk cloths found purchasers mostly at Calcutta and Benaras. Indigo was exported direct to Calcutta. The trade in brass metal work was mainly carried on at Nawabganj, the place of manufacture. The most important seats of commerce in

16. W.W. Hunter, op.cit., Vol.II, pp.302-4.

the district, where trade was extensively carried on in food stuffs, were English bazar, Maldah, Rohanpur, Nawabganj and Haiatpur. The principal fairs or religious gatherings were held at Ramkail in June; Kansat, Sudullapur, and Kunva in March; Rattbari in May; etc. The real trade of the district was conducted in market towns mentioned above and also at various landing places along the bank of Ganges. The general practice on the Ganges was for the boats to move wherever they found in the vicinity an arat or place for weighing and selling the grain, which had been previously entrusted to the aratdar by the cultivators themselves or by beparis. The articles imported include cotton goods, coconuts, betelnuts, sal wood, gram, salt, gur, sugar, sulphur, copper, ginger, turmeric, spices and pepper. The large manufacturers in the district were Europeans and many of the banias and beparis were natives of the north-west province or Bihar, so that a part of the profits of trade was ultimately sent out of Bengal.¹⁷

Next we come to Murshidabad district. It was conveniently situated so far as the major river route was concerned. It lay between the two first offshoots of the Ganges, which led southwards direct to Calcutta. The eastern half of the district surrounded by the Ganges, Bhagirathi and Jalangi, had a number of large commercial centres. The principal centres of commerce in the entire district were

Jangipur, Azimganj, Jiaganj, Murshidabad town, Bahrapur on the Bhagirathi; Bhagwangola and Dhulian on the Ganges; etc. Trade was carried on chiefly by permanent markets; but in the case of few articles, by means of village hats, held at stated intervals. The important fairs for commercial purposes included those held at Dhulian in April, Jangipur in May, Chaltia near Bahrapur in April, Saktipur in March and Nandi in November. Silk, metalware and indigo formed the main exports from the district. Much of the raw silk wound in Murshidabad was destined for Europe. The silk cocoons were partly reared in the district and partly bought from Maldah and Rajshahi. The town of Jangipur was the centre of silk trade. Apart from these, rice was also exported. The main rice producing areas lay to west and north-west parts of the district. In fact, the eastern part of the district also had to take rice from the western part for its own consumption. The imports of the district included cotton cloth, salt, spices, raw cotton. Some imports were made, not for consumption but for export to other districts. Thus cotton consigned in large quantities to Azimganj merchants was landed at Bhagwangola or Alatali and then sent in carts via Kandi to Synthia and then to Calcutta. There was also brisk trade between the eastern and western parts of the

17. W.W. Hunter, op.cit., Vol.VII, pp.100-2.

district. The west sent rice and received in turn, oil seeds and other products. The Oswals or Jains were the principal merchants and bankers and had settlements in Azimganj, Baluchar, Murshidabad and Bahrapur. They also invested part of their wealth in land. The medium of exchange throughout the district was money although in the north western portion barter trade was carried on. There, rice was the very common standard of value and salt, fish, oil and other necessities, except clothing, were bartered for rice.¹⁸

I.1.i.b EXPORT TRADE

Bengal maintained trade relations with various parts of India as well as the world during the 2nd half of the 18th century.¹⁹ The trade relations can be classified into the following categories :

- 1) trade with parts of India
- 2) trade with other parts of Asia
- 3) trade with Britain
- 4) trade with other parts of the world

1) Trade with other parts of India :

This branch of trade was highly active even in the 2nd half of the 18th century despite the political and social

18. W.W. Hunter, op.cit., Vol.IX, pp.157-8.

19. Milburn, Oriental Commerce, Vol.II, pp.111-2.

turmoils that took place after the break-up of the Mughal empire. The coastal trade with the Coromandel and Malabar coasts formed an important part in this branch. Towards the end of the 18th century this trade came almost wholly in the hands of the Europeans.²⁰ Grain was one of the most important exports to this region from Bengal. In 1793, out of 83,000 tons of European shipping employed in the Coromandel trade, more than 80,000 were involved in transporting grain and pulses.²¹ The other exports to the Coromandal coast were cotton and silk piece goods, sugar, saltpetre, raw silk, long pepper, ginger and a few minor products, which together were worth about Rs.6 lakhs in 1793 while the total value of the exports in that year to the Coromandel was Sonaut Rs.39 lakhs.²² The returns from the Madras presidency were made in bullion, salt, redwood, some fine long cloths, chints and a supply of European goods previously imported. Usually the exports exceeded the imports in value and the balance was absorbed by drafts or bills, or remitted in specie. The exports to the Malabar coast in 1793 were valued at Rs 1400,000.²³ The export items

20. Asiatic Annual Register, 1803, Miscellaneous Tracts, p.8.

21. *ibid*, p.7.

22. *ibid*. pp.7-8.

23. *ibid*, p.9.

were broadly the same as those sent to the Coromandel coast. The leading import from the Malabar coast included horses, sandalwood, coir, pepper, spices, turmeric, coconuts, teak, some bullion, etc.²⁴

Trade with Deccan was another branch of Bengal's trade with other parts of India. This trade was mainly over land. Apart from sugar, Bengal exported cotton and silk piece goods, raw silk and a variety of European manufactures to the Deccan. In return she obtained cotton, coconuts, salt and several other commodities.²⁵

In the northern direction, Bengal traded with Assam, Nepal, Bhutan, Oudh, Rajputana, Punjab etc. On 8th October, 1790, the Governor General passed a resolution permitting all British-born subjects, Armenians and Greeks as well as the merchants of Sylhet to trade with Assam. They conveyed salt, opium and other goods to Assam and brought lime, wax, ivory, iron, silk thread and silk goods from there.²⁶ The forests of Nepal supplied abundant timber to the merchants

24. Bengal Board of Trade (Customs), Consultations, April 23, 1802.

25. Bengal Board of Trade (Customs) Consultation, 1 September, 1795; Bengal Board of Trade (Commercial) Consultation, 18 April, 1803 and 25 March, 1806.

26. Seton-Karr, Selections from Calcutta Gazettes, Vol. II, p. 31.

of Purnea, Dinajpur and Rangpur. In addition, the imports from Nepal included grain, wax, gold and gold dust, iron, pepper, ivory, paper, cardamom and Tibetan products like musk, medicinal herbs and roots. The chief exports to Nepal from Bengal were salt, silver, sugar and piece goods.²⁷ From Morang and Bhutan the northern districts of Bengal obtained the same goods as those from Nepal. According to Krishnakanta Bose, Bhutan produced plenty of horses, blankets, musk, manjit, wallets and oranges and these were imported by Bhutias into Rangpur.²⁸ They obtained in return woollen cloth, indigo, cloves and coarse cotton cloth. Bhutan also imported salt, tobacco, cotton goods, rice, etc., from Purnea.²⁹ For a long time Bengal had close commercial relations with Oudh. Towards the end of the 18th century, merchants faced some problems in that region because of the weakness of the Nawab - Vizier's government. As a result, trade suffered. Things became more stable after the acquisition of the Ceded and Conquered territories by the Company. The exports from Oudh to Bengal were fine cotton and silk piece goods, European manufactures, grain and metals. The imports consisted of saltpetre, several

27. Buchanan, Purnea Report, pp.573-4.

28. S.N. Sen, 'On Raja Rammohan Roy', Bharatvarsa, Bhadra (Aug-Sept), 1348 B.S., pp.273-79.

29. Buchanan, op.cit., pp.556-75.

varieties of coarse Oudh cloth, raw cotton, perfumes etc.³⁰
Brisk trade was also carried with Rajputana, the Punjab and Kashmir. The exports were mainly cotton cloth, European products, copper, lead, tin, indigo, spices, raw silk. Bengal, on the other hand, imported shawls, rock salt, fur from Kashmir; saffron, rock salt, manjit from the Punjab, etc.³¹

2) Trade with other parts of Asia :

Throughout the 2nd half of the 18th century, Bengal had direct trade relations with the Arabian and Persian Gulf areas. The value of exports from Bengal to these areas was quite high and averaged about Rs.30 lakhs per year.³² However, towards the end of the 18th century, this trade suffered a decline and the annual exports came down to Rs.8 lakhs.³³ After 1800, there was another upswing which lasted upto 1820, followed by a decline in the subsequent period.

On the eastern side, Bengal carried a brisk trade with Penang, Borneo, the Celebes and the Moluccas. From the mid

30. Bengal Board of Trade (Commercial) Consultations, 7 January, 1803 and 18 April, 1803.

31. Buchanan, Patna-Gaya Report, Vol.II, p.690.

32. Asiatic Annual Register, 1803, Miscellaneous Tracts, p.9.

33. *ibid.*

1780s, Penang was the chief entrepot of trade in that quarter. But towards the end of the 18th century, the trade with Penang suffered a decline due to increase of piracy in its neighbourhood and a falling off in the demand for opium in the several islands.³⁴ In 1795-96 the exports to Penang and the Straits amounted to about Sicca Rs.1480,000, but in the following year this came down to Sicca Rs.987,000.³⁵ Opium and piece goods were the main exports to Penang and to the Straits. Other exports were grain, saltpetre, sugar and gunnies. Imports included treasure, pepper, spices, wax, sapan wood, chinaware, beads, benjamin, sugar, etc.³⁶ The trade with Sumatra was, however, not so extensive as with Penang and the Straits. But the commodity composition of this trade was the same as in the case of Penang and the Straits.³⁷ Bengal also had some direct trade with Java till 1799-1800. The imports from Java generally consisted of sugar, pepper, Molucca spices, and South American copper, while the exports to that island were confined to two

34. Straits Settlement Consultations, 2 September, 1793-A, No.1, (Home Department, Miscellaneous).

35. Bengal Board of Trade (Customs) Consultations, 4 August, 1797.

36. *ibid.*

37. Letter of the Reporter of External Commerce to Accountant General, dated 8 August, 1810.

articles - piece goods and opium.³⁸ Bengal also had trade relations with Ceylon, the Dutch colony of Ambionna, Burma and the Spanish settlement of Manila.³⁹ Perhaps the most significant part of Bengal's trade on the eastern side was that with China. Bengal's China trade stood in terms of volume, second to that with the United Kingdom and formed about 1/5th of her total external commerce.⁴⁰ The China trade was different from the other branches because in this period it was, legally speaking, a monopoly of the English Company, although servants of the Company and other individuals were allowed a share in it. Bullion was one of the leading exports to China from Bengal, being required there to pay for the consignments of tea for the European market. Though the Company's Court of Directors almost regularly consigned silver from England to China, a large demand usually come upon the Bengal treasury every year for the Company's procurement of supercargoes at Canton.⁴¹ Towards the end of the 18th century, the export of specie from Bengal could be reduced because of the higher demand

38. Letter from Reporter of External Commerce to Governor General, 2 April, 1811.

39. John Bell, A Comparative View of the External Commerce of Bengal, p.XXIX.

40. Ava Receipts and Issues, IV, 1832 (Foreign Departement, Miscellaneous).

41. Phipps, A Practical Treatise on the China and Eastern Trade, p.251.

and consequent higher exports of opium to China from Bengal.⁴² Besides bullion and opium, other export items to China were piecegoods, grain, saltpetre, canvas, gunnies, etc. The imports consisted of a vast variety of goods, e.g., alum, camphor, nankeens, liquor, pepper, tea, chinaware, sugar candy, metals, paper goods.⁴³ However, it is interesting to note that the value of imports was generally less than that of exports.⁴⁴

3) Trade with Britain

In terms of volume, Bengal's trade with Great Britain occupied the highest share (about 1/3) of her total external commerce. The bulk of Bengal's exports went to that country.⁴⁵ Of course, this does not imply that Britain consumed all the goods she imported from Bengal. In fact, Britain re-exported a large proportion of these goods to different parts of Europe. Bengal exported to Britain, mainly cotton and silk piece-goods, raw silk, cotton, sugar, saltpetre, indigo, grain, etc. The export of rice and other

42. Home Department, Public Consultations, 26 January, 1804, No.6.

43. Milburn, Oriental Commerce, Vol.II., p.147.

44. *ibid.*

45. Prinsep, Remarks on the External Commerce and Exchanges of Bengal, p.31.

kinds of grain become regular from 1795. After 1795-6, the exports of cotton and silk piece goods gradually went down, while that of sugar almost ceased by the early 19th century. However this loss was made up by increased exports of inferior cotton goods for some time, raw silk, indigo, grain and raw cotton. Towards the end of the 18th century and in the early 19th century, the share of private traders in this trade gradually increased relative to the Company.⁴⁶ Imports from Britain included, besides bullion, wine and spirits, glass and looking glasses, oilmen's stores, cutlery and hardware, saddlery, carriage, woollens, hosiery, metals, books, etc.⁴⁷ of the English East India Company, though exceptions were generally made in favour of the commanders and other officers of the ships.⁴⁸ The Company's servants in Bengal were also granted a space in their ships from

In the 2nd half of the 18th century upto 1793, the trade between Bengal and Great Britain was a monopoly time to time so that they could export their merchandise from Bengal.⁴⁹ Incidentally, this was one way for the Company's servants to transfer their fortunes acquired in Bengal. But

46. Milburn, op.cit., Vol.II, p.127.

47. ibid., p.112

48. ibid, p.126.

49. ibid.

the majority of the British individuals did not have any share in this trade. However, in the last decades of the 18th century, this monopoly position of the Company was being challenged by new forces which were coming up in British society due to certain major socio-economic changes taking place during this period.⁵⁰ Moreover, the fortunes of British individuals in Bengal increased substantially and the channels provided by the Company of their remittance proved inadequate. So the British individuals turned to the English private merchants and the foreign companies for remittance of their wealth.⁵¹ Consequently, the volume of the foreign European trade in Bengal swelled immensely after the Peace of Versailles.⁵² So in 1793, when the question of the renewal of the Company's Charter came up, the Parliament had to take into account all these factors. The Charter Act of 1793, while renewing the Company's privileges for another 20 years, enacted that during the continuance of those privileges, they should annually provide at least 3000 tons of shipping for purposes of carrying to and bringing from the East Indies such goods as might be lawfully exported by individuals, and that an additional quantity of tonnage should be provided for carrying the said private trade

50. Milburn, op.cit., Vol. II, p.125.

51. ibid, p.126.

52. ibid.

as the Board of Commissioners for the Affairs of India should from time to time order and direct.⁵³ This provided a great fillip to both private trade and privilege trade by individuals between Bengal and Great Britain. It received a further impetus when Wellesley, by a regulation of 5th October, 1798, allowed the free merchants of Calcutta to export to Great Britain in India-built ships as much of the surplus trade of Bengal as their capital could afford, with the privilege of bringing back on these vessels, cargoes, the produce of Great Britain, under certain stipulations protective of the Company's monopoly.⁵⁴ In 1799, the British Parliament passed the Warehousing Act, by which certain articles were allowed to be warehoused for the purpose of future exports on payment of small duties.⁵⁵ All these measures combined together gave great fillip to English private trade between Bengal and Great Britain and managed to dissuade British individuals to seek the channels provided by the foreign European companies.

53. Sandemann, Selections from Calcutta Gazettes, Vol.IV, pp.37-40.

54. Dallas, A Letter to Sir William Pulteny, pp.27-28.

55. Extract of a Commercial General Letter from Court, 7th May, 1800, Debates at the East India House during the Negotiations for the Renewal of the East India Company's Charter, 1813, Vol.I, p.246.

4. Trade with other parts of the world

A large part of this trade was with continental Europe. We can get an idea of the volume of this trade by the fact that in the period 1792-94, about 53 foreign European ships cleared out from Calcutta for different parts of continental Europe.⁵⁶ The exports from Bengal to the continent in 1795 were valued at around Rs. 47 lakhs.⁵⁷ During the next 3 years, the annual average came down to Rs. 21 lakhs, perhaps due to the war in Europe. The exports particularly fell in 1798.⁵⁸ In 1799, the exports rose again to Rs.4262000 in value⁵⁹, which was largely due to the relief felt in trade circles at the defeat of Napoleon. Similar movements could be seen in the imports. Whereas in 1796-98, Bengal's imports from the continent averaged Rs. 10 lakhs per year, in 1799 this rose to Rs. 57,45,000.⁶⁰ The chief export items were piecegoods, sugar, indigo and cotton.⁶¹ The imports from the continent included bullion, wines, copper, nails, iron and steel, cordage, canvas, oilmen's stores,

56. Asiatic Annual Register, 1803, Miscellaneous Tracts, p.6.

57. Milburn, op.cit., Vol.II, p.133.

58. ibid.

59. ibid.

60. ibid.

61. Milburn, op.cit., Vol.II, p.130.

spices, etc.⁶² An interesting fact to be noted here is that during the Revolutionary and Napoleonic wars in Europe, the legal trade between Bengal and continental Europe came into the hands of neutral nations such as Denmark, Sweden, Hamburg, Portugal and the USA. When the war broke out in Europe, the English Company in Bengal who captured the factories of the French and the Dutch thereby putting their trade to a standstill.⁶³ The result was that the neutral nations got a monopoly of this trade with continental Europe. This was also aided by a Parliamentary Act of 1797 which stipulated that vessels belonging to countries in amity with Great Britain should be allowed, under certain restrictions, to import into and export from British territories in India any goods permitted by the country's Court of Directors in England.⁶⁴ Among the neutral nations engaged in the export trade to continental Europe, Denmark occupied a predominant portion. In 1793, 6 Danish ships departed from the port of Calcutta, and in 1794, 14 Danish ships of a total burden of 7600 tons cleared out from that port.⁶⁵ During the subsequent years, Danish trade increased

62. *ibid.*

63. *Indian Historical Quarterly*, September, 1935, pp.407-13.

64. *Milburn, op.cit.*, Vol.II, p.133.

65. *Asiatic Annual Register*, 1803, *Miscellaneous Tracts*, p.6.

immensely and Serampore became a busy centre of this trading activity. According to a report by the Collector of Customs, Calcutta, during the 6 months ending on the 30th April, 1798, the Danish exports from Bengal amounted to Sicca Rs. 17,30,402.⁶⁶

Another branch of Bengal's trade with parts of the world other than Britain was that with the United States of America. The exports of Bengal to the USA included cotton and silk manufactures, sugar, saltpetre, cotton, indigo, drugs, grain, ginnet, etc. The imports were very few, such as some wines and spirit. The payment for Bengal's exports surplus was made by the USA in dollars.⁶⁷ It should be noted that the American traders visited the port of Calcutta almost regularly. The English government in Bengal, passed an order in 1788, that ships of the USA should be cordially received at all the British settlements in India.⁶⁸ The trade thus encouraged, grew quite fast. Moreover this was found easier and more profitable by the American traders than the indirect trade through Europe. This trade received a further fillip by a commercial treaty

66. Bengal Board of Trade (Customs), Consultations, 8 May, 1798.

67. Journal of the Asiatic Society of Bengal, (New Series), XXV, p.203.

68. Milburn, op.cit., Vol.II, p.136.

between Britain and the USA in November, 1794. It stipulated that 'subjects of the USA would have a right to trade between their country and all the sea ports and harbours of the British territories in the East Indies in all articles "of which the importation or exportation respectively to and from the said territories was not entirely prohibited."⁶⁹ But it forbade the carrying on of any part of the coasting trade of the said territories.⁷⁰ This treaty proved highly advantageous for the Americans. Exports from Bengal to the USA rose from sicca Rs.50,000 in value in 1795 to Sicca Rs. 61 lakhs in 1800.⁷¹ Imports from the USA to Bengal amounted to Rs. 50 lakhs in 1800.⁷² Besides supplying the wants of their own markets, the Americans carried Bengal goods to different parts of Europe, and South America and even to British West Indies and North America colonies during the wars in the late 18th century. They also took cargoes from the Danish settlement of Serampore and took these to Copenhegen, Manila, Penang and the Straits, Mauritius and China.

69. *ibid.*

70. *ibid.*

71. Milburn, *op.cit.*, p.139.

72. *ibid.*

I.1.iii. An Analysis of the important features of trade in Bengal

Trade in Bengal (both inland and export) was carried on chiefly through permanent markets in towns and villages. However, some trade was also done through fairs taking place on particular days of the month or the year at particular places. There were also certain very informal and temporary type of markets organized at a certain place for a particular purpose, e.g., organisation of such markets by grain producers on the banks of a river for selling grain to the merchants.

A hierarchy can also be found in the trade and market network in Bengal. At the lowest level were the local permanent markets and fairs which dealt mainly in goods for local consumption. However, they also sent out some goods for consumption to other parts of Bengal and / or for export trade. The goods traded at these local centres were mainly the products of the same regions although some goods from even long distances were also sold there. At the next level, there were the intermediate centres catering to a specific region inside Bengal. They also sent out some goods for export trade. The goods which were traded at these centres could be either products of that region or could have come from other regions. These were the main centres of trade and/or manufactures as far as the internal

trade of Bengal was concerned. But above them there were certain nodal centres, such as Dacca, Murshidabad, Calcutta, etc., of trade and manufactures which had direct contact with the outside world and were the main outlets for export trade. They also acted as centres through which goods imported into Bengal were distributed within the country. As far as the internal trade of Bengal was concerned, the nodal centres acted as the highest centres of redistribution of goods. It is also interesting to see that the nodal centres were located on major river or major land routes, while the intermediate and local centres were situated on their branches. Another feature which strikes us is that at the nodal centres, the big merchants and the foreign companies had their main establishments while trade at the intermediate and local centres was carried on predominantly by middle level and petty traders acting either independently or as agents of the bigger traders and companies. The presence of different categories of specialised traders and their networks suggest a developed trade structure in Bengal during this period. Big and middle level merchants took part in setting up markets, though some markets were set up by zamindars and the local population.

The movement of goods between places depended on a number of factors. The most fundamental among these were

the relative demand for goods at the different places and their relative prices. Export of a particular commodity from a certain region (I) to another region (II) did not necessarily mean that region (I) had a surplus in that commodity. Relative price played a crucial role here. In this case, the export was made because of the higher price that commodity fetched in region (II) compared to region (I). This is evident from the cloth export from Santipur and rice export from Jessore to Calcutta because of higher prices there. The domestic demand for these goods in these areas was met up with imports from other regions. Factors such as transport facilities and services rendered by merchants also influenced the movement of goods in a big way. We find certain parts of a region linked to particular markets while other parts were linked to other markets mainly because of these factors. The number of markets to which a particular region was linked also had a great importance. This was because the more the number of markets that a producing region was linked to, it was better for it as it had a higher number of options open for it and it could get better and more competitive prices for its commodities. About the nature of commodities traded inside Bengal and also in other parts of India in the mid-18th century, it can be noticed that most of the goods were agricultural items and fine manufactured stuff.

Manufactured goods for mass consumption were very few. Goods such as cloths for daily use by the common people were mostly produced at home or at the same village and were not traded so much. One can conjecture that the relative absence of manufactured goods for mass consumption from the trade networks could have been due to non-development of home market for these goods and or the lack of adequate technology to produce these goods on a large scale at a cheap price. However, the production and circulation of manufactured goods inside Bengal increased throughout the second half of the 18th century. We also get evidence, though very few, of the rise of some successful markets and the decline of some less successful ones throughout Bengal due to a number of reasons.

Concludingly let me make a few theoretical points. A basic form of market structure involves open 'outcry' whereby prospective buyers (sellers) call out bid (ask) prices for some stated (or predetermined) quantity of the object in question; these announcements hold good for some predetermined period of time and can be accepted by a seller (buyer) with the result that a deal is struck⁷³. However, in practice, few people are confident enough to specify

73. C.A.E. Goodhart, Money, Information and Uncertainty (Macmillan, London, 1989), p.4.

publicly prices at which they will buy (sell) unless they have reasonably strong convictions (perhaps arising from good information) about the future price evolution of the objects in the market place. Given that dealing itself involves costs which have to be recouped from profits, this implies that such markets require a considerable volume of trade to succeed and remain as continuous markets.

Now, in Bengal, the permanent markets may be termed as continuous markets in both time and space. Although many of them dealt with considerable volume of trade, very few of these were open 'outcry' markets. This might have been due to lack of flow of good information which prevented the prospective sellers (buyers) to have reasonably strong convictions about future price evolution of the objects in the market they were dealing with. But the question arises as to how did these permanent (continuous) markets maintain themselves. How did they deal with the irregular, stochastic and often small flow of new orders? One can argue that probably in the majority of these markets, some market participants (such as prominent merchants and important buyers) took on the function of 'market making' as well as performing other functions at the same time. These specialist market makers with relative better information interposed themselves as principals in the market by offsetting the fluctuating imbalances in demand and supply

with purchase or sales for his own account. By this process, they smoothened the stochastic variation of prices and thus encouraged potential buyers and sellers to maintain the market for the same objects. Further, since the diffusion of good information was limited, there were a large number of uninformed regular dealers in these markets. Now, the large number of uninformed regular dealers could mean that the profit of the market maker from a given bid-ask margin was high (and consequently high cost of transacting for dealers) if there was a single or very few market-makers. But if there were a number of market makers, the competition among them would force down the size of the bid-ask margin, thereby reducing the cost of transacting for dealers and encouraging more regular dealers, thereby contributing to the success of the market. Therefore, one can argue that less successful markets in Bengal probably had very few market makers and few regular dealers, whereas the more successful markets had a large number of market makers and regular dealers. However the centripetal tendency that was inherent in this which could have cost trade to move towards more successful markets was probably checked in Bengal by inadequate information flow and lack of developed communication facilities. Lastly, I would like to make a point about the less permanent and occasional markets such as the fairs. These were markets where the

traders entered at rare intervals. Thus they tended to be high cost and fragile markets and were much less successful economically than the permanent markets.

Part 2 : NON-AGRICULTURAL PRODUCTION : A CROSS-SECTION

I.2.i. The Silk Industry

The silk industry consisted mainly of the production of (i) raw silk and (ii) silk weaving.

(i) Raw Silk

Silk is a very soft, fine, bright thread, the work of an insect called bombyx or the silkworm, common in some parts of the East Indies, Persia, China and in the southern parts of Europe.

The raw silk produced in Bengal was of 2 classes : that reeled according to the old method, commonly called country-wound, and that reeled according to the new or Italian method. The places where the former was manufactured, were Commercolly, Jungypore, Rungpore and Bauleah; and those where the latter was prepared were Commercolly, Malda, Radnagore, Jungypore, Bauleah, Cossimbazar and Gonatea.¹

The premier centre of the silk industry in Bengal in the 18th century was Cossimbazar, but it was losing that position to Rungpore by the end of the century.² The silk that was produced in Bengal was known

1. Milburn, Oriental Commerce, Vol.II, pp.242-3.

2. N.K. Sinha, Economic History of Bengal, Vol.I, p.178

according to the place of manufacture or often according to the manufacturer's name, e.g., Beecher, Trushard, Collinson, etc. They were graded as A, B, C, D, etc., according to their relative quality. The quality of the Bengal silk was determined by taking into account the brightness and clearness of the colour (whether white or yellow), the evenness of the thread and the size. The best silk was invariably that which had a gloss or brightness on its surface. The bad quality would easily be discovered by looking along the skein. When turned obliquely from the light, the inferior silks appeared very unequal and had many knits and coarse stuff sticking to the thread; but the moss or head of the silk often appeared fair to the eye when much coarseness remained concealed under it. The size of the thread, provided the silk was good, was no real indicator of its value. However, if the silk was bad, the finer the thread, the worse it would work. It was taken care of that the thread was equal, strong, round and very clean; it should be in a medium with regard to fineness, for the finest was not the easiest to manufacture to advantage. Particular care was taken that the silk was perfectly dry when packed or it would be subjected to mildew and become discoloured. Judging by all these criteria, the filatures which produced the best silk were located in Commercolly, Gonatea and Rungpore; there was also good silk from

Jungypore and Cossimbazar. Of the country wound silk, Rungpore and Bauleah skeins were the most esteemed.³

Let us now discuss the various processes involved in the manufacture of raw silk. One of the many processes involved is the cultivation of the mulberry plant whose leaves provide the vital food for the silkworm. The mode of cultivation is more or less the same in all the areas. From a report by Mr. Hyde, one of the Company's Commercial Residents in Rajshahi, we can get a fairly good idea of this.⁴ "The mulberry cultivation is accomplished mostly from cuttings of five or six inches in length; which in the course of five or six months after planting become sufficiently rooted in the ground to admit of the leaves being used. The cuttings are not 3 or 4 together, with six inches space between each cluster, and in rows, leaving sufficient width between the rows to admit of the ground being turned up by the kodali (hoe or spade) and the small plough used in Bengal. The fields are never irrigated, but if the weather be favourable with a reasonable supply of rain, five or six crops of leaves may be obtained every year, but never fewer than four, unless there should be an unusual drought. If the mulberry plants be originally

3. Milburn, op.cit., Vol.II, pp.242-3.

4. W.W.Hunter, A Statistical Account of Bengal, Vol.VIII, pp.83-84.

planted in good land, well tended and well weeded, they will last ten or fifteen years. In that case it is necessary to supply fresh earth annually by way of manure, after the first two or three years. The time, however, during which one set of cuttings will continue to produce a nutritious leaf depends much on the quality of the soil and the attention paid to render it fertile. Some fields will not last more than 4 or 5 years. The height to which mulberry grows, before it is cut, varies accordingly as the weather is favourable or otherwise. It may be roughly stated at from 2 to 4 feet. The plant, when required, is cut three or four inches from the ground, except in the rainy season, when the stumps are allowed to be eight or ten inches in length. After the plant has been used for the worm in July, it is allowed to grow to waste, in order that the rains of inundations may not destroy or injure it. The rains having subsided, the plant is again cut down, and the land ploughed and dressed as may be requisite for the ground bund (crop) of the year, called the November bund". One thing that should be noted here is that the mulberry plants are mainly of two types : the mulberry shrub and the mulberry tree. The nature of the plant varied from area to area. For example, in Bauleah, the large or annual worm preferred the leaf of the shrub, which is well matured, to that which is young and tender. It may be inferred that the annual

worm would thrive better upon the tree-leaf than upon the shrub-leaf'. The tree mulberry was mainly cultivated in Rangpur. The mulberry shrub, notwithstanding that it occasions more labour and expense, is more profitable than the tree, from its yielding 4 or 5 crops in the year'. From a piece of evidence from Murshidabad,⁵ it is seen that the demand for mulberry leaves constantly fluctuated according as the silk-worms are plentiful or otherwise. This fluctuating demand also affected the price of the mulberry leaves. Sometimes when worms were plentiful, the leaf was worth about Rs. 2/- per 50 kg. But if the worms failed, there was no demand for the mulberry leaves and they were used as fodder for cattle. In this case the price became so low that it was not enough for paying the rent of the land. However in favourable seasons, the gain to the mulberry grower was great.

Another process involved is the rearing of the worm and preparing the cocoons. Here, in each year there are 3 seasons, locally termed bunds, of hatching the eggs, spinning and gathering the cocoons. The November bund is from 1st October to the end of Feb.; March band from 1st March to 30th June; July (or barsat) band from 1st July to 30th September. The worms thrive best in the cold season

5. W.W.Hunter, A Statistical Account of Bengal, Vol.IX, p.148.

and the November bund silk is thus the best in quality and very valuable. The March bund is not so good and the rainy-season bund is the worst.⁶

A crucial stage in the rearing of worms is constructing the structures to house them. The best size of these houses is about 24 feet long, 15 feet broad and 9 feet high, including a raised floor of 3 feet; the walls to be of earth about a cubit thick, and a roof of thick compact thatch, the ridge being 14 1/2 feet from the ground, or 8 1/4 perpendicular feet higher than the upper part of the wall, with doorways to the southward (most preferable) or eastward, and 2 small windows at nearly the top of the walls on the same side. Such a house is capable of containing 200 Kahans or 256000 worms; i.e., 5 gharas or machans each having 16 dalas or shelves of 5 1/2 by 4 1/2 feet, with a raised rim of 2 or 3 inches well plastered with cow or buffalo dung; the last being the most esteemed by the manufacturers, as the odour is more congenial to the worms; in each of the shelves there is sufficient space for 2 1/2 Kahans, or 3200 worms. The gharas or machans are supported by 4 corner bamboos, which rest on small earthen saucers containing water, for the purpose of preventing the passage of ants and insects. To each house there are ten chandrakis, phings or spinning mats, of 3 1/3 by 4 feet,

6. *ibid*, p.149.

with a raised work of 3 inches. The remainder of the fittings are a close bamboo chick or screen for the door, and another for each window; a few large sized baskets for carrying leaves; a kinie for cutting the leaves during the early stages of the worm; 3 or 4 gunnies for pardahs and mats for spreading on the floor, with a small number of earthen pots or kuljis, for sundry purposes; the whole costing from 50 to 65 rupees (L 5 to L 6, 10s) per house, according to the locality and the facility of procuring labour and cheap material. To every twelve houses there is an extra building of thatch and mat, twenty feet long, twelve feet broad, and eight feet in height, with a mud floor, as a storeroom to put away any materials not in use, but more especially to afford protection to the chandrakis or spinning mats during the night at spinning time; the worm being inclined to relax its operations during darkness and the changed air of the night, to the consequent deterioration of the cocoons; while, by the influence of light and protection from night air the insect continues its labour unremittingly and produces a superior cocoon. The cost of this building may be from Rs. 4-8-0 to Rs. 6-8-0 (9s to 13 s) per rearing house.⁷

7. W.W.Hunter, A Statistical Account of Bengal, Vol.VIII, pp.84-85.

Next, we come to the actual rearing of the worm. The quality of the worms is very important here. The manufacturers travel even 60 to 80 miles from their houses to obtain worms of a good breed or from localities noted for early breeding. They are then taken by the purchasers to their houses and carefully kept; a few days after the moths come out they lay their eggs, which are hatched in about 10 or 12 days. The young worms require the greatest care and attention.⁸ They must be fed daily, with mulberry leaves. Of the mulberry, about 3/5ths is actual leaf and 2/5ths wood and waste. During the first stage or kalpa, the leaf must be very finely cut up; for the second, quartered; for the 3rd and 4th stages it is given whole on the stick as cut from the field. The supplies of food are given twice a day during the 1st and 2nd stages, and during the two last stages every 6 or 8 hours, or even after if the worms are observed to eat with avidity, which is generally the case for 2 or 3 days in each of the latter stages. The shelves required to be cleaned every morning, particularly in the last 2 stages, the worms being easily removed for their purpose after they have ascended on the fresh supplies of mulberry leaves.⁹ They also have to be defended from the

8. W.W.Hunter, A Statistical Account of Bengal, Vol.IX, p.149.

9. W.W.Hunter, op.cit., Vol.VIII, pp.85-86.

attacks of the ichneumonfly, which selects the finest worms in which to insert its eggs; and all dead worms must be immediately removed. Worms attacked by the ichneumonfly spin as usual, perhaps somewhat earlier, and the change to chrysalis is effected about the time that the fly's grub comes to life. It then feeds on the chrysalis and eventually eating its way through the cocoon, destroys its value¹⁰. From the time the worm leaves the eggs to its beginning to spin, a month or 6 weeks elapses, according to the season of the year, the longest period being in the cold season. About 3 or 4 days are occupied by them in spinning. As soon as the worms are ready to spin, they turn from a greenish cream to a mellow light orange colour, not unlike the pulp of a ripe papaya. The worms are then put in the chandrakis or spinning mats, and placed in the open air, facing the sun when not too powerful, or turned a little aside when the rays are strong, but under no shade; and all night under cover with a lamp burning till past midnight and again lit just before daybreak. The worms work with activity for 36 hours, and gradually relaxing continue their operations for 56 hours. About 4 or 5 days afterwards, the cocoons are ready for reeling. During the rains, or at the 2 last bunds or crops of the year, the cocoons are ready for reeling on the 3rd day, and as at this season they will not

10. W.W.Hunter, op.cit., Vol.IX, p.149.

keep sound for many days, should be run off as quickly as possible; while at other periods, killing the larva either by exposure to the sun, or by heating in an oven at a moderate temperature, preserves the perfection of the cocoons.¹¹

Next comes the stage of reeling. The chasas or (chassar) rearers of the silk-worm wind off the cocoons in earthen basins upon the common Bengal nattaahs, or reels made of bamboo, the thread so reeled being called patni. It is necessary to heat the water in which the cocoons are kept whilst being spun off, in order to dissolve the gluten that binds the fine fabric together. Under the old system, each pair of katanis or spinners had to be provided with a fire-place, to heat their basins of boiling water. It required about 100 maunds of wood, each maund containing 60 sers to work of one maund of silk. This quantity of wood used to cost Rs. 12/- but later on the price rose to almost double that sum. Consumption was so excessive that there was need for introducing a more economical process. So steam came to be introduced to heat the water, the spinning-room being filled with a furnace, boiler and steam main pipes. These latter pass alongside the rows of basins of water with which they are connected by smaller pipes furnished with stop-cocks. The rush of heated steam into the basin of

11. W.W.Hunter, op.cit., Vol.VIII, p.86.

water at once heats it to the required temperature. By its use, besides greater cleanliness in working off the silk from the absence of soot-flakes, ash-dust, etc., which were caused by the numerous fires of the old system, there is also a great saving in consumption of fuel. However, not at all the filatures adopted the steam-method of heating, first of all, because of the expense in altering the old filatures and secondly, due to manufacturers' resistance to innovation.¹² The katanis or winders are helped by the pakdars. The pakdars supply or feed the thread with fibres from the cocoons, as one after another is expended and thrown aside. The dexterity they acquire in handling the cocoons and keeping up the supply is astonishing. The pakadars in most places are young boys or girls, who get promoted to spinners after a few years. However, the exception is Rajshahi district where women and girls are not employed in this work.¹³ Fine and coarse threads are wound in the same skein indiscriminately, and parts of the husk are frequently introduced to increase the weight; hence it is necessary to have the patni rewound. This is first done on bobbins, in order to preserve the different degrees of fineness. The silk is then wound from these bobbins upon a large reel, to separate and distinguish the colours of each

12. W.W. Hunter, op.cit., Vol.IX, p.150.

13. *ibid.*

assortment, and is taken off, as soon as dry, to be twisted into skeins. The reeling machines used in the large European filatures are of the best description possible, and the greatest pains are taken to secure a firm, well-crossed thread.

(ii) Silk-Weaving

This includes both the weaving of silk-goods as well as mixed silk and cotton cloth. The goods thus manufactured were varied in nature. In Murshidabad (Cossimbazar), Koras, Saris, bandannas, etc., were prepared by weavers, of various colours and patterns. The chief colours were white, green, scarlet and yellow. Silk pieces of almost any coloured pattern could be had to order if a pattern was given to guide the workmen. Handkerchiefs were also made, plain or stamped, of various colours, the stamp used being a coarse wooden one.¹⁴ The chief weaving villages in the district were Basua, Bishnupur, and Margram in the Rampurhat subdivision, and Mirzapur in the Jangipur subdivision.¹⁵ Maldah had its speciality. Here the fabrics were of different varieties both in terms of colour and pattern, some being made of silk alone, and others of silk and cotton

14. *ibid.*, p.151.

15. *ibid.*

mixed. The principal sorts were called by the following characteristic names :

- (1) Mazchhar, or riplets of the river;
- (2) Bulbulchasm, or nightingales' eyes;
- (3) Kalintarakshi, or pigeons' eyes;
- (4) Chand tara, or moon and stars.

These patterns differed somewhat from those known as peacock's neck and sunshade, made in Murshidabad, but the process of manufacture was the same. The thread was dyed before being woven, and different coloured threads were crossed in the loom, such as green on a red ground, or red on a blue ground. Silk weaving was carried on in Rajshahi, Bogra, Rangpur, Midnapur and Hugli districts.¹⁶ One important point that has to be noted here is the weaving of coarse silk cloth practised in many regions of Bengal. In Rangpur, the Muslim peasantry manufactured for their own use coarse silk cloth (endi), woven from the cocoon of a worm which fed on the leaves of the castor oil plant. This shrub was to be seen around nearly every cultivator's house, providing the inmates with oil for their lamps as well as supplying food for the worms.¹⁷ Coarse silk cloth was also

16. W.W. Hunter, op.cit.,
Vol.VIII, pp.85, 270-271;
Vol.VII, p.304;
Vol.III, pp.149, 372.

17. W.W.Hunter, op.cit., Vol.VII, p.304.

woven in Bogra and Rajshahi districts providing durable and cheap cloth for the poorer classes. In Bhagalpur district a special woven article was tasar silk cloth which was used locally as well as exported.¹⁸ This was also woven in Midnapur, Hugli and some other districts.

Now let us turn to the processes involved in weaving.¹⁹ The manufacture of cloth made from silk alone and of silk mixed with cotton is conducted in precisely the same way. The thread is always dyed before being woven, and the process of dyeing is performed by the weavers themselves or the female members of their families. The silk is first bleached, which is done by steeping it in boiling water with soap, and drying it in the sun. In this operation one quarter of the weight of the silk is lost. The dyes used are very numerous, and include the following. Turmeric, which gives a bright but perishable yellow; the wood of the jack tree (*Artocarpus integrifolia*), which also gives a good yellow, less bright but more permanent; safflower (*carthamus tinctorius*) gives two beautiful colours, known as gulabi and kusum, both a kind of rose-red; manjit (*Rubia munjista*) gives a fixed red colour, and when applied after jackwood produces a

18. W.W.Hunter, op.cit, Vol.XIV, pp.180-182.

19. Dr. Buchanan Hamilton's account quoted in Hunter, op.cit., Vol.VII, pp.97-99.

golden colour called sonala, resembling that of new copper; a preparation called maski, of which iron is the chief ingredient, combined with wheat flour, molasses and butter, yields a variety of colours, all more or less dark, as the name implies. There are 3 shades of colour called uda', which is dark red, like Russain leather. The first is produced by haritaki (Terminalia Chebula), the second by chamallati(a species of Caesalpinia) and the third by alum; but for the satisfactory production of all three, the silk must have been previously dyed with lac, and should be afterwards steeped in maski. A dye called labang, karnaphuli, or clove colour, is a fixed brown. It is produced by soaking the silk successively in alum, a decoction of jackwood, alum again, manjit, chamallati and finally maski. Panduki, a well-fixed lilac, from a combination of the various simple dyes already mentioned. These are the dyes for the silk thread. The cotton thread is always dyed one of the 3 following colours : - (1) Salu a well fixed light pomegranate colour; (2) Uda, a dark red of various shades, developed out of No.1; and (3) Kusum, a beautiful light red, but not well fixed. These cotton dyes are all formed out of a combination of those before described. The materials of these dyes are mostly grown in the immediate neighbourhood, and the weavers require no apparatus beyond a few earthen pots. For weaving they use

loom of extremely imperfect structure, and a few sticks for warping. The preliminary process of warping is performed by the women who take a spindle in each hand, and lay 2 thread of the length required round some sticks placed upright in the ground, repeating this by 2 thread at a time until the warp is completed. The cloth that is woven in Malda consists of a silk warp and cotton woof woven very thin, the warp being generally disposed in stripes of various colours, but the woof is all of the same dye. The fabric is of 2 sorts - the one called ilachi, in which both sides of the material are alike, as in taffeta; and the other called musri, in which one side differs from the other, as with satin. Of each sort there is an immense variety of patterns, which may be roughly ranged under the 2 following classes - (1) when one stripe is very narrow and the other very broad, the cloth is called golbadan; (2) when the spots and stripes are waved, the cloth is called katar. Katar cloth is slightly the more expensive of the two. These are the names primarily applicable to the mixed cloth, but they have been indiscriminately used to describe the cloth made entirely of silk.²⁰

We have earlier mentioned the manufacture of tasar silk cloth in the Bhagalpur region. The manufacturing

20. *ibid.*, p.98.

process of this is slightly different.²¹ The process of manufacture is very backward and the looms are quite crude, being little more than bamboo frames. The kind of cloth that are usually made are known as dariyas, in which the warp consists of 3 parts of cotton, and 2 parts of tasar of different colours. The woof is all cotton of one colour, so that the cloth is striped length-ways, being dyed entirely by the weavers in the thread. The pieces are from 20 to 22 cubits long, by 1 1/2 cubit broad. A man can weave 8 pieces monthly. Namunas are pieces from 20 to 22 cubits long and 1 3/4 cubit broad. The warp contains about 35 parts of cotton thread and 21 of tasar, disposed in stripes of a different pattern from those of the dariya'. The woof is all cotton. One loom can produce seven pieces a month. Charkhanas are about 18 cubits long, and 8/7ths of a cubit wide. Each loom weaves 6 pieces in the month. The warp requires 10 parts of cotton and 15 parts of tasar, the woof 10 parts of cotton and 18 parts of tasar, so that the pieces are checkered. Baftas are pieces of a uniform colour, dyed after being woven, and of the same size with the naminas. The whole warp is tasar and the woof is cotton. The foregoing kinds are mostly made for exportation. Kharsaris, which are produced chiefly for home use, are like dariyas, but of

21. W.W.Hunter, op.cit., Vol XIV, pp.180-1.

inferior size and firmness, and afford occupation to a larger number of weavers than any other kind. They are made up in pieces about 8 feet long and 3 feet wide, and are dyed by the weavers, who can make eight pieces a month. The pure tasar silk is called tul. Dhirpchaya is a bafta of a bright blue. Maurkanti is a white silk figured in blue. Lahan-gowal is a figured silk worn only by brahmins, kayasths and Rajputs. The koa or cocoons of tasar silk come from Malda, Mushidabad, Suri, Bankura and Santalia. Patwas, Momims, Tantis and Tatamas are the weaver castes mostly employed in this trade. The winding of the silk from the cocoons is effected by a very simple instrument called a tariya. Eight pounds weight of the cocoons are boiled with twice that amount of water, till all the water is evaporated. They are then left to cool, and next day are again boiled. The silk is then easily wound off, strands from 5 cocoons being used to form each thread. They are twisted with the left hand on the left thigh, and wound on the tariya.

With the weaving process is connected the process of dyeing²² of the cloth. The following are the chief materials used for preparing the dyes: the flowers of the Kusam or Safflower (*Carthamus tinctorius*); the flowers of the Singahar (*Nyctanthes arbor-tristis*), and of the tun

22. *ibid*, pp.182-3.

(*Cedrela toona*); the leaves of *Indigofera tinctoria* or indigo; tairi, the pods of *Caesalpinia sappan*; the wood of the same trees; kath (*catechu* or *terra Japonica*), obtained from *Acacia catechu*; the root of the haldi (*Curcuma Zerumbet*); the reeds of *Bixa orellana*; the fruit of the karanja or *Galedupa Indica*; the bark of the am or mango (*Mangifera Indica*); the flowers of the palas (*Butea frondosa*); the root of manjit or Indian madder (*Rubia munjista*) ; Singrif or vermilion ; Zanger or Verdigris; Sajimati, an impure carbonate of soda ; and Kassis, a white and powdery sulphate of iron.

The process of dyeing is as follows :

(1) Kakreja, a dark brown, inclining to purple is obtained by infusing 9 oz. of tairi in 10 lbs of water for 2 hours; the greater part of the water is drained off, and the cloth soaked in the remaining dye. Then, 1 1/4 oz. of kassis is dissolved in 10 lbs of water, and the cloth put into the mixture for a few minutes, after which it is dried in the sun. Other mordants may be used. Next, 1 1/4 oz of alum is dissolved in a little hot water, added to 10 lbs of cold water, and in this the cloth is thoroughly soaked. Then 5 1/2 oz. of rappan wood is boiled in 30 lbs of water for 6 hours, the decotion cooled and the cloth is steeped in it for half-an-hour ; 2 1/2 oz of lime is added to it and

stirred, quickly, and the cloth is put in again. Then, it is wrung and dried in the shade.

(2) Aga'ri, a brown without any tinge of purple, is produced from 19 oz of bruised tairi, infused in 10 lbs of water for about an hour and a half; in this the cloth is soaked, kassis being the mordant used. Then, infuse 7½ oz. of terra Japonica is infused in 10 lbs of cold water: a little water is added, and the infusion is stirred; the cloth is dipped into, wrung, and dried in the sun. (3) Uda', a bright purplish brown, is derived from a weaker solution of tairi than is necessary for the last mentioned colour, and is similarly fixed by kassis. Afterwards, the cloth is soaked in the solution of alum, such as is first used in obtaining kakreja; and then placed for half an hour in a decoction of 10 oz of sappan wood, boiled for 7 1/2 hours in 40 lbs of water, to which a little lime is added. (4) Baigani, a shade lighter than the above, and approaching to claret colour, is produced in the same manner as the last, except that the decoction of sappan is less strong, (5) Habasi, a blood red, is produced by much the same treatment as the above, but alum is freely used, and the sappan infusion is prepared in the same manner as in the case of Uda'. (6) Shotari, a light brownish drab colour, is obtained from 5 oz of terra Japonica infused for a whole day in 1 lb of water; in this, when diluted, the cloth is steeped. The mordant is usually

Kassis. (7) For tarangi, a bright gambage yellow, 5 oz of turmeric are infused in 10 lbs of cold water. The colour is fixed by alum mixed with 20 oz of sour curdled milk. (8) Asmani, is a light sky-blue, made from 1 1/4 oz of native indigo infused in abundant water (9) In preparing fakhta, a bluish ash colour, the cloth into is first put into an infusion of 20 oz of tairi in 10 lbs of water, and next into a solution of 2 1/2 oz of Kassis dissolved in a similar quantity of water. Then it is dried in the sun, and taking an infusion of 2 1/2 oz of powdered haldi root, the cloth is steeped in it. (10) In the case of Shishaha, a pale blue, somewhat resembling the colour of lead, the process is the same as in producing fakhta, except that the cloth after being taken from the infusion of kachur, is put into an infusion of 5 oz of native indigo in 10 lbs of water. It may be also made by omitting the kachur infusion.

Let us now touch briefly upon the production organization.²³ Raw silk by country wound method was produced by individual manufacturers dispersed across the countryside using mainly family labour. However there are cases when some labour was hired to supplement the family labour for production. The labour was hired for a fixed

23. W.W. Hunter, op.cit., Vols.I-XX.

term and was paid either on the basis of the period of work or of the amount of work. Sometimes the wages were paid in advance and the labourer had to pay back by his labour. Fresh advances were continually made so as to bind the labourer to production.

The individual manufacturer often owned the means of production. He either worked on his own capital and sold the silk in the market. Or he could take advances from the merchants and deliver them with the required goods after production. When they took the advances, they came under a certain degree of control by the merchants because they had to produce according to certain specifications and sell the goods at prices fixed from beforehand, sometimes the manufacturers carried on production by means of borrowed money. In these cases, the money-lender instead of advancing money, brought his own account the raw material required and gave it over to the manufacturer. He had a lien over the manufactured articles and frequently found a customer for them. As soon as the goods were sold, the manufacturer refunded the value of the raw material purchased for him by the money-lender, with interest, the rate varying from 25% to 36%.

The filature production system represented a new form of production organization. In this, the manufacturers were

assembled in one place in large filatures and had to work under strict supervision with a definite work schedule. There was also a separation between the manufacturer and the means of production in terms of ownership and use. One of the reasons for this was that filature production involved substantial fixed capital unlike the country method which required very low fixed capital investment. The large filatures were mostly owned by Europeans and some rich Indians. The smaller filatures were owned mostly by indigenous capital. Some manufacturers, of course, became prosperous enough to establish their own filatures and produced silk through hired labour. The owners of the filatures carried on production either with their own capital or through borrowed capital or advances. The labour was paid either according to the period of work or the amount of work. Sometimes, a part of the pay was paid as advance; and continual advances helped to bind the manufacturers to the particular person who paid the advances. The distinction between labour and capital was strongly marked in case of filature silk. Filature silk production also brought about a sharp division of labour. Processes like growing of mulberry leaves, rearing silkworms, reeling, weaving, etc., became separate professions which later on formed distinct sub-castes.

Weaving was mainly done by individual weavers working mostly through advances they received from merchants. This meant they had to produce according to certain specifications at predetermined prices and had to deliver the goods to the merchants. Some of them also carried on production on their own and sold their goods in the open market. In the last decades of the 18th century the English Company tried to establish a very formalised kind of production organisation in the weaving sector. A certain degree of control was sought to be exercised through a number of financial and legal measures. This was very similar to that in the case of weaving of cotton piece goods (which will be discussed later on) and does not need separate elaboration here.

I.2.ii. The cotton goods industry

The cotton textile manufacturers of Bengal during this period (1750-1800) can be divided into two categories²⁴ : (1) the various scarf or plaid-like articles such as turbans, loongees, dhotees, sarees, which left the loom ready for wear and (2) the piecegoods for the conversion of which into clothing, the scissors and needle were required. My main concern here is with the manufacture of the piece

24. Forbes Watson, The Textile Manufactures and Costumes of the People of India, London, 1866, p.11.

goods. The piece goods could be of a number of varieties, e.g., muslins, calicoes, canvas, coloured cotton goods, printed cotton goods, etc. Muslins²⁵ in turn, could be white, striped, chequered, figured, woven with coloured thread, printed and gold and silver printed. The most notable variety among the different muslins was that from Dacca which was famous for its fineness.

Let us now move on to discuss the production process itself. The 1st step involved here is the cultivation of cotton. Two main varieties of cotton were used in most districts of Bengal.²⁶ The *gossypirium harbaceum* (Bengali, Kapas; Arabic, Katan) was commonly found in Bengal as a shrub. It was grown for commercial use in Dinajpur, Bogra, Rajshahi, Rangpur, Malda, Pabna, Murshidabad, Nadia, Jessore, Burdwan, Birbhum, Midnapur, Dhaka, Tripurah, Mymensingh, Rangamati and Radhanagar. The *gossypirium arborium* (narma) variety which grew more sparsely in Bengal, was generally imported from the Deccan.

Cotton never became a plantation crop in Bengal. Instead it remained a seasonal crop under peasant farming. In the lowlands, 2 crops were grown every year, the spring

25. *ibid.*, p.75.

26. J.B. Medlicott, *Cotton Handbook for Bengal*, Calcutta, 1862, pp.75-102.

crop being the better of the two. Cotton, especially the coarser variety, was generally grown by the peasant on the land around his house, but large-scale cultivation was also practised. The cotton trade was, however, a specialised function and was carried on by itinerant traders. The increased demand for cotton to meet the manufacturers' requirements led to the development of a complicated system of commerce. Monetization had encouraged the growth of a market. There was little uniformity in the system of procurement. As long as cotton was used for domestic purposes and was available at local hats, the producers could buy their raw material directly from the cultivators or even use home-grown cotton. Thus there was little need for an interdependent market network. With the increase in manufactures, local supplies became inadequate.²⁷ Since production now depended on the availability of cotton from outside the weavers' own market region, intermediaries were required to arrange the movement of cotton. These complex arrangements even for moving raw material from one region to another within Bengal could only be organised by systematic market transactions undertaken by merchants, dalals or paikars. The elaborate market network evolved for the purchase and sale of cotton not only increased the weavers'

27. Hameeda Hossain, *The Company Weavers of Bengal*, p.26

dependence on supplies which were subject to external commercial pressures, but it increased the prices due to the marketing services offered.²⁸ The quality and quantity of cotton consumed in each district, the uses to which it was put and the prices obtaining in each area varied considerably. Such variations had implications for the cost of production. As demand increased, there developed a tendency to use a mixture of yarns, some from imported cotton. This led to a change in the quality of certain assortments and the introduction of new assortments dependent upon supplies from diverse sources. The cost of cotton was also determined by its purchase of Kapas (cotton with seeds) or ruyi (cotton after removal of seeds). But to calculate its real cost, the cost of cleaning plus the loss due to reduction in bulk would have to be included. Depending upon the variety of cotton, the yield of ruyi varied from one half to a sixth of the total weight of kapas.²⁹

In spite of an elaborate market system, Bengal's need for raw cotton remained unsatisfied. From 1750 onwards, the reports of factory servants from the interior noted the upward trend in prices of raw cotton. The weavers, in

28. *ibid*, pp.27-28.

29. Cotton Cultivation in India : East India (Cotton), p.63.

consequence, were forced to raise their prices, or failing that, to reduce the quality of their manufacturers. A number of factors contributed to the inadequacy of cotton supplied in Bengal. To provide adequate quantities of cotton to feed the cloth industry in Bengal, the company recommended distribution of seeds to increase output. But their reports suggest that they ascribed the shortage to the method of cultivation and the cultivator's unwillingness to improve his output, and made no positive efforts to increase cultivation of cotton in the 18th century.³⁰ One can only say here that the inadequate supply of raw cotton became a major factor in the shortfall in production.

The next cycle in the process of production culminated with the spinning of yarn :

Spinning³¹ : The first step involved here was the cleaning of the cotton which was usually done by women. Fragments of the leaves, stalks, and capsules of the plant were carefully pulled out with the fingers and the wool adhering to the reels was then carded with the jaw-bone of the boolee fish (*silusis boalis*), the teeth of which being small, recurved, and closely set, act as a fine comb in removing the loose

30. Hameeda Hossain, op.cit., p.36.

31. James Taylor, A Descriptive and Historical Account of the Cotton Manufacturers of Dacca, quoted in Forbes Watson, op.cit., p.64.

and coarser fibres of the cotton, and all extraneous matter, such as minute particles of earth and vegetable matter from it. The next step was the separation of the fibres from the seeds. This was done by placing a small quantity of the combed cotton upon a smooth flat board, made of the wood of the chalta tree (*Dillenia speciosa*) and then rolling an iron pin backwards and forwards upon it with the hands, in such a manner as to separate the fibres without crushing the seeds. The cotton was then teared with small handbow, formed of a piece of bamboo with 2 elastic slips of the same material inserted into it, and strung with a cord made of catgut, muga silk, or of plantain or rotten fibres, twisted together. The bamboo slips were moveable within the centre piece, and in proportion to the extent they were drawn out, or pushed back, the tension of the cord increased or diminished. The cotton having been reduced by the operation of bowing to a state of light, downy fleece, was then spread out and lapped round a thick wooden roller, and, on the removal of the latter instrument, it was pressed between 2 flat boards. It was next rolled round a piece of lacquered reed of the size of a quill; and lastly, was enveloped in the smooth and soft skin of the cuchia fish, which served as a cover to preserve it from dust and from being soiled, while it was held in the hand, during the process of spinning.

The spinning apparatus, which was usually contained in a small flat work-basket, comprised the cylindrical roll of cotton (puni), a delicate iron spindle (in some eastern districts of Bengal and in Assam, the spindle was frequently made of a slender piece of bamboo instead of iron), a piece of shell embedded in clay, and a little hollow stone containing chalk powder, to which the spinner occasionally applied her fingers. The spindle (tukua) was not much thicker than a stout needle. It was from 10 to 14 inches in length; and attached to it, near its lower point, is a small ball of unbaked clay to give it sufficient weight in turning. The spinner held it in an inclined position, with its points resting in the hollow of the piece of shell, and turned it between the thumb and the forefinger of one hand, while she, at the same time, drew out the single filaments from the roll of cotton held in the other hand, and twisted them into yarn upon the spindle. When a certain quantity of the yarn had been spun and collected on this instrument it was wound from it upon a reed. Dryness of the air prevented the filaments of cotton from being sufficiently attenuated or elongated, and was, therefore, unfavourable to the spinning of fine yarn. A certain degree of moisture, combined with a temperature of about 82 degrees, was the condition of the atmosphere best suited to the carrying on of this operation. The Dacca spinner generally worked from

soon after early dawn to 9 or 10 o' clock, and from 3 to 4 in the afternoon till half an hour before sunset. The finest yarn was spun early in the morning before the rising sun dissipated the dew on the grass; or, when this was wanting and the air was unusually dry, it was often made over a shallow vessel of water, the evaporation from which imparted the necessary degree of moisture to the filaments of cotton and enabled the spinner to form them into thread.

Let us now turn to the measurement side of the process. The weavers commonly judged the fineness of yarn by sight alone. They had no rule or standard for the length of the reels on instrument by which they could form an estimate of any given weight of thread. The quality of the yarn was ascertaining by weighing the skeins and then measuring them on sticks placed on the ground. Yarn was measured by the hath (cubit), the length of which is stated by the Commercial Resident as $19 \frac{3}{4}$ inches; and it was weighed by the ruttee, which is equal to about 2 grains troy. The standard quality of the yarn was used in the manufacture of the muslins sent to the court of Delhi measured 150 haths in length to one ruttee in weight; but the variety commonly used varied from 140 to 160 haths in length to the above weight - the yarn of 140 haths being employed for the warp and that of 160 for the weft of these fabrics. The finest yarn used in the Dacca looms, in the year 1800, did not

exceed 140 cubits in length to one ruttee in weight. Some, however, are mentioned as having been spun at Sonargong at this time, of the quality of 175 cubits to one ruttee. The tendency of the fibres to expand from moisture was the criterion by which the quality of cloth was judged. The cotton which swelled the least on bleaching was considered the best.

Regarding the productivity one can point out that if a spinner devoted the whole morning to the spindle, then she could make about a half-sicca or tola weight (90 grains troy) of fine thread in a month. This can be taken as the maximum quantity. The average quantity produced at that time by each of the persons employed in the business was around 45 grains weight. The price of the finest yarn used in the Dacca looms was Rs. 8 (16 s) per tola weight (180 grains). This was at the rate of about L 31.2 per pound (7000 grains).

Weaving : Next we come to the weaving process which can be subdivided into a number of stages :

(i) Winding and preparing the yarn³² :

The yarn when delivered to the weaver was wound on small pieces of reel or made up in the form of small skeins. The

32. *ibid*, p.67.

1st thing that was done was to dip it in this state in water. It was then reeled. A piece of stick was passed through the hollow reed and fixed in the cleft end of a piece of bamboo. The weaver, holding the latter between his toes, drew off the yarn from the reel, which revolved upon the stick through it, and wound it upon the reel, which he held in the other hand and whirled round in a small cup of smooth coconut shell. When the yarn got in the form of a skein, it was put upon a small wheel made of fine splints of bamboo and thread. This was mounted on the end of a stick upon which it was made to revolve, and as the yarn was thus drawn off, it was wound upon the reel.

The yarn was divided into 2 portions viz, a sufficient quantity of the finest of it for the woof (burna) and the rest for the warp (tana). The warp thread was dipped for 3 days in water which was changed twice daily. On the 4th day, it was, after being raised, put upon a small wheel, made of splits of reed and thread, and was then reeled - the stick upon which the wheel was mounted being held between the toes, and the reel turned. Skeins of a convenient size having been wound off, were steeped in water and were tightly twisted between 2 sticks; they were then left upon the sticks and exposed to the sun to dry. They were next untwisted and put into water mixed with fine charcoal powder, lampblack or soot scraped from the surface of a

cooking vessel. They were kept in this mixture for 2 days, then rinsed in clear water, wrung out, and hung upon pieces of stick placed in the shade to dry. Each skein having reeled, was dipped in water for one night, and on the next day opened up and spread over a flat board, upon which it was smoothed with the hand and rubbed over with a paste made of koie (paddy or rice, from which the husk had been removed by heated sand) and a small quantity of fine lime mixed with water.

The skeins after being sized were wound upon large reels and exposed to the sun - the turns of the thread being widely spread over the surface of the reels in order that they might dry quickly. All the thread was again reeled and sorted preparatory to warping. It was generally divided into 3 shades of quality - viz., the finest for the right-hand side, the next finest for the left-hand side and the coarsest for the centre of the warp. Such was the mode of preparing the yarn for the woof was continued daily until the cloth was finished.

(ii) Warping³³ : The operation was usually performed in a field or any open spot. For this purpose, 4 short bamboo posts were fixed in the ground at measured distances and

33. *ibid*, p.68.

several pairs of rods placed between them, the whole forming 2 parallel rows of rods about 4 feet apart. The weaver holding a small wheel of warp-yarn in each hand, passed the latter over one of the posts and then walked along the rows, laying down 2 threads and crossing them until he arrived at the post at the opposite extremity. He retraced his steps from this point and thus continued to traverse backwards and forwards as many times as there were threads of the warp to be laid down. The small wheels on which the warp yarn was wound were made of fine splits of bamboo and thread and were each attached at a right angle to a short handle at the end of which there was a coarse glass ring through which the yarn ran. Two pairs of hand-wheels, one with single and another with twisted yarn, were used alternately for the warps of striped and chequered muslins.

(ii) Applying the reed to the warp³⁴ : The reed was made of fine splits of bamboo firmly between the ribs of split cane. The finest reed used in the Dacca looms contained only 2800 dents in a space of 40 inches in length. In order to supply it to the warp, the latter was folded up in the form of a roll or bundle, and suspended from the roof of the weaver's hut, with one end of it unfolded, spread out, and hanging down to within one foot or two from the ground. The reed

34. *ibid*, p.69.

was then fastened with slight cords to the bundle and leese rods and hung in front of the unfolded position of the warp. Two workmen sat there, one on each side of the warp. Having cut with a knife a portion of its end loops, the man in front passed an iron wire through the 1st division of the reed to the other workman; and the end of the two outermost threads being twisted upon it by him, it was drawn back, and the thread thus brought through. In this manner the wire was introduced through all the divisions of the reed in succession, and 2 threads were drawn through each of them at a time. The ends of the threads were gathered in bunches of five or six, and knotted; and through the loops formed by these knots a small bamboo rod was passed.

(iv) Applying the warp to the end roll of the loom³⁵ : The warp was folded upon the reed in the form of a bundle, and was held by a workman. The end of it was then unfolded and a thin slip of bamboo having been passed through it, it was recieved into a longitudinal groove in the end-roll (yarn-beam) and fastened to it with pieces of string. The end roll rested in 2 loops of cord attached to 2 posts, and was turned round with a winch. The warp threads were next arranged. The outermost ones were brought to a distance commensurate with the intended breadth of the cloth and a

35. *ibid*, pp.70-71.

portion of the warp being unfolded and put upon the stretch by the person who held the bundle, 2 workmen proceeded to arrange the threads in the middle. They used a small piece of cane, softened and beaten out at one end into the forms of brush, in order to separate the threads from each other, and then gently tapped them with an elastic cane, held in the form of a bow, bring them into a state of parallelism. The portion of the warp which was thus arranged being carefully wound upon the end roll, another portion was then unrolled and similarly prepared.

(v) Preparing the heedles³⁶ : In order to prepare the heedles, a portion of the warp behind the reed was unfolded and stretched out horizontally in the same manner as it was in the loom. A broad piece of bamboo was then placed edgewise behind the threads of the wrap, in order that the weaver might have had sufficient room to form the loop of the heedles. The reddish coloured twine of which the thread are made was unwound from a wheel fixed to a post near the weaver, and being passed between the separated threads of the warp to the opposite side, it was fastened to a cane to which was attached an oval piece of wood about 8 inches in length; the weaver then dipped 2 fingers between the outermost thread of the warp and the one next to it and

36. *ibid*, p.71.

brought up a fold or loop of the coloured string which passed upon the inside of the oval piece of wood and was crossed round the cane above. The same process was repeated between every 2 threads of the warp - the cane and oval piece of wood being gradually moved across the warp as the work proceeded. As 2 sets of loops were made on each side of the warp, 2 workmen were generally employed at the same time in forming them. When the loops of one side were furnished, the warp was removed from the posts, reversed and stretched out as before and then those of the other side were made. By this process the loops of the one side were interlinked with those of the other - the threads of the warp inclosed within them being thereby so placed as either to rise or fall, according as the force applied by the toe of the weaver acted upon the upper or lower loops of the heddles. The canes on which the loops were crossed were fastened by strings to 4 small bamboo rods - the 2 upper ones being attached, when placed in the loom, to the slings of the heddles and the 2 lower ones to the weights of the treadles.

(vi) The loom and operation of weaving³⁷ : The Indian loom was horizontal and was most often erected under a roof either that of the weaver's house or the cover of a shed

37. *ibid*, p.72.

built for that purpose. Its lateral standards were 4 bamboo posts firmly fixed in the ground. They were connected above by side-pieces which supported the transverse rods, to which the slings of the batten and the balances of the heddles were attached. The warp wound on the end-roll (or yarn beam), and having the reed and heddles attached to it, was brought to the loom and fixed to the breast roll (or cloth beam) by a small slip of bamboo, which was passed through the loops of the warp, and received into a longitudinal groove in the beam. Both the end and breast rolls rested either in scooped shoulder-posts, or in strong looped cords attached to the 4 lateral standards. They were turned round with a winch and prevented from moving in the opposite direction by a piece of stick, one end of which was inserted into a mortice in the end of the roll, and the other fixed in the ground. The lay or batten consisted of 2 broad flat pieces of wood, grooved on their inner edges for the reception of the reed, which was fixed in its place by iron or wooden pins passed through the ends of the lay. It was suspended from the traverse rod above by slings passing through several pieces of sawn shell. By altering the distance between these segments of shell, which was done by lengthening or shortening the intermediate slings, the range of motion of the lay was increased or diminished. The extent of this range of motion regulated, in a great measure,

the degree of force which was applied to the weft in weaving; and as it was necessary to adapt this to the particular texture of the fabric which was to be made, the proper adjustment of this part of the apparatus required considerable care, and was considered by the weavers as one of the nicest operations connected with the loom. The balances of the heddles, having the slings of the latter attached to their extremities, were equally poised and suspended from the transverse rod above. The treadles were made of pieces of bamboo were contained in a pit dug in the ground, of almost 3 feet in length, by 2 in breadth and 1 1/2 in depth. The shuttle was made of the light wood of the betel nut tree and had spear-shaped iron points. It was from 10 to 14 inches in length and 3/4 of an inch in breadth and weighed about 2 ounces. It had a long open space in its centre, in which was longitudinally placed a moveable iron wire, upon which the reed of the weft revolved - the thread passing, as it was thrown off from the latter, through an eye in the side of the shuttle. The temple, or instrument for keeping the cloth on the stretch during the process of weaving, was formed of 2 rods connected together with the cord, and armed at their outer ends with 2 brass hooks or pins, which were inserted into the edges of the cloth on its under surface.

The apparatus of the loom being all adjusted, the weaver proceeded to work. He sat upon a board or mat placed close to the edge of the pit, and depressing one of the treadles with the great toe of the left foot and thus forming the shed in the warp above, he passed the shuttle with a slight jerk from one hand to the other, and then struck home each shot of the weft with the lay. The stretch of the warp in the loom seldom exceeded one yard in length; and the depth of the sheet was generally about $\frac{7}{8}$ of an inch. To lessen friction on the threads of the warp during the process of weaving, the shuttle reed and lay were all oiled; and to prevent the dessication of the former in very dry hot weather, a brush made of a tuft of fibres of the nul plant and smeared with mustard oil, was occasionally drawn lightly along their extended surface. When a portion of the cloth, to the extent of 10 or 12 inches, was finished, it was, in order to preserve it from being injured by insects, sprinkled with lime-water and then rolled upon the cloth-beam and a portion of the warp unwound from the yarn beam at the opposite end of the loom. The condition of the atmosphere most favourable to the manufacture of fine muslins, was that of a temperature of about 82 degrees combined with moisture. It was the practice among weavers to work only in the morning and afternoon. The best season for weaving fine muslins was the time period from 13th of

May to the 14th of August. In very dry hot weather it was sometimes necessary to place water in shallow vessels as it was in the case of spinning.

Regarding the time required for the manufacture of a piece of muslin of the usual dimension (20 yds in length x 1 yd. in breadth), one may say that it depended on the quality of the fabric and the expertise of the weaver. As the Commercial Resident stated : 'The preparation of the tana or warp thread of full piece of plain or striped cloth in Dacca, employing 2 men took 10-30 days. The weaving of the same cloth employing 2 persons, if of the ordinary or middling plain assortments took 10-15 days, if of the fine - 20, the superfine - 30, the fine superfine -40-45, and if the cloth was of the fine superfine dooreas or charkana assortments - 60 days. At other stations, where the cloths of higher or less value were made, the time requisite for manufacturing them was proportionately increased or diminished. A half piece of mulmul khas or of Circar Ali of the finest kind, costing from Rs. 70 to 80, could not be manufactured in less than 5 or 6 months. A whole piece of Narainpur jahazy muslin, costing Rs. 2, could be made in 8 days.

(vii) Bleaching-Dressing-Packing³⁸ : Cloths were first

38. *ibid.*

dipped in large semi-circular earthen vessels (gumlas) and were then beaten, in their wet state upon a board, the surface of which was generally cut out into transverse parallel furrows. Fine muslins, however, were not subjected to this rough process, but were merely dipped in water. All sorts of cloths, of whatever texture they might be, were next immersed for some hours in an alkaline ley, composed of soap and sajee matee (impure carbonate of soda). They were then spread over the grass and occasionally sprinkled with water, and when half dried, were removed to the boiling house in order to be steamed. The boiler used for this purpose was an earthen vessel, having a very wide mouth and capable of containing about 8-10 gallons of water. It was placed over a small excavation in the ground and built up with clay, so as to form a broad flat surface around its neck, having at one point a slanting opening or passage leading to the excavation below. A hollow bamboo or reed, fitted with a cup or funnel made of coconut shell, served as a tube through which the water was poured into the vessel. The cloths were twisted into the form of loose bundles and placed upon the broad day platform, on a level with the neck of the boiler. They were arranged in circular layers, one above the other, around the bamboo tube, which was kept in an upright position by means of the transverse supporters projecting from it, the whole forming a conical pile that

rose to a height of 5 or 6 feet above the boiler. The fire was kindled in the excavation below, and as the ebullition of the water started, the steam rose through the wide mouth of the vessel and diffused itself through the mass of cloths above, swelling the alkali still adhering to them to penetrate more completely into their fibres and seize on the colouring matter of the cotton. The operation of steaming was done in the evening and continued all night till the following morning. The cloths were then removed from the boiler, dipped in alkaline ley and spread over the grass and again steamed at night. These alternate processes of bucking and crofting were repeated for 10 or 12 days until the cloths were perfectly bleached. After the last steaming, they were dipped in clear filtered water, acidulated with lime juice in the proportion generally of one large lime to each piece of cloth. Mixed fabrics of cotton and muga silk were steeped in water mixed with lime juice and coarse sugar, where the latter article was said to have the effect of brightening the natural colour of the silk. The best season for bleaching was from July to November. Fine thin fabrics exposed to a strong sun at this season of the year could be dried in $\frac{3}{4}$ th of an hour; cloths of a medium texture in a hour and a half ; and stout fabrics, in 3 hours. The cost of bleaching depended upon the number of times the cloths were steamed. Including the

expense of dressing them, it varied from Rs. 30 to 1.60 per 100 pieces.

The cloths having bleached were dressed by workmen, who practised the several arts included under that head as distinct trades. Nurdeeahs arranged the threads of cloths that happened to be displaced during bleaching. The cloth wound upon a roller (nurd) was placed between 2 posts on the bleaching ground and was unrolled and carefully examined. The damaged portion of it was then stretched out and being made wet with water, an instrument like a comb, formed of the spines of the Nagphunee plant was drawn lightly along the surface of the displaced threads in order to bring them into their proper places. Another group was known as Rafugars who repaired cloths that were damaged during bleaching. They joined broken threads, removed knots from threads, etc. Dagh-dhobees were washermen who removed spots and stains from the muslins. They used the juice of the amroola plant for this purpose. Muslins were also beaten with smooth chank shells and the cloths of a stout texture were beaten with a mallet, upon a block of tamerind wood, rice-water being sprinkled over them during this operation. This work was done by the koondegurs. Istrewallahs were those who ironed the cloths.

The cloths thus produced were finally folded by the

Nurdeeahs and then piled up and formed into bales, which were compressed by workmen called Bustabunds. This was done by placing them between flat boards, tied together by strong ropes and tightly twisting the latter with pieces of stick.

Let us now discuss the production-organization in the cotton-textile industry. In the earlier system, the production was carried on by the small independent producer, generally a member of a guild, working with his own capital and employing mainly his own labour for customers dealing directly with him in his village.³⁹ However, the increasing demand brought about a change in the system whereby the independent producer gradually lost his freedom and found himself working for a superior called the 'Mahajan'. The Mahajan was the wholesale dealer in cloth who advanced money for the manufacture of cloth through the services of agents called paikars who travelled through the country to purchase yarn or to give out money to the spinners.⁴⁰ The Mahajan often combined money-lending with his cloth business. It was easy to exploit the labour of simple artisans whose poverty made them dependent on the Mahajan. Whether working for himself or the Mahajan, the weaver did business in the

39. James Taylor, op.cit., quoted in D.B.Mitra, The Cotton Weavers of Bengal, p.40.

40. Taylor, op.cit., p.81, quoted in Chicherov, Economic Development of India, p.138.

traditional way with the cooperation of his household and of one or two journeymen or apprentices. The wages paid to the journeyman varied according to his ability and the kind of work he was employed to perform.⁴¹

Another form of organization was the royal Karkhanas or the factories where a large number of excellent workers were brought together under one roof most often by big merchants. They were mostly situated in the largest centres of cotton-cloth production in Bengal, namely Dacca, Sonargaon, Junglebaree, Basetpore, etc. The cloth was called 'mulboos khas'; the buildings housing the workshops, 'mulboos khas kootee'. According to Taylor⁴², these workshops were superintended by an official, the darogah, who exercised uncontrolled authority over all persons employed in them. The artisans were registered and they were compelled to attend daily at the appointed hours. Inspectors carefully examined the thread that was brought to the looms and none was permitted to be used until it was compared with the standard musters and approved of. The incessant inspection of the darogahs and their people and their fear of incurring punishments for any deviation of the duty expected of them, must have effectually deterred the weavers, while manufacturing the cloths, from attempting any

41. Taylor, op.cit. p.78, quoted in D.B. Mitra, op.cit., p.40.

improper practices. Taylor emphasizes that the officials strove to achieve a high quality of the cloth produced in the mulboos khas kootee. Guards (peons) were placed over any weavers who showed unwillingness to work and corporal punishment was inflicted on them if they attempted to abscond. The daroghas also defrauded the weavers of a considerable portion of the wages allowed them by the government.

42. Taylor, *op.cit.*, pp.82-84, quoted in Chicherov, *op.cit.*, p.185.

CHAPTER II

THE MONETARY SYSTEM AND TRADE IN BENGAL (1750-1800)

The American economist, Walker¹, once said, 'money is what money does'. Interpretations of the meaning of money are varied and often contradict each other². But here we will try to put forward a unified definition of money. Anything which is widely accepted in exchange for goods, or in settling debts, not for itself but because it can be similarly passed on, has the character of money, since it serves the primary function of money, i.e., a means of payment. As a means of payment, money is an entity which is transferred when a payment is made; as such, it acts as a medium of exchange, a function essential to any economy other than the most primitive. A modern commentator has said that money also brought anonymity to exchange.³ The term, 'money' is also used in the sense of a unit of account. This denotes a system of abstract accounting units in which values are expressed or debts defined. Practically such a system is a necessary precondition of a price system since it reduces relative values to a manageable number of

1. F.A. Walker, Money (1878).

2. Joseph Schumpeter, A History of Economic Analysis (London, 1954). p.289.

3. A. Giddens, A Contemporary Critique of Historical Materialism. (London, 1981), p.116.

money prices. In monetised economies, the principal means of payment are debt instruments, namely the banknotes and bank deposits. Besides serving as exchange media, such means of payment are held as part of the holder's stock of assets, i.e., they act as 'stores of value'. It should also be noted that the component of a country's money stock that literally circulates from hand to hand, i.e., coins and banknotes is called currency⁴.

With this perspective in mind we now turn to analyse the monetary system of Bengal in the 2nd half of the 18th century. Before going into this analysis, we should take a brief look at the monetary history of Bengal upto the mid-18th century. During Mughal times, the rulers gave attention to only one circulating medium, i.e., silver. Gold coins were struck but they were left to seek their own value.⁵ In short, gold was treated as bullion and the stamped pieces called mohurs circulated at various prices according to the current price of the metal. The weight and fineness of the Delhi mohurs were uniform, being of the same weight and fineness as the silver rupee, but a Delhi mohur sometimes sold for twelve, sometimes for 13, 14 or 15 sicca

4. J. Schumpeter, op.cit, p.290.

5. Sir James Stuart's Principles of Money Applied to Bengal, p.25, 4to, 1972.

rupees.⁶ In the same way, copper coins when transferred in large quantities, were sold, that is to say, they did not pass at their full denominational value, but at a lower one and this value depended on the comparative demand for silver or copper coins.⁷

The silver currency thus, was the only circulating medium which the Mughals and the other indigenous governments steadily endeavoured to regulate but even in these efforts they were not totally successful. The system under the Mughals was that all rupees coined under the reigning king were considered as siccas and passed at their original value during his life. When a new king ascended the throne the rupees of the former reign became subject to a batta (discount) and were not received into the royal treasury. Sicca rupees were the only coins received in official payments. But there were mints at Dacca, Patna and Mushidabad. People could procure the new siccas by sending their bullion or old coin to the mint or even disposing of them to shroffs in exchange for new siccas at current batta. The batta was seldom more than what was sufficient to indemnify the shroff (money-changer) for

6. Ibid, p.26.

7. Ibid, p.26.

charges of the mint and to compensate him for his effort.⁸ The composition of the rupee did not vary. It contained 179.5511 grains troy of silver and the standard fineness was 98/100 silver.⁹ The older coins were subject to discounts of a varying standard. There were cases of clipping and other forms of debasement. Such worn coins were subject to a discount which varied according to the bullion content. The government assay-masters did their work with 'utmost accuracy, care and fairness'.¹⁰ It should be pointed out here that in Mughal times the debasement of coins or alteration in the composition of the coins did not reach such an extent so as to allow a good deal of profit to the shroffs. However, a change took place in the reign of Farrukhsiyar, by which a system of farming out the mints was adopted in northern India on an extensive scale by Ratan Chand, dewan of Farrukhsiyar.¹¹ This system introduced in some of the mint towns the custom of changing the value of the rupee every year. The farmers in many places made use of every expedient to draw the old coins into the mint in order to debase them. This provided an additional source of

8. Mint Committee Proceedings, 26th June, 1792.

9. Hunter, Annals of Rural Bengal, I, p.299.

10. Proceedings, Board of India - July, 1789. Letter of Collector of Dacca, 23rd June.

11. N.K. Sinha - Economic History of Bengal (Calcutta 1965), vol.I, p.129.

profit for the shroffs. In Bengal the sicca rupees were termed as sonauts when they were 3 years old and their denomination sank gradually in 3 years in the proportion of 116 to 111.¹² It should be noted here that a positive thing about the Nawabs of Bengal is that they did not intentionally debase the coin as was done elsewhere for temporary gain. However, this system of under valuation of all siccas of an earlier date and the fact that the revenues had to be paid in siccas only, provided a big scope of gain for the shroffs. The sicca and the sonaut rupees did not form the only circulating media in Bengal. Bengal's favourable balance of trade with other parts of India brought to her, from the mints in Arcot, Benaras, Bihar, Lucknow, Madras, Surat and other parts of India, rupees of different varieties many of them debased. The Arcot rupees were originally struck by the Nawab of Arcot, but the English, French and the Dutch also secured the privilege of coining in Madras, Pondicherry and Nagapatnam and consequently the English, French, and Dutch Arcots also poured into Bengal. A contemporary report thus states the situation : 'Cowries (shells), copper coins of every denomination, lumps of copper without any denomination whatever, pieces of iron beaten up with brass, 32 different kinds of rupees from the full sicca to be Vizieri, hardly

12. Verelst - View, p.93.

more than half its value,¹³ pagodas of different weights,¹⁴ dollars of different standards of purity¹⁵, gold mohurs worth from 25 to 32 shillings each,¹⁶ and a diversity of Asiatic and European coins circulated in Bengal. Mandeville, who was in Bengal in 1750, gives a list of coins he found in trading circles in Calcutta in 1750 - 'Sicca rupees, coined in Murshidabad, Surat rupees, Arcot rupees and Ely (Patna) rupees. All these rupees do (or ought to) weigh ten massa weight but then they differ in fineness or touch. The Bengal Sicca rupee is the best of all....., the Arcot rupee is commonly bad and light and the Ely rupee still worse'.¹⁷ One thing that is clear from all this is that the coins from the different places of India and elsewhere, different considerably in their silver content or their intrinsic values were circulating in Bengal. We can get an idea of the relative intrinsic values of the different coins circulating in Bengal from the table (2.1).

-
13. Calcutta Gazette, 1st November, 1792. The value of the Viziery rupee was 37 percent less than the siccas of Murshidabad, Patna, Dacca.
 14. Worth from 6 shillings and 8 pence to 8 shillings and 6 pence, according to the weight and the current rates of exchange as stated by W.W. Hunter - Annals of Rural of Bengal, I, p.294.
 15. Calcutta Gazette, 14th January, 1790.
 16. Sir James Sturart's Principles of Money applied to Bengal, p.26.
 17. Quoted in Robert, Stevens - The New and Complete Guide to East India Trade, p.96.

Table 2.1

A Table showing the intrinsic value of the different species of rupees current in Bengal, Bihar and Orissa, compared with Sicca rupees, from assays by the Calcutta Mint in October 1792.

S.No.	Species of Rupee	Intrinsic Value, Compared with the Sicca rupee		
		Rs.	A	P
(1)	(2)	(3)	(4)	(5)
1.	Siccas of Murshidabad, per sicca weight, 100	100	0	0
2.	Siccas of Patna..	100	0	0
3.	Siccas of Dacca...	100	0	0
4.	Pholy Sonats...	100	0	0
5.	Delhi Mahomet Shai..	99	8	0
6.	Money Surat, large...	99	8	0
7.	Benaras Sicca...	99	8	0
8.	Bissun Arcot...	97	14	6
9.	Sonats Sabic...	97	8	0
10.	Sonats Duckie...	97	8	0
11.	Forshee Arcots...	97	6	6
12.	French Arcots...	97	0	0
13.	Patanea Arcots...	96	9	6
14.	Aurangzebe Arcots...	96	9	6
15.	Gursaul...	96	9	6

continued....

Table 2.1 continued

(1)	(2)	(3)	(4)	(5)
16.	Madras Arcots, new...	96	4	9
17.	Masulipatnam Arcots...	96	0	0
18.	Shardar Arcots...	96	0	0
19.	Patna Sonatts, old...	96	0	0
20.	Benaras rupees, old...	95	14	6
21.	Madras Arcots, old...	95	14	6
22.	Farruckabad rupees...	95	12	9
23.	Jehanjee Arcots...	95	11	3
24.	Chunta Arcots...	95	11	3
25.	Calcutta Arcots...	95	6	6
26.	Moorshedabad Arcots...	95	6	6
27.	Old Arcots...	95	3	3
28.	Dutch Arcots...	95	0	0
29.	Surat Arcots...	94	0	0
30.	Benaras Frisolie...	92	6	6
31.	Viziery rupees	63	0	0
32.	Narrany half rupee...	63	0	0

Source: W.W. Hunter, The Annals of Rural Bengal,
p. 472.

This was a departure from the Mughal practice when inspite of there being so many provinces and so many mint towns, coins of one Subah were equally current in another.¹⁸ But now the thing was different. However it was not that the conins from the different places (having different intrinsic values) circulated always according to their relative intrinsic values. There were other factors, e.g. the trade pattern and spatial distribution of the production centres of different commodities which influenced the exchange rate between different coins. The question now is : how this was so? In some earlier chapters we have shown that different areas of Bengal specialised in the production of certain specific commodities and they carried on a brisk trade in these commodities with different regions of India as well as with foreign lands. In many cases these areas of Bengal had a favourable balance in this trade. Naturally this brought in a considerable amount of coins from the regions which traded with these areas of Bengal. Thus we see that a commodity 'x', produced in an area of Bengal, suppose 'A', was being exported to a region outside Bengal, take for example 'A'', and was being paid for in the currency 'a' which was the currency of the region 'A''. Due to this specialised nature of the production/trading pattern, the

18. Irfan Habib and Tapan Raychaudhuri (ed) - Cambridge Economic History of India, vol.I. Chapter on currency.

currency 'a' was established in the particular area of Bengal 'A' for trade in the commodity 'x'. So anybody willing to purchase the commodity 'x' from the area 'A' had to make the payment in currency 'a'. Similarly, we can argue for purchasing a commodity 'y' which was produced in another area of Bengal 'B', the payment had to be made in the currency 'b' which was the currency of the region 'B'' (outside Bengal) to which the commodity 'y' was predominantly exported. Even we get cases where the commodity 'x' produced in the 'B' region of Bengal, exported to the region outside Bengal 'B'' had to be purchased with currency 'b' since the predominant export of that commodity from the region 'B' was to the region 'B''. This system will be more clear if we turn to the actual evidence. In 1775, the Export Warehousekeeper of the English E.I. Company submitted a list of different species of rupees required at the several aurungs for the provision of the company's 'investment'. They are given in Table 2.2¹⁹

From the list of commodities which constituted the company's investments at these places and from other European sources, we can find out which of these places specialised in the manufacture of what commodities. Thus we

19. Board of Trade (Commercial) Proceedings, vol.3, 5th May to 11th June, 1775: Proceedings, 12th May, 1775.

Table 2,2

Patna	Sonaut
Cossimbazar	Sicca
Dacca	Arcot
Luckipore	Arcot
Chittagong	Arcot
Malda	Sonaut
Midnapore	Arcot or Sicca
Heerpay & Hurripaul	Sicca
Soonamooky	Sonaut
Santipore	Sicca
Gallagore	Sicca
Cuttorah	Sicca
Chandernagore	Sicca
Barnagore	Arcot
Calcutta	Arcot
Hurriaul	Arcot
Burron	Sicca
Rungpore	French Arcot

find that Dacca, Luckipore, Haripaul, Khirpai, Sonamooky, Santipore, Gollagore, Barnagore, Burron, Chandernagore dealt mainly in cotton goods; while Malda, Cassimbazar and Rangpur specialised in both silk and cotton piece goods; and Patna dealt in saltpetre and cotton goods. Chittagong and Calcutta acted as outlets for a wide variety of goods. From this list and the information given in Table 2.2, we can find out what sort of currency was required for buying which commodity at which place. Combining this information with the reports^{19A} sent in by the Collectors of the different districts we can get a more clear picture. Thus at Dacca and Luckipore for buying cotton goods it was necessary to have Arcot rupees. Naturally, the demand for Arcots in Dacca was high. This caused the batta for Arcots in Dacca to rise. Thus we find Arcots in Dacca came to pass at the same value as the siccas, although Arcots were worth 7% less than 7% less than siccas in terms of intrinsic value.^{19B} In Dinajpore district, grain, silk, cotton, etc., were purchased with sonats and French Arcots. However, revenue was paid in 4 different species. In Rajshahi district, the picture is more interesting. In Bhattoreeah pargana, grain was purchased in Sicca rupees and all other merchandise in

19A. Mint Committee Proceedings, 26th June, 1792, pp.389-514.

19B. Ibid, pp.93-103.

sonats. In Pookooreah and Patlada parganas, French Arcots were most current in trade. In Boosna pargana commercial transactions were all in Arcot rupees. In Rajshahi pargana, grain was purchased in siccas, all other merchandise in sonats. In the district of Nadia, however, all commercial transactions were carried on in Arcot rupees. Arcot coins were also received by the Zamindars from the talukdars and ryots.

From the sort of coins current in one place and the commodities produced there, we can also get an idea about the areas to which the goods produced in these areas were predominantly exported in the 18th century. However one should note that the information thus obtained is quite tentative and has to be verified from other sources. Thus, one can argue that a large amount of goods were exported from Dacca, Chittagong, Luckipore, Midnapore and Barnagore to the Coromandel coast and probably had a favourable trade balance with that area, since the main currency prevalent there was Arcot rupee. Rangpore probably exported a considerable amount of goods to the French settlements of the Coromandel coast since the French Arcot was current here for a considerably long time. It also appears that Patna, Cassimbazar, Malda, Haripaul, Sonamooky, Santipore, Gollagore, etc., did not have direct access to markets outside Bengal and their goods were sent first to some

centres like Calcutta and then exported from there. When we compare this data with the information we have got in the 1st chapter, we find a similarity between these two. So we can argue that this method of finding out the direction of exports of different commodities from different areas and some other information about trade from the monetary system is quite useful. However, one should recognize that this also has its limitations.

Another important point which should be mentioned here is that during this period in Bengal, no political authority could dominate the monetary system.

Coins minted in different areas and of different intrinsic values circulated in Bengal. The circulation was influenced predominantly by the trade pattern and the spatial distribution of production centres of the different commodities which were traded. Administrative measures by political authorities could not influence the monetary system by any significant degree during this period. The rates of exchange between the different coins were determined by their relative intrinsic values as well as by their relative demand which was mainly dependent on the overall trade pattern in Bengal.

This multiplicity of coins in Bengal, however, provided great opportunities for the moneylenders and moneychangers. One factor which helped to preserve the dominant position of the moneylenders and money-changers over the monetary system was the extensive internal and external trade and the consequent demand for various species of currency in different places. Another factor was the system of paying the land revenue in sicca rupees²⁰. In every pargana a particular species of rupees had become current in which the revenue was collected from the ryots. These species of rupees, being in constant demand for circulation in these districts, always sold there for more than their intrinsic values. This value was in fact attributed to them by the shroffs who through their agents - the inferior revenue officials being in league with them - bought up these rupees in different parts of the country and sent them to the districts where they were current. The ryot in order to pay his rent, went to the shroff with the rupees current in his pargana and exchanged them for sicca rupees, which then he could pay to the Zamindars or his agents. The rate of exchange was determined by the shroff. However, if the Zamindar received the rent in the currency prevalent in the pargana, he also had to exchange it for sicca rupees (a

20. Mint Committee Proceedings - 26th June, 1792, pp.93-103.

batta being charged by the shroff for this) in order to send the rent to the higher authorities. But the Zamindar managed to realise most of the batta that had to be paid by him from the ryots. So this system provided enormous profits to the shroffs.

The monetary history of Bengal would perhaps remain incomplete if we do not mention the rise and growth of the banking house of the Jagat Seths and the role it played in Bengal's monetary system. This banking house occupied a position of 'dignity superior to that of any Zamindar' and was connected with some of the most critical changes in Bengal. Manik Chand, a member of this house came and settled in Dacca in the 17th century. At that time Dacca was the seat of government in Bengal and was a place where every enterprising man would like to stay. When Murshid Kuli Khan transferred his capital to Murshidabad in 1704, Manik Chand, by this time a big banker, followed his patron and became the most influential personage at the new court.²¹ Manik Chand played an important part in all of Murshid Kuli's financial reforms. The establishment of the mint at Murshidabad, by which the city was conspicuously marked as the new capital of Bengal, was rendered easy by the

21. The House of Jagat Setwrh - Bengal Past & Present, 1921 and W.W. Hunter - A Statistical Account of Bengal, vol. IX, Murshidabad & Pabna, pp.252-265.

commands of specie possessed by the banker. This power of the banker also facilitated the fundamental change introduced by Murshid Kuli by which the Zamindars who were also the collectors of revenue, paid the land tax by monthly instalments at Murshidabad. These payments passed through the hands of Manik Chand and it was through him that the annual revenue of one crore and fifty lakhs of rupees (L. 1,500,000) was annually remitted to the Mughal emperor;²² whether in specie as stated by Stewart²³, or in drafts and order drawn by Manik Chand on the corresponding firm of his brother in Delhi. The private hoards of the Nawabs were also deposited with Manik Chand and on the death of the former, it is said that 5 crors of rupees remained yet unpaid. Given these circumstances it is easy to understand the great influence commanded by the banker over the Nawab's govt. In 1715 Manik Chand got the title of 'Seth' or banker from the emperor Farrukhsiyar through the efforts of Murshid Kuli Khan. Manik Chand had previously helped Murshid Kuli to purchase the continuance of his office of Nawab of Bengal after the death of Aurangzeb. Manik Chand was succeeded by his nephew Fathi Chand who rose to the position of the richest banker in India and the most influential man in

22. Ibid.

23. Stuart - History of Bengal, p.238.

matters of finance. In recognition of this, Emperor Muhammad Shah conferred on him the title of 'Jagat Seth' or the 'banker of the world'.²⁴ This was in 1724. The Nawab was also instructed to consult with Jagat Seth in all matters of state.²⁵ Fathi Chand died in 1744 and was succeeded in his title of Jagat Seth by his grandson Mehtab Rai who in turn was succeeded by Swarup Chand and Mahtab Rai. The affairs of the Seths were now at their highest tide of prosperity.²⁶ They are said to have possessed a capital of ten crores of rupees or 10 million sterling. Ghulam Husain, the author of the Sair-i-Mutakharim, and who was intimate with the Nawab, asserts that 'the Seths could meet at sight a draft from a krur of rupees (one million sterling)'. A local tradition estimates their wealth by saying that they could have, if they chose, blocked up with rupees the head of the river Bhagirathi at Suti. Among the modes by which they derived their income may be mentioned the receipt of the revenue of Bengal, and its transmission to Delhi, the exchange on depreciated currency, and transactions with European merchants. In those days there were not many treasuries scattered over the country. The Zamindars collected the revenue and remitted it to the viceregal treasury at Murshidabad. Every time, at the time

25. Ibid.

26. Ibid

of 'Punya' or annual settlement of the revenue (a custom introduced by Murshid Kuli) all the Zamindars assembled at the bank of the Seths, in order to settle their accounts, adjust the difference of batta' or discount and negotiate for a fresh supply of funds.²⁷ Moreover, Jagat Seth had the privilege of having his money stamped at the Murshidabad mint, on paying a (low) duty of 1/2 per cent²⁸. By this privilege and by his great wealth and influence in the country, he reaped the great benefit arising from the practice of batta. The Nawab also found it convenient to indulge him therein, in recompense for the loans and exactions to which he obliged him to submit.²⁹

TH-3498
Thus it was a situation where the bankers especially the principal banker of the country, Jagat Seth exercised a tremendous hold over the monetary system in Bengal. As is evident, the Nawabs were also not free from this hold. In fact, as W.W. Hunter³⁰ remarks, the principal bankers of India at that time commanded, through the influence of their extensive credit, the respect of sovereigns and the support of their principal ministers and generals. Their property,

27. Ibid.

28. Report by Batson in J.Long (ed.) - Selections from Unpublished Records.

29. Ibid.

30. W.W. Hunter, A Statistical Account of Bengal, vol.IX, pp.260-262.



though often immense, was seldom in a tangible form. Their great profits enabled them to bear moderate extractions, and the ruler who had recourse to violence towards these bankers was not likely to fail in his immediate objective of plunder but in the long run he was certain to destroy his resources and provoke rebellions often instigated by the bankers.

Let me now discuss the credit market in Bengal during this period. But, first, we have to understand what is meant by credit. Technically speaking, to give credit is to finance, directly or indirectly, the expenditures of others against future repayment. Such lending or 'financing' is direct when, say, a banking house extends an overdraft facility to a customer who then uses it. It is indirect when a trader or producer supplies goods on 'credit', i.e., for payment at a later date. So, to have a credit is to have a facility to acquire goods without immediate payment or to be able to draw on finance from a lending institution. In monetary economics 'credit' frequently connotes types of lending that are held to have monetary effects, either by causing increases in the money supply as when increased banking lending leads to increases in bank deposits, or by increasing money substitutes such as, on some views, trade credit.³¹ This connection between credit

31. R.L. Sayers, Modern Banking.

and money is more direct at the macroeconomic level when changes in money supply are analysed in terms of domestic credit expansion. During this period, the credit market in Bengal was highly organised, however, it was largely uncontrolled. One can find three levels of credit operations. At the top, there was the great banking house of the Jagat Seths who dominated the credit market and also the monetary system till the early 1770s. The Jagat Seths usually lent large sums of money to the Nawab, the Zamindars, and the European Companies and enjoyed a number of privileges in return apart from receiving a substantial interest.³² In the middle level, there were the rich shroffs and moneylenders. They were initially somewhat subdued due to the prominence of the Jagat Seths. However, after the Jagat Seths' decline in the early 1770s they rose to prominence. This group included the Katmas of Cassimbazar, the Seths of Calcutta and other prominent moneylenders and shroffs.³³ They were not involved in financing the need for funds of the state. They were primarily engaged in providing funds for internal and external commerce and also agriculture. Some big landowners and merchants were also

32. Mr. Batson's report in J. Long (ed.), Selections from Unpublished Records.

33. Sushil Chaudhuri, 'European Companies and pre-modern South Asian Commercial System' in 'The Calcutta Historical Journal', vol.IX, nos.1-2, July 1986 - June 1987, pp.135-142.

included in this group.³⁴ At the lowest level, there were the petty traders, shopkeepers and also some village moneylenders. They financed mostly local level transactions and the need for funds of the rural population both for agriculture and consumption.³⁵

The rate of interest and the amount of security were different for different categories of loans. These different categories of loan were also mostly used for different purposes by the debtors. The rate of interest, when the borrower pledged some article of personal use, was from 3 to 6 pie per rupee a month, equivalent to from 18 3/4% to 37 1/2% per annum, but in these loans it was held essential that the value of the article pawned should be double the amount advanced.³⁶ In large transactions, when the lender was secured by a lien on moveable property, the rate of interest varied from 12% to 24% per annum. In similar transactions, when a mortgage was given upon houses or lands, the rate of interest would not be more than 18% or

34. W.W. Hunter, A Statistical Account of Bengal, vol.VIII, pp.88-89.

35. W.W. Hunter, op. cit., vol.VIII, pp.88-89, 277-78; vol.VIII, pp.104-5, 308-10, 414-5.

36. W.W. Hunter, op. cit., vol.VIII, pp.88-89, 277-78; vol.VIII, pp.104-5, 308-10, 414-5; vol.V, pp.115-6, 217-8, 340-1, 461-2.

less than 12% per annum.³⁷ In case of petty advances to cultivators, whether the lender had only the personal security of the borrower, or took in addition a lien upon the crops, the rate of interest was about the same, i.e., from 6 pie to 1 anna' on the rupee per month, or from 37 1/2% to 75% per annum. Advances of this kind, however, were usually made only until the coming harvest; the advance was made in the shape of seed-grain, and the capital with the interest was also repaid in kind.³⁸ Apart from this, a fair return on capital expended in the purchase of a landed estate was reckoned to be at about 12%. An important point to be noted here is that the rate of interest in the Bengal economy during this period was greatly regulated not primarily by the quantity of money in the economy but by the demand and supply of funds. This demand and supply was, in turn, determined by the total income and expenditure in the economy, in short, the state of the economy at that period of time.³⁹ Apart from these, the nature of the venture for which the credit was taken, the risks involved therein and the securities that were offered also had some influence on the interest rate. Another point to be noted is that while a large portion of the surplus from

37. Ibid.

38. Ibid.

39. Ibid.

agriculture and trade was hoarded in the form of gold or other precious metals, and a portion was reinvested; a substantial portion came into usury.⁴⁰ Finally, if one looks at the credit operations going on in the Bengal economy during this period, it can hardly be concluded that the economy was stagnating or suffering from a decline. Rather, it was a dynamic economy with lot of vitality.

We now move on to discuss the nature of the impact of the English East India Company's trade and administrative authority on the monetary system in Bengal during this period. The East India Company, as we have pointed out earlier, started its trade operations in Bengal from the mid 17th century and in the 18th century it attained quite a large proportion. But the monetary system of Bengal presented a variety of problems for the company's trade. We have already seen that the house of Jagat Seths, the principal banker in the land as well as numerous other indigenous shroffs and moneylenders exercised a strong hold over Bengal's monetary and credit system. Parallel with this, the monetary system was marked by a multiplicity of coins in different stages of debasement which helped to maintain the hold of the indigenous shroffs and provided great profits for them. The monetary system of Bengal

40. Ibid.

affected the English Company in the following ways. As we have stated earlier, different species of rupees were current in different regions of Bengal for different commodities. So the company, in order to purchase these commodities had to send in the particular coin current for that commodity in that particular area. Often the company's different factories suffered from a lack of the appropriate species of rupees. There are numerous instances of these in the company's records. In the appropriate species of rupees were not sent to the particular place, those had to be changed to the appropriate ones had to be paid. From the information that can be obtained, it is seen that the rate of batta was also quite high.⁴¹ The rate of batta on a particular species of rupees varied according to the demand for it and there was also a difference between the rates on the same specie at different places.⁴² Moreover, the company often had to borrow money from the market. The company's main sources of credit were the Jagat Seths, the Katmas and some other big merchants. In the initial stage, the rate of interest was around 9%, per annum, later on, this rate went up to 12% per annum.⁴³ So the high rates of

41. Proceedings, 12 May, 23 May, 1775, Board of Trade (Commercial) Proceedings, vol.3.

42. Ibid.

43. Wilson, Early Annals of the English in Bengal, vol.II, Part.I, p.273.

interest and batta and the hold of the indigenous shroffs and moneylenders on the monetary system posed great problems for the company's trade. The multiplicity of coins and the given situation of the monetary system also affected the company's revenue interests after 1765.

In order to tackle these problems, the company needed to establish a degree of control over the monetary system in Bengal. Since the monetary system was well integrated with the land revenue system and the trade/production sectors, a complete domination of the monetary system required the establishment of hegemony in the other sectors. The grant of diwani in 1765 was one achievement for the company in this direction. But success regarding the trade/production sectors were yet to be achieved. So, the major step that the company took was to try to establish its own currency throughout Bengal mainly through administrative measures. Actually, efforts in this direction began a long time back. In 1713, the English were granted a hasb-ul-hukum or imperial rescript by Farrukhsiyar conferring upon them the use of the Mughal mints at Murshidabad. But Murshid Quli Khan was aware of the consequences of the grant of this privilege and chose to disobey the emperor's command^{43A}. It was only in 1756 that the servants of the English East India

43A. Ibid.

Company got the privilege of coining money for themselves by the 'Treaty and Agreement' with Siraj-ud-daula after the re-capture of Calcutta. The treaty stipulated that 'sicca could be coined at Aleenagar (Calcutta) in the same manner as at Murshidabad and that the money struck in Calcutta be of equal of weight and fineness with that of Murshidabad.⁴⁴ It was agreed that bullion imported by the company would be coined as siccas. In the treaty with Mir Jafar in 1763 (Article 9), it was held that Mir Jafar would cause the rupees coined in Calcutta to pass in every respect as equal to the siccas of Murshidabad without any deduction or batta and whoever would demand batta would be punished. However, the Calcutta Mint was not of much use, even after Plassey. This was because of the immense prestige of the house of the Jagat Seths managing the Nawab's currency and the control of that house and other Indian moneylenders and shroffs on the monetary system in Bengal. Thus the Calcutta coins remained depreciated in value even after the establishment of British ascendancy in Bengal.

What the company could not achieve (i.e. control over the Bengal monetary system) by economic means, it tried to do by administrative measures. This is reflected in the following provision of the company's treaty with Najm-ud-

44. Aitchinson, Treaties, vol.I, p.12.

daula in February 1765 : 'the annual loss on coinage by the fall of batta on the issuing of new siccas, is a very heavy grievance to the country and after mature consideration, I (Najm -ud-daula) will, in concert with the Governor and Council, do whatever may appear as the best method for remedying it'.⁴⁵

In the early stages, the company tried to introduce a standard of value called the current rupee, which was 10% less in value than a dusmassa rupee.⁴⁶ Apparently, the current rupee was introduced so that the value of the different species of money in a situation of fluctuating values could be ascertained relative to the current rupee. However, there is enough reason to argue that this was perhaps a bid by the company to introduce its own standard of value in the Bengal economy and make it acceptable. However, this was not at all successful. The concept of the current rupee did not extend beyond the town of Calcutta. In 1765, the company started its efforts which was nothing but trying to establish its own currency. In 1766, the company decided to call in the old currency and issue in its place a new coinage of fixed weight and purity and 'on this

45. Ibid, p.51.

46. James Stuart, op. cit., p.17.

important duty the first English governors of Bengal went heartily to work'.⁴⁷ But soon they discovered that the process was by no means easy or simple. Recoinage cost a heavy percentage and people would not bring their debased coins to the mint when they found that they got back barely 3/5ths of what they gave in. This resulted in the flow of the coins to places where the value was higher. Partly due to this and partly from the delay in re-issuing the rupees, the province of Bengal suffered from a drain of currency. Business was adversely affected as a result.

The merchants could not obtain enough circulating medium with which to purchase goods for their traffic, and no one would sell goods on credit, knowing well that, when the time of payment came, no coin would be forthcoming.⁴⁸ To meet this emergency, the council in Calcutta issued a gold currency which would pass not merely for its equivalent in silver at the market rates, but as a distinct medium of circulation, each piece having a fixed denomination of value.⁴⁹ The council, however, not having the requisite bullion to start with, tried to induce the people to bring their gold for coinage, by attaching an arbitrary value to the new gold mohurs. According to this, each piece of gold

47. W.W. Hunter, The Annals of Rural Bengal, p.301.

48. Ibid, p.302.

49. Ibid

mohur was to pass at a rate which exceeded by 17 1/2% its market value in silver. But this experiment also did not work out. The encouragement given to gold meant discouraging silver. The council, by fixing the value of the new coins at arbitrary rates, had rendered it 17 1/2% more profitable to make payments in gold, but it had only done so by rendering it 17 1/2% less profitable to pay in silver. The gains of the fortunate few who held gold had to be paid by the many who held silver. The latter refused to make payments in currency that has been the depreciated 17 1/2% and sent it elsewhere (mainly outside Bengal) either in exchange for gold or for purposes of trade.⁵⁰ Combined with this there was the outflow of specie by the East India company. The company carried a quarter of a million sterling per annum out of Bengal to China⁵¹; Madras constantly required specie from Bengal to purchase its investment; and Bombay, which did not pay the expense of government, had to be supplied from the same source⁵².

50. Ibid, p.303.

51. Sir James Stuart, op. cit., pp.26-32, 57, etc.

52. A hundred references to the Indian records & papers of the 18th century can be given. For example, letters from the President & Council of Bengal to the Court of Directors, dated 25 August, 1770, Paras 26 and 30; the 9th March, 1772, para 22; Hicky's Bengal Gazette, 29th April 1780, with innumerable notices in the Calcutta Gazette, 1784-1804, quoted in W.W. Hunter, Annals of Rural Bengal, p.303.

Another factor intensified this problem. Bengal had always received precious metal from outside because of its favourable trade with other regions. The East India Company also brought in large quantities of specie for buying its annual investment. But after 1765, this necessity was largely reduced. From now on, the revenues of Bengal supplied the means of providing the investment in Bengal, and so the annual influx of specie almost ceased, while the consumption of the precious metals went on as before.⁵³ In this context, this specie outflow had adverse effects on trade and production. The situation is reflected in a petition by the English inhabitants in 1769. It says⁵⁴ : At present the distress is so great that every merchant in Calcutta is in danger of becoming bankrupt or running a risk of ruin by attachments on his goods. There remained not sufficient currency for the occasions and intercourse of commerce. The fair and honest dealer is every day prosecuted to judgement in the court without remedy, from the impossibility of obtaining payment from his debtors'. The 'Humble Petitions of the Armenian Merchants settled in Calcutta' puts the case even more forcefully : 'The necessity of coin now felt in this capital, amongst the many

53. W.W. Hunter, *op. cit.*, p.304.

54. Petition of the Mayor Court of Calcutta to the Honourable Harry Verelst, dated, Town Hall, 14 March, 1769, signed 'John Holmes, Registrar'. Quoted from the 'Calcutta Review', XXXV, 29.

intolerable evils arising from it, affects every individual to that degree, that the best houses, with magazines full of goods, are distressed for daily provisions; and that not only a general bankruptcy is to be feared, but a real famine, in the midst of wealth and plenty'.⁵⁵

As the remedy to this problem, the English merchants proposed that all those who held silver and would not give it in exchange for the gold coins at rates fixed by law be prosecuted. However the Armenians took a deeper view of the problem. They perceived the existence of a real deficiency which legislation could not solve and recommended that the bullion in the country should be utilised by being coined. Silver was not to be had, but many people held gold; and they proposed a general coinage of the latter metal into pieces varying from eight shillings to L. 1, 12s sterling, not on the ground that such a currency would be in itself a convenient one, but because 'any coin whatever was better than no coin at all'.⁵⁶

Harry Verelst took the advice of the Armenians and ordered for a second gold coinage in 1769. Although Verelst avoided the mistake of fixing the legal denomination of the new coins so high above their market

55. The Armenian Petition of 1769, quoted from the 'Calcutta Review', XXXV, 28.

56. W.W. Hunter, Annals of Rural Bengal, p.308.

value as in 1766, he still overrated them by 5 1/4%.⁵⁷ The events of 1766, therefore repeated themselves, although in a mitigated manner. At first the people very gladly brought their bullion to undergo the profitable process of coinage. But after some time, they began to find out that, while the value of gold mohurs had been articially enhanced by 5 1/4%, the value of silver rupees had been depreciated to an equal degree. They therefore withdrew the last remnant of their silver from circulation and the supply of gold coins that issued from the mint proved wholly inadequate to take the place of the country's currency. The indigenous bankers, on the part, had learned wisdom from the losses of 1766. Now they refused to advance sums in silver which might be repaid a few months later in gold coins bearing a fictitious value. So before the end of the year the council found its treasury empty and complained that the merchants had deserted their trade and were 'locking up their fortunes in their treasure chests'.⁵⁸ Even those who held gold soon began to distrust the company's efforts at a gold coinage. According to the regulation of 1766, a mohur containing 149.72 grains of pure gold passed for Rs.14, or at the rate of 10.964 grains to the rupee; according to the regulations of 1769, th mohur

57. W.W. Hunter, *Annals of Rural Bengal*, p.308.

58. Letter from the President and Council to the Court of Directors, dated 25 Sept., 1769, para 39, quoted in W.W. Hunter, *op. cit.*, p.308.

contained 190.086 grains of pure gold, and passed for Rs. 16, or at the rate of 11.88 grains to the rupee. The indigenous money-changers speedily detected this and became afraid to have anything to do with the company's mint. They knew that they could always get the market value of their gold as bullion, but it was impossible to say what liberty the company might next be pleased to take regarding the coin.⁵⁹ Thus this experiment was also successful. On April 10, 1771, the company's Court of Directors gave the order for abolishing the batta on sonauts and the President and Council decided to stabilise the sicca by issuing a regulation that 'the coinage of 12 sun sicca would not cause the 11 sun sicca to fall in value and in future years siccas upto 11 sun would not be reduced to the state of sonauts'.⁶⁰ However, problems arose because the company did not make any provision for the recoinage of clipped or worn out coins. Even, as it was, the Court of Directors apprehended loss of revenue and the regulation was disapproved.

Hastings faced this problem and decided to do something about it. There were 4 mints in Bengal, at Patna, Dacca, Murshidabad and Calcutta. Hastings wanted to have a single mint for Bengal because he felt that the standard and purity

59. W.W. Hunter, op. cit., p.309.

60. Regulation of 1771, see Golebrooke - Digest.

of the coinage would not, in the existing circumstances be maintained in these dispersed mint towns. Moreover, he wanted to establish a centralised control mechanism. The Dacca and Patna mints were closed down in October 1773 and the Murshidabad mint was abolished in April 1777.⁶¹ In 1778, the 19th year of the reign of Shah Alam, Hastings definitely introduced the practice of putting an unvarying date on the coins. The stamp '19th Sun' was to be continued upon all rupees which must be coined in subsequent years, so that the value of the rupee might remain the same irrespective of the bullion content. But the insertion of the correct Hijra year completely defeated the purpose for which the same regnal year was put on coins of all subsequent years.⁶² The arrangement of one mint and one regnal year led to a number of problems. This was because while 3 other mints were open, the farmers and landholders who had to pay their revenue in sicca, could always procure sicca rupees with facility, but now the shroffs bought up the sicca rupees and at the time of collection sold them at a very high price. The landholders and farmers in the remote areas could not afford to send their money to be coined as siccas in the Calcutta mint and so had to pay the

61. Sinha, Annals, p.123 footnote, quoting Sir William Foster.

62. N.K. Sinha - Economic History of Bengal, vol.I, p134, p.147.

high batta. One can get an idea of the increase in batta charges from the following example. Sicca rupees at Dacca had now a batta of 17 1/2% whereas earlier it varied between 4% and 8%. We also know that different currencies were prevalent in different areas of Bengal. In such a situation, the peasants and the landlords, artisans and merchants, all had to pay the most exorbitant batta charges. As very frequent complaints were made, the Government fixed a table of the rates of batta between the various species of coins in circulation and sicca rupees. The officers in charge of collection were directed to receive different sorts of rupees and reduce them to siccas in accordance with this table of rates.⁶³ Thus the currency of old and light rupees was legalised. Although the rates of batta were fixed by the company's government, the money-changers (shroffs) altered the rates to their interest and the company could not stop it because of the control the shroffs had on the money market. The shroffs held in their hand, the bulk of the specie of the country. They had a network in almost every part. As they followed this trade from generation to generation, they were very subtle in their operations from long and early habit. Theirs was a close caste and their connections were very widespread. Since the early days of

63. Ibid.

the company's government, a practice was followed which had contributed to the increase of the power of the shroffs. When the farming of revenue was in practice, the custom of paying revenue in pauts or bills of shroffs to be presented after 15 or 20 days was followed, when the pauts fell due, sealed bags were deposited by shroffs in the treasury. These were said to contain varieties of coins tht were not always siccas or good sonauts or good Arcots. These bags were taken back after some time and revenue was paid in the currency which the treasury demanded.⁶⁴ The shroffs were averse to the opening of the bags and always asserted that this was against the custom of the country. Thus the payment of revenue in sicca was actually done by the shroffs. As the shroffs possessed much greater financial resouces than the Zamindars, this arrangement proved to be convenient both to the Zamindars and the government. But the shroffs thereby exercised greater control on the specie circulating in the country. The shroffs also derived great profits as a result of this. These profits were of 3 sorts : interest, kissaraut and salamy.⁶⁵ The interest varied according to the ability of the Zamindars to pay off their loans. If the Zamindar failed to pay in time, some other

64. N.K. Sinha - op. cit., vol.I, pp.144-5.

65. Ibid.

shroffs delivered a paut payable in 8 days which was accepted by the shroff, who charged kissaraut, a premium for the credit of 8 days at 1% to 2%. The salamy was a douceur given to the shroff by the Zamindar upon their first dealing together. Thus we see that the shroffs already had a high degree of control over the money market. So they could use Hastings' policy to their advantage. Hastings' measures thus far from checking activities of the shroffs, provided greater opportunities for their economic prosperity.

Efforts were again taken under Lord Cornwallis. Cornwallis's approach was however more systematic and comprehensive. In 1789, an order was issued depriving the treasury officers of any discretion in taking or rejecting coins on the ground of short weight. If a rupee was the genuine product of recognised mint no matter to what extent it had been clipped or drilled, the treasury officers were to receive it by weight according to fixed rates hung up in the collector's office.⁶⁶ This single stroke put an end to the indefinite and arbitrary discount which the provincial treasurers had exacted on all coins except siccas of the current year. The treasurers were also held responsible not only for the net sums received, but for the actual coin in which it was paid. This order put the treasurers in grave

66. W.W. Hunter, Annals of Rural Bengal, p.313.

trouble. Cornwallis had sensed that the treasurers represented one important link in the chain that constituted the monetary system of Bengal. They had used the deposits in various ways and also enjoyed the privilege of deducting whatever allowance they pleased from each coin when they received it and then for returning it to circulation, payment had to be made at rates fixed by themselves. They also had good linkages with the indigenous merchants and moneylenders.⁶⁷ So Cornwallis found it necessary to strike at them. At another level, Cornwallis divided the currency into 2 classes : the first consisting of the statutory coinage, to be taken at its full legal denomination; the 2nd or the deteriorated sort, to be received at the published rates, and sent off at the end of each month to Calcutta. The mere fact of some deduction requiring to be made from the nominal value of a rupee, was accepted as conclusive proof of its unfitness to be returned to circulation, and it was stipulated that in every such case the treasury officers should specify the rates at which they received the coin in an invoice to be forwarded along with the coin itself, to the Presidency mint.⁶⁸ Although there was some

67. Ibid.

68. Order of the 23rd June 1790, forwarded with a letter from the Board of Revenue to the Collector of Birbhum, dated 30th June. (MS Revenue Records, English and Persian in the Birbhum Collectorate Library, W.B.)

resistance from the treasurers, in the end they had to give in. But regarding coinage there were a number of difficulties. The 'debased' coinage constituted 2/3 rds of the currency circulating in the rural areas. The very success of the measure for calling it in, denuded the rural population of the means of purchasing the necessities of life. This was because while on the one hand the debased coins were called in, the company's mint could not produce enough coins to fill up the deficiency. So the relative price of the coins became high and this led to a depression in prices of agricultural commodities and consequently great suffering of the agricultural producers especially at the hands of the usurers.⁶⁹ However, in large towns the situation was different. Here the statutory coins were in abundance and so the calling in of the debased rupees hardly caused any drain and did not affect prices. Taking advantage of this the grain dealers bought great quantities of grain from rural areas where it was cheap and sold it in the towns at a high profit, while the producers starved. Another factor which further aggravated the problem was the war against Tipu Sultan. This meant immense need for funds. So all the good coins were swept off to Calcutta for exportation to Madras and all the bad coins were also siphoned off to Calcutta to be melted. This again meant

69. W.W. Hunter, Annals of Rural Bengal, p.315.

that the relative price of the rupee went up. The winter of 1790-91 passed like this. Although the government had made provision for returning the specie when recoined, the new rupees did not reach the hands of the people. Some new steps were taken by the company's government. New mints were established at the three great provincial centres, Dacca, Murshidabad, and Patna. The old Calcutta mint was set vigorously to work and the head of the administration in each district was ordered to take all coins that might be offered to them at the local market rate, giving back statutory rupees in payment.⁷⁰ However, the supply of silver and the level of production of the new coins remained the greatest constraints. The supply of silver continued to be affected by the needs of the war. By early spring, 1791, the pressure became lighter.⁷¹ The supply of the newly-milled coins had gone up while the drain of silver rupees was also reduced. The prices of the commodities started rising. This was reflected in the good returns that the village bankers and grain dealers received for the grain they sent to the towns or exported to Madras. Agrarian production received a stimulus and due to the prospects for

70. Circular Order of the Board of Revenue, dated 2nd August, 1790 (MS Revenue Records, English & Persian, Birbhum Collectorate Library, W.B.)

71. W.W. Hunter, Annals of Rural Bengal, pp.318-9.

profits and flow of funds, loans were readily available in the rural areas.

In 1792, it was finally decided to do away with the old currency by compulsory measures. On 4th August, 1792 the Mint Committee submitted 13 propositions calculated to draw the various species of old and light coins into the mints and to establish the general currency of the sicca rupees which were as follows:⁷²

- 1) That after the 10th April, 1794 only the 19 sun be received at the public treasuries or issued therefrom on any account whatsoever.
- (2) That public notice be given that government with a view to enable individuals, to get their old coin or bullion converted into sicca rupees without delay have established mints at Patna, Murshidabad and Dacca in addition to the mint at Calcutta.
- 3) That for all bullion or old coin of sicca standard delivered into the mint an equal weight of sicca rupees be returned to the proprietor without any change whatsoever.

72. Declaration dated Fort William, Public Department, 24 October, 1792, signed J.L. Chauret, Subsecretary, published in extenso in the 'Calcutta Gazette' of 1st November, 1792.

- 4) That all bullion or old coin under sicca standard delivered into the mint be refined to the sicca standard and that the number of sicca rupees equal to the weight of the bullion so refined be returned after deducting 12 annas percent for the charge of refining.
- (5) That the rupees coined at Dacca, Patna, and Murshidabad be made precisely of the same shape, weight and standard and that they bear the same impression as the 19 sun sicca rupees coined at Calcutta, in order that the rupees struck at the several mints may not be distinguishable from each other, and they may be received and paid indiscriminately in public and private transactions.
- 6) That the guard as far as possible against the counterfeiting, clipping, drilling, filing or defacing the coin, the dies with which the rupees are to be struck be made in future of the same size as the coin so that the whole of the inscription may appear on the surface of it, and the edges of the coin be milled.
- 7) That persons detected in counterfeiting, clipping, filing, drilling or defacing the coin be committed to the criminal court to be punished as the law directs.
- 8) That all the officers, gomastahs and others employed in

the collection of revenue, the provision of the investment and manufacture of salt and all shroffs, poddars, Zamindars, talukdars, farmers and all persons whosoever, be prohibited from affixing any mark whatsoever to the coin, and that all rupees so marked be declared not to be legal tenders of payments in any public or private transaction and that the officers of government be directed to reject any rupee of this description that may be rendered at the public treasuries.

- 9) That as there may not be a sufficient number of sicca rupees in circulation in some districts to enable the landlords to pay their revenues to government in sicca rupees, as stipulated in their engagements for the decennial settlement, that the various species of rupees current in the several districts be received at the public treasuries from the landholders and farmers in payment of their revenues until 10 April, 1794 at fixed rates of batta, to be calculated according to the difference of intrinsic value which the various species of coins in circulation bear to the sicca rupee as ascertained from assays in the Calcutta mint. (Table 2.1).

- 10) That all rupees excepting siccas which may be received at the public treasuries agreeably to the 9th article be not on any account issued therefrom but that they may be sent to the mints and coined into siccas of the 19 sun.
- 11) That after the 10th April, 1794 no person be permitted to return in the Dewani or Maul Adalat established in the provinces of Bengal, Bihar and Orissa any sum of money under a bond or other writing or any document, written or verbal, entered into after the above mentioned date by us, any species of rupees excepting the sicca rupee of the 19 sun as stipulated to be paid.
- 12) That persons who shall have entered into bonds or writing or other agreements, written or verbal, prior to the 10th April, 1794, whereby a sum of money is to be paid in the same before that date, be at liberty to liquidate such engagement either in the rupees specified therein or in the 19 sun sicca rupee at the batta which may be specified in the table mentioned in the 9th article.
- 13) That all engagements hereafter entered into on the part of Government for the provision of the investment or manufacture of salt or opium be made in the sicca rupee and that all landholders and farmers of land be

expressly prohibited from concluding any engagements with their under renters ryots or dependent talukdars after the 10th April, 1794, excepting for sicca rupees under the penalty of not being permitted to recover any arrears that may become due to them under such engagements as prescribed in the 11th article."

The current rupee also ceased to be the money of account with the establishment of the sicca rupee from 1st May, 1794. By 1795, the company's new and uniform currency managed to achieve a substantial degree of acceptance within the economy.⁷³

Another policy tried out by the company's government was to back up the establishment of European banks in Bengal in the late 18th century. Thus, in 1770, Messrs. Alexander and Co., one of the leading Agency Houses of Calcutta, started the 'Bank of Hindustan'. Shortly thereafter, another European bank was established in Calcutta. The issue of notes was at first the chief function of these banks, but they also tried to introduce cheques.⁷⁴ In June, 1786, the 'General Bank of India' was opened. This was the earliest

73. A.K. Bachi, *Transition from Indian to British Indian Systems of Money and Banking, 1800-50.* p.513, 516. (Modern Asian Studies, 19, 3, 1985).

74. H. Sinha, *Early European Banking in India* (London, 1927), p.7.

joint stock bank with limited liability⁷⁵. This bank issued notes of its own, it being provided that one-third at least of the capital should remain in specie at its disposal. It also lent at its discretion upon pledges and mortgages for a term not exceeding four months. From the very beginning, the 'General Bank' met with considerable success and Lord Cornwallis virtually made it the company's banker.⁷⁶ However, the General Bank was dissolved in 1791 due to the financial crisis.⁷⁷ The financial problems in 1791 also affected the Bengal Bank and the Bank of Hindustan. Both of them applied to the Government for loans and their applications were granted.⁷⁸ The Bank of Hindustan accepted the Government offer and was able to pay off the loan before the due date.⁷⁹ But the other banks failed to do so and went into liquidation. Finally, in June 1806, a bank known as the 'Bank of Calcutta' was opened under the auspices of the company's government.⁸⁰ Its main purposes were stated as: (1) to provide general utility to the public, (2) to offer facilities of loans to the merchants and others and (3) to

75. Ibid, p.9.

76. Ibid, p.40.

77. Ibid.

78. J.C. Sinha, Economic Annals of Bengal, (1927). p.241.

79. Ibid, p.120.

80. Ibid, pp.121-122.

give encouragement to the circulation of paper currency.⁸¹ In 1809, this bank was transformed into the 'Bank of Bengal' with the same functions. Its uniqueness lay in the fact that its notes alone were recognised by the Government and it became the premier bank of India at that time.⁸²

From the picture we have got so far, we can make the following deductions: (1) first of all, we find that the Bengal economy, and also its monetary system were regulated to a large extent by the forces of demand and supply. This is reflected in the movement of silver and other commodities. (2) Although there were a number of currencies prevalent, the economy had well-integrated monetary and trade structures. (3) The hold of the indigenous money-changers (shroffs) and the moneylenders on the monetary system was quite strong. (4) There was also strong nexus between the indigenous traders and the moneylenders and shroffs (5) Upto the 1790s the control of the company on the monetary system was not very strong.

It was in this content that the company was trying to establish its hegemony over the Bengal economy. In this bid, the control of the monetary system was a crucial

81. H. Sinha, op. cit., pp.124-26.

82. Ibid, p.163.

component. What the company could not do by economic means, it tried to compensate for by administrative measures. But as we have found out throughout this chapter, these administrative measures had serious limitations. From 1766 onwards upto Cornwallis's initial period of rule, we find a series of failures for the company's monetary measures. The company tried to establish its own currency; initially it was gold and later on, silver. When gold coinage was introduced and it was given an unusual high value, there was flow of silver to areas where the price of silver was high and led to a shortage of silver rupees in Bengal. There was also the limitation of the supply of gold. Hastings' policy of one mint, one regnal year, could not solve the problem either. It rather led to tremendous profits for the shroffs and strengthening of their economic position. The shroffs played a crucial role in the revenue collection system of the company after the decline of the house of the Jagat Seths. And this role was consciously granted by the company because it was well aware of the working of Bengal's monetary system. Cornwallis's measures were, no doubt, more systematic and comprehensive. He converted Hastings' mistakes and took adequate precautions. But there remained the problem of the outflow of silver from Bengal due to the fixation of the value of statutory and deteriorated rupees and the increased demand for silver rupees in other areas.

Actually this process of natural outflow of silver (this is apart from the outflow of silver undertaken by the company directly) had never ceased from the 1760's). However, by the early 1790s the company had managed to establish some sort of a hold over Bengal's monetary system. But, this hold was never total. The indigenous shroffs and moneylenders continued their business as before. They learnt to fit into the changed circumstances and many of them even prospered in their trade. The bigger ones among them catered to the needs of the European traders and the Agency houses as well as the big indigenous merchants, while the smaller ones operated at lower levels of trade and production. We have earlier pointed out the strong nexus between the monetary system and the trade/production sectors in Bengal during this period. In fact, I would argue that in this context, the failure of the company to establish near -total domination over Bengal's trade and production sectors in this period enabled the indigenous shroffs and moneylenders to survive the company government's onslaught. And their survival, in turn, contributed to the sustenance of the indigenous merchants in certain spheres of the trade and production sectors. This situation continued, more or less, upto the early decades of the 19th century.

That the company and its government had to recognise the important position that the indigenous shroffs and

moneylenders managed to preserve for themselves within Bengal's monetary and credit system can be illustrated by the following example. Even as late as 1809, a post of Khazanchee was created in the Bank of Bengal.⁸³ The Khazanchee had his own establishment and provided the essential link between the Indian traders and bankers on the one hand and the European secretary and directors of the bank on the other. Characteristically, he took considerable risk upon himself in certifying to the reliability of Indian borrowers or endorsers of the bills of their European principals. The Khazanchees were usually recruited from among the leading Indian banking firms of Northern and Western India. Besides this, there was an 'indigenous accountant's department' in the bank and upto 1852, the basic accounts were first kept in Bengali and then transferred to the European accountant's department.⁸⁴ We also get mention of the indigenous hundian as an important source of income for the bank in the early 19th century and a Nagree munshi was appointed for translating the hundis for the Khazanchee and his staff.⁸⁵ All these indicate the extent of the hold that the indigenous shroffs and moneylenders had on the monetary and credit system of Bengal even as late as the early years of the 19th century.

83. A.K. Bagchi, op.cit., pp.513-516.

84. Ibid.

85. Ibid.

CHAPTER 3

TRADE, PRODUCTION AND THE BENGAL ECONOMY - I
THE ENGLISH EAST INDIA COMPANY'S TRADE AND THE COTTON-
GOODS INDUSTRY IN BENGAL (1750-1800)

I. Course of the Company's trade in Bengal cotton goods:
broad trends:

Before the introduction of machine spinning and weaving in Britain in the later half of the 18th century, the Indian subcontinent was probably the world's greatest producer of cotton textiles. The overseas markets in Asia and Africa were of course long dominated by Indian products, and to the demands of these 2 continents, Europe added its own in the 17th and 18th centuries. From the last quarter of the 17th century, the 'invasion' of the European market by the textiles from India (particularly Bengal) inaugurated a new phase in the history of Indo-European trade and led to developments which became significant in the history of the entire sub-continent.

In Bengal's export trade in cotton textiles in the 18th century, the English East India Company occupied a very important position. Bengal cotton goods also occupied a predominant position in the English Company's export commodities basket. Cotton goods from Bengal formed 65% of

the Company's total exports from Asia in 1751-60,¹ 75.3% in 1766 and 80.4% in 1772-3.² In terms of sales value, Bengal cotton goods were the 2nd largest item next to tea, among the Asian goods sold both at London and Amsterdam between 1793 and 1797.³

Coming to the actual quantity of cotton goods purchased by the Company in Bengal, we find that the Company's annual purchases over 5 year periods between (1751 and 1755) and (1756 and 1760) averaged 390814 and 377302 pieces respectively. Their average values were L 401886 (Rs.40,18,860) and L 252987 (Rs. 2529870) respectively at current prices.⁴ In 1757, however, there occurred a sudden drop to 82656 pieces valued at Rs. 609980 at current prices. This can probably be explained by the dislocation of trade caused by the Company's war with the Nawab. After Plassey, exports continued to rise. In 1766-70, the average annual purchase of cotton goods in Bengal by the Company was valued

-
1. K.N. Chaudhuri, Trading World of Asia and the English East India Company, pp.540-8.
 2. Parliamentary Papers, Ninth Report, 1783, Appendix, No.6.
 3. Hameeda Hossain, The Company Weavers of Bengal, pp.65-67.
 4. For Figures, 1750-60 : K.N. Chaudhuri, op.cit., pp.544-5; for figures, 1766-80: Parliamentary Papers, op.cit.; for figures, 1770-1800:Milburn, Oriental Commerce, Vol.II, p.222.

at Rs. 4,511,520. Between 1771 and 1780 the Company's annual purchase of cotton goods averaged about half a million pounds. A significant rise took place in 1787 and 1788. Between 1793 and 1796, the average value of piece goods purchased by the Company rose to Rs.8027230 per year.⁵ We can get an idea of the number of pieces of cotton goods bought by the Company in Bengal annually and their gross values at current prices in the period 1750-1800 from the following table.⁶ (table 3.1)

The sales figures also show an increase between 1771-5 and 1784-90. In the former period, 625278 pieces were sold for an average of L 1079893 per year and in the latter, 717094 pieces were sold for L 1236606 on the Company's account. About the selling price, one can find that between 1772 and 1787, the average selling price stood unchanged at L 1.14.0 per piece but declined in 1799 to L 1.10.6 and in 1805 it fell to L 0.15.6 per piece.⁷

Let us now try to see the methods of procurement followed by the Company in this period. In the pre-1753 phase, the Company purchased cotton goods through *dadan*

5. *ibid.*

6. Table based on : K.N. Chaudhuri, *op.cit.*, pp.544-5.; *Parliamentary Papers, op.cit.*; *Milburn, op.cit.*, p.222, p.234; *Fort William-India House Correspondence, Vol.II, pp.267, 271-72, 338-39; Vol.VI, p.14.*

7. *Parliamentary Papers, Sixth Report, pp.209-10.*

Table 3.1

Year	No. of pieces purchased by the Company in Bengal	Index	Gross value at Current prices (Rs)	Index
(1)	(2)	(3)	(4)	(5)
1755	3,90,814	100	4,018,860	100
1757	82,656	21	609,980	15
1760	3,77,302	96.5	2,529,870	62.9
1766	6,14,459	157	4,547,000	113
1770	9,45,946	242	7,000,000	174
1772	9,42,943	241	6,977,780	173
1773	6,87,327	175.9	5,086,220	126.6
1774	6,31,005	161	4,669,440	116
1775	8,90,885	228	6,592,550	164
1776	6,03,077	153	4,462,770	111
1777	8,30,458	212	6,145,390	152.9
1778	8,05,010	206	5,950,790	148
1779	3,38,465	86.6	2,504,641	62.3
1780	3,38,465	86.6	2,504,641	62.3
1781	3,38,465	86.6	2,504,641	62.3
1782	3,38,465	86.6	2,504,641	62.3
1783	4,37,802	112	3,239,735	80.6
1784	5,16,088	132	3,819,051	95
1785	7,68,228	197	5,684,887	141

continued....

Table 3.1 continued

(1)	(2)	(3)	(4)	(5)
1786	7,64,173	195.5	5,654,880	140.7
1787	7,45,449	191	5,516,323	137
1788	7,45,449	191	5,567,602	138
1789	7,45,449	191	5,611,888	139.6
1790	7,45,449	191	5,656,174	140.7
1791	5,07,660	130	3,756,686	93.5
1792	8,33,741	213	6,169,686	153.5
1793	10,84,761	278	8,027,230	199.7
1794	10,84,761	278	8,027,230	199.7
1795	10,84,761	278	8,027,230	199.7
1796	3,20,939	82	2,374,950	59
1797	6,41,878	164	4,749,900	118
1798	6,41,878	164	4,749,900	118
1799	1,73,751	44	1,285,759	32

merchants who were basically independent traders. Negotiation were carried out with them to settle the price and the amount to be delivered and the time of delivery. A part of the total value of the goods was paid as advances to the merchants.⁸ But by the early 1750s this method of procurement through the traditional channels of the dadan merchants was under stress. Targets were not being met by the merchants. One reason was the uncertain political and economic conditions created by the Marathas. There was a greater risk of advances being forfeited. Under the prevailing circumstances the merchants themselves were not too eager to purchase for the company. The terms demanded by them had become difficult to reconcile with the strict conditions enforced by the factory. Since prices of basic necessities had gone up and deliveries were difficult, merchants now demanded 85% of the purchase price as advance. They were no longer willing to procure 'ready-money' goods or to accept contracts on the basis of the previous year's samples and prices. The Company agreed to give only 30% of the total value of the order as advance; from this 2/3rds of the order was to be contracted through dadan and 1/3rd through 'ready money' purchasers. Another point of contention was low procurement on account of upheavals and

8. Letter to Court, 11 Dec, 1741, quoted in K.K. Datta, Studies in the History of the Bengal Subah, pp.123-4.

disturbances in the rural areas.^{8a} The merchants refused to be made liable for lapses in meeting the target or be penalised if their orders were not completed, whereas the Company insisted on getting back 10% of the cost of goods not delivered in time.⁹

Due to all these problems, the Company decided in 1753 to abandon the previous system of procurement and adopt a new system of getting the piecegoods directly from the aurungs through their gomashtahs or agents. A regulation published from Fort William specified the conditions of employment : 'The substantial gomashtahs approved of by the Board should be employed at the aurungs, giving sufficient security that they undertake no other than the Honourable Company's business on forfeiture of their wages and allowances, that each gomashtah have different musters, of the cloth delivered him for his guide with orders to keep upto that goodness and prepare as soon as possible 50 to 100 pieces of each sortment, send them down for an inspection, that no gomashtah... be entrusted with more than Rs. 20,000 at one time... that all occurrences relative to the investment be consulted and approved of in Council and the gomashtahs be ordered to send frequent advices of their

8a. H.Hossain, op.cit. pp.5-9.

9. Letter to Court, 18th Jan, 1754 Fort William-India House Correspondence, Vol. I, p.762.

proceedings addressed to the Board.¹⁰ The gomashthah thus entered the factory's payroll, but on a moderate salary of Rs. 50 per month, together with a few perquisites, such as a palankeen; under him were a staff of one cash-keeper, two writers, four paikars and four peons. But the factory at the same time drafted a contractual agreement which imposed considerable responsibility and risk on the agent.¹¹ In fact their status and position suggest that the latter may have given up their independent trading in the market to become paid agents of the Company. This new method of purchase, though successful for more time, did not produce very satisfactory results. It was because this new method meant for the weavers an inflexible and restrictive relationship with the Company. Once the weaver entered the Company's procurement he was registered at a particular aurung and was subjected to regular supervision and restriction and in case, orders were not fulfilled, they met with punishment. This system therefore could have affected production conditions and trade prospects for the Company and could be counter productive. But another important effect which probably concerned the Company's more than anything else was the unholy nexus that grew up between the gomashthahs and the Company's servants and free merchants. All these 3 parties

10. Letter to Court, 3/9/1753, Fort William-India House Correspondence, Vol.V, pp.138-39.

11. *ibid.*

benefited in their private trade (both inland and export), through the abuse of dastaks and other means, at the cost of the indigenous government and more so the Company's trade and revenue prospects.¹² So in 1771, the Company decided to revert to the 'contract system' and invited local traders and Armenians to provide the Company's investment under specific conditions. The arrangement under this system was similar to that with the dadan merchants. The quantity to be delivered, the price, the time of delivery, etc., were worked out in the negotiations and advances were made. The terms and conditions were as follows. The merchants who had entered into the contract would be answerable for all outstanding balances that would properly accounted for and acknowledged by the weavers, would give responsible security for thier performance, and would be answerable by a penalty in case of failure in delivering the cloths agreeable to the Kistbandee (paper of agreement) annexed to the estimate and the quality of the goods to be agreeable to the musters kept at the several factories. Duplicates of the musters (samples) were to be given out to the merchants and the advances were to be made according to the Kistbandee.¹³ The contractors always wanted a secure contract atleast for 5

12. Letter from Court, 11 Nov., 1768, Fort William-India House Correspondence, Vol. V, pp.138-39.

13. Proceedings 6th May in Board of Trade (Commercial) Proceedings, 3rd April - 26th June 1778, Vol.15.

years. This would be beneficial both for the contractors as well as for production prospects because an assured and stable demand level for a long term would deter people from extracting short benefits and thereby stimulate production in the long run. The Company also often wanted an increased supply. In that case it had to pay an allowance of 8%-10% of the value of the extra amount demanded to the contractors.¹⁴ However, the strict adherence to muster (sample) and the establishment of fixed rates to each 'letter' instead of a medium price were advantages which the Company enjoyed at the contractors' expense and particularly the penalty upon short dimensions was a severe clause in the Company's favour.¹⁵ It can also be noted that this kind of an elaborate paper of contract was a practice introduced into Bengal by the Company. In fact it was a part of a highly formalised structure of business organisation and transactions that the Company was trying to incorporate into Bengal's economic life. The indigenous method of contract was quite simple. A list of proposals was made and each contractor put his seal and gave security for their performance thereof. In fact the Company's officials were

14. *ibid.*

15. BOT(Comm) Proceedings 4th Nov-30 Dec., 1783, Vol.40.

forced to adapt this prevalent form in certain areas, e.g., at Patna.¹⁶

Although in the period 1771 to 1787, the 'contract' system was the predominant method of servants, etc., had to be undermined, and this was a difficult job and consequently we find the prevalence of the agency system in some places.¹⁷ As we have noted earlier, the Company's servants had built up a nexus with the gomashthahs for their private trade. Some managed to find a way out in the changed circumstances by entering into an agreement with the merchants who were going into contracts with the Company. This often created problems for the Company's own trade in terms of supply, prices, etc.,¹⁸.

Due to these problems, the Company decided to bring about a basic change in its method of procurement. On 22 Jan, 1787, Lord Cornwallis wrote a minute in which he decided to reintroduce the 'Agency' system and on 23rd July, 1787, a series of regulations was published to this effect.¹⁹ Under this new method, the Company's 'investment'

16. Proc. 30th May 1775, BOT(Comm).

17. Proceedings, 5th May, 1775 BOT (Comm) Proc. Vol.III.

18. Letter from Court, April 1786; Proc.2 Sept.1785, BOT(Comm.) Proc.; Proc. 3 Dec, 1788, BOT (Comm), Proc.

19. Proc., 21 August, 1801, BOT (Comm). Proc.

of cotton piece goods was to be secured not through dalals but by issuing advances to the weavers direct through the Company's servants employed as commercial agents in the interior of Bengal. An official commission was also paid to the commercial agent for the supply of goods. In 1790, the commission paid on piecegoods amounted to Rs. 268,796, whereas the amount of gross outlay of piecegoods in that year was about Rs.5,500,000.²⁰ Therefore the commission to the agents was approximately at the rate of 49% on the value of the goods. Certain functionaries called amins were appointed to adjust the accounts between the agents and the weavers. The amins would go the aurungs and find out the exact price at which the weavers delivered their goods whether of the Company's or the ferretted assortments. This information would help the factors to adjust the prices with the gomashtahs more efficiently.²¹ The amins also helped to preserve a nominal freedom of trade for the weavers. They were supposed to ensure that the gomashtahs of the English, French, Dutch, Hindustani and other merchants could give advances to the weavers and other manufacturers and no oppression or force was exercised in the procurement process.²² It should also be noted that throughout the

20. Proc. BOT(Comm), Vol.84.

21. Proc. 5th May, 16th May, 1775, BOT (Comm) Proceedings

22. Proceedings, 29 June, 1775, BOT (Comm) Proc.

period 1750-1800 some ready-money purchases were always made by the Company. This system was known as KooshKereede.²³ But this sort of purchase was kept to as low a level as possible.

It is often held that the Company enjoyed a monopsonic position^{23a} as far as the cotton piecegoods market was increased. If we take this in the strict technical sense of the term then it can be questioned. This is because we find lot of evidence of competition in the piecegoods market in the Company's records. The competition that the company encountered was chiefly from the agents or the merchants of the other European Companies, Private Free Merchants and the Company's own servants.^{23b} In 1775, the English Chief of Dacca reported of intense competition piece goods. He said that the weavers had the tendency to sell to the price merchants even the assortments which were prepared with advances from the Company.²⁴ In 1783, Mr Tomlinson and Gosling wrote from Burron that they were 'very much inconvenienced in procuring the cotton goods as several cooties had been established by the agents of the Danes, the

23. Proc. 5th May, 26th May, 1775, (Vol.III) BOT(Comm)

23a. N.K. Sinha, History of Bengal (Calcutta, 1967), p.105.

23b. D.B. Mitra, Cotton Weavers of Bengal, pp.93-95.

24. Proceedings, 16th May, 1775, B.O.T. (Comm.), Proceedings (vol.3).

Dutch and private merchants who readily gave the weavers an advance at increased rates and continually obtained cloths made with money issued by the Company's contractor.²⁵ John Taylor, the superintendent of Hurripaul in 1783, informed that at least 50% of the total weavers at Hurripaul were either openly or secretly engaged in the service of private traders who paid better prices than the Company. He further stated that an Armenian in Dacca in 1782-83 procured from Hurripaul, cloths worth nearly Rs. 2 lakhs. He had a list of 13 other adventurers who were employed that year in different parts of the auring for the purpose of purchasing cloths.²⁶ At Santipore, according to John Prinsep, the superintendent in 1783, there was lot of interference by the agents of the private merchants and of foreigners as well as of the other contractors with the Board of Trade.²⁷ Similar circumstances were reported from Luckipore in January, 1785. There, the number of agents of the private traders, had increased and they were offering much higher prices to the weavers than before. The European companies had their

25. Proceedings, 4th Nov., 1783, B.O.T. (Comm.) Proceedings Vol.40.

26. Proceedings, 20th Nov., 1783, B.O.T. (Comm.) Proc., Vol.40.

27. Proceedings, 31st Oct., 1783, B.O.T. (Comm.) Proc., Vol.39.

factories in different places.²⁸ From Dacca, John Bebb reported in 1784 that the weavers were unwilling to renew their engagements with the Company. There was also unusual delay in delivering the cloths by the weavers. This was because the weavers had worked for the private traders for a long time and started working on the cloths for the Company very late.²⁹ In Malda, the Company's resident found in 1787 that the Company's Resident found in 1787 that the Company's commercial rights had been alarmingly invaded by the French, Armenians and others. They are dalals established their network throughout the districts where the weavers lived. Some Armenians went so far as to carry on an illicit trade in cloths in collusion with the gomastahs of the Company's factory at Juggernathpore³⁰

So one can cite any number of evidences from the Company's records to prove the point about competition among buyers of piece goods in the different aurgungs. In this context I think that the concept of a completely monopsonic position of the Company in the strict technical sense can be questioned. I would argue that it most reasonable to say that the Company enjoyed a near monopsonist position for

28. Proceedings, 18 Jan., 1785, B.O.T. (Comm.) Proc., vol.46.

29. Ibid.

30. Proceedings, 24th July, 1787, B.O.T. (Comm.) Proc., vol.58.

certain varieties of cloth, at certain places at only certain periods of time between 1750 and 1800. If we want to have an overall picture for Bengal in the period 1750 - 1800, then one can say that the English Company enjoyed the status of the largest buyer of cotton goods in terms of relative volume of demand. It always was trying to move towards a total monopsonic position and was successful in doing so at certain points of time and space.

In order to establish a monopsonic position for itself, the Company tried out a number of methods. Broadly, these can be divided into two categories: those intended to maintain a degree of control over the weavers and those which were to restrict the other buyers.

The first set of methods that is those intended to provide the weavers with a contractual arrangement with the Company's agents, to define the weavers' relations with the other traders and to stipulate their conditions of work. These included a kind of a mix of judicial and administrative measures leading to overall advantage over procurement of goods. The Company could resort to judicial and administrative measures for economic purposes only due to their changed status in Bengal after acquiring the Diwani rights in 1765. In the 1750s and 1760s, for conflicts involving the weavers, Panchayati arbitration was used.

Traditional forms of punishment such as expulsion from the caste were inflicted.³¹ But by 1767, most disputes relating to commercial matters at the auring were referred to the Company's gomastahs for arbitration. When a regular judicial system was established in 1772 and civil and criminal courts were set up, a more formalised structure was constructed. A distinction was also sought to be made between revenue and commercial problems.

So in commercial complaints involving paikars or weavers, the parties concerned were summoned by the gomastah before the Commercial Resident.³² By 1775, the Company set up provincial and pargana courts. In commercial disputes the gomastahs had the responsibility to issue summons to the weavers and ensure their attendance at the courts. But the gomastah himself was protected from the jurisdiction of the daroga at the pargana court and was only responsible to the commercial chief. The gomastah was also given the power to post peons over the weavers so as to ensure that the finished product was not sold elsewhere.³³ Very often this power was misused by the gomastah for his own benefits. A

31. J. Long, Selections from Unpublished Records of Government for the years 1748-67 and 1784 to 1805. (Calcutta, 1793), p.122.

32. Proceedings, 5th May, B.O.T. (Comm.) Proc., vol.3.

33. Ibid.

practical problem which developed in this judicial - commercial system was as follows. Quite often the weavers were summoned to attend the Sadar Adalat far from his village in regard to some legal dispute. Consequently, this absence from the place of work greatly hampered production and cause a lot of concern for the Company's Commercial Department. An example can be cited from Dacca. In May 1775, Mr. Grueber, the English Chief complained to the Board of Trade that a number of weavers had been brought from the Chandpore aurung to Dacca by the order of the Provincial chief and council to answer to complaints against them. This adversely affected the production of cotton goods and the chief could do nothing to stop this. Another important observation which the chief made was that in Bengal of that period which was marked by uncertainty and instability, an assurance of protection and security had to be given by the Company's factory chief in order to retain the weaver's services. In the particular case mentioned above, the chief at Dacca could not help the weavers much when they were harrassed and asked to attend the Sadat Adalat far from their homes. Naturally, he lost lot of credibility among the weavers. Moreover, the gomashtahs and other authorities had the right to place peons on the weavers in case of a complaint against the weavers and upto that time when the case came up for hearing. The weavers had to bear heavy

expenses for the peons' maintenance. This practice adversely affected the production because the weavers had to cut into the advance money they received to pay for their extra expenses and purchased inferior quality thread. So the quality of cloth produced would be bad and had to be rejected. Consequently balances due from the weavers would increase.³⁴ In order to do away with this problem certain local officials of justice called naibs were posted at each auring to deal summarily with disputes involving weavers. The naibs could handle disputes where the amount did not exceed Rs.100. They could impose fines but not exceeding Rs.10 and a punishment of not more than 10 stripes with a rattan. The naib also had the power to take down the weavers deposition or his affidavit and send it to the Diwani court. He was also required to send regular monthly reports to the Superintendent of the Diwani court and his authority superceded that of the gomastahs. However, the naib's jurisdiction, as was the case with the gomastahs was limited to commercial matters³⁵.

Apart from this there were a number of regulations designed to establish a degree of formalised arrangement

34. Proceedings, 24th April, 1778, B.O.T. (Comm.) Proc., vol.15.

35. Proceedings, 5th May, 1775, B.O.T. (Comm.) Proc., vol.3.

with the weavers. The first one was apparently a declaration of freedom of trade and protection. It was formulated in a resolution passed in the council on 12th April 1773. The clauses were as follows : 'that all weavers and manufacturers shall in future have full liberty to work for whom they please, and shall, on no pretence whatever, be obliged to receive advances against the inclination either from the Company or from private merchants. It is intended, however, that they shall complete any engagements which they may have already made for this year.'

'that we will receive proposals from all native merchants, who may be willing to contract with the Company for any quantity of goods (not amounting to less than Rs20000) of the proper assortments for the investment and give satisfactory security for the performance of their engagements.

'that we will receive, for ready money, whatever goods, of proper assortments may be tendered upon suitable terms.

'As our honourable Masters, with a view to the freedom of trade, and the welfare of the country, have thought it proper to relinquish the influence of their authority in the provision of their investment, they expect an equal attention from their servants. Whoever

therefore shall attempt, directly or indirectly, or make them enter into engagements against their will, or in any way exercise an undue influence over them, shall be immediately suspended from the Compnay's service; if any Collector shall, upon their complaining to him, neglect to give them proper redress, he shall be removed from his station'.³⁶

In the subsequent period 1773-1793, a series of regulations were issued at Fort William, to define the status of weavers and their market relations.³⁷ The dates on which these regualtions were published are as follows : 1 May, 1775; 31 August 1775; 23 April, 1782; 29 July, 1786; 23 July, 1787; 30 October, 1789.³⁸

Another set of measures was aimed at buyers of cotton piece goods who posed a stiff competition for the Company. On 22 April, 1782, it was resolved by the Public Department that the purchasers of cloths apparently knowing them to be the property of the Company, by the secret and cladestine

36. J.E. Colebrooke, Digest of the Regulations and Laws, enacted by the Governor General in Council for the Civil Government of the Territories under the Presidency of Bengal, Calcutta, 1807, vol.III, pp.453-4.

37. J.E. Colebrooke, op. cit.

38. Ibid.

manner which they take to procure them, or by the notoriety of the weavers being in the Company's employ, who offer to dispose of them, on proof of the fact, shall be liable to punishment by the Adalat according to the nature of his offence and the cloths so purchased shall be confiscated.³⁹ Under Articles 12 and 13 of the Regulations for 1786, the buyer became liable to prosecution in the Diwani Adalat⁴⁰ Article 5 of the Regulation of 1789 stated that if the individual merchants enter into transactions knowing such cloths to be the right of the Company either by mark upon them, or the transactions between the weavers from whom they procure them, or having reason for such knowledge from the notoriety of those weavers being in the Company's employ, discovering the same by the clandestine methods they take to obtain the cloths shall on proof of the fact in the Adalats, be subjected to such punishment as the nature of the offence may appear to deserve; and the cloths so obtained, shall be restored to the Company. But for purchasers openly and fairly made at the public hauts and bazaars the buyers shall be liable to no prosecution unless the cloths have the Company's mark upon them.⁴¹

39. Regulations for the Honourable Company's Weavers, passed on 22 April, 1782, J.E. Colebrooke, op. cit.

40. Colebrooke, op.cit.

41. Ibid.

Apart from these judicial-administrative measures, the Company's agents sometimes resorted to direct force as a form of intervention on the commercial scene. Force was used by the Company's men to get the cloths which were manufactured for others such as the English private merchants, Americans and the indigenious traders. In Dacca we get evidence of this practice in 1775 from the interrogation of Ram Raja, Bridjoo Krishna, Ram Dulal and Bishnath Dedars who were responsible for taking the cloth meant for American traders from the houses of the weavers by force.⁴²

Similar cases can also be found for the other places. Force was also used on some occasions for paying lower prices as well as to secure the services of the weavers, etc., Obstructions were also created for the buyers sometimes. In 1775 and 1776, according to complaints filed by private merchants⁴³ in many of the Dacca aurungs their trade was obstructed by the presence of a military force. Deterred from entering the market the private merchant was forced to buy from the Company's gomastah or commercial resident. The formers' agents were often arrested whereas the Company's gomastah exercised influence with a considerable force over the weavers.

42. Proceedings, 16th May, 1775, B.O.T. (Comm.) Proc., vol.3.

43. Parliamentary Papers, Nith Report, p.216.

Let us now try to understand how far all these measures adopted by the Company were successful. First, let us take the case of the weavers. We have to look at the various forms of resistance by the weavers. Some of these forms were very conspicuous, others were rather silent ways of protest and non-cooperation. On many occasions the weavers were organised as a body. This provided them with a better bargaining position, vis-a-vis the buyers in terms of prices, working conditions, etc., and also to resist the instances of coercion exercised by the buyers. The leaders of these combinations were usually head weavers called Jellatdars.⁴⁴ From Dacca, Mr. Grueber complained in 1776 of the existence of such a combination of weavers under his factory. He reported that weavers from two villages noted as Conchanaghat and Tangabo under Sonargaon auran refused to work for the Company. During the investigation he learned that they had been intimidated by the weavers of Sonargaon.⁴⁵ There were some cases of outright refusal by the weavers to accept advances from the Company's agents. For example, in Santipore, in 1783, out of 100 weavers comprising in the first class of the old Shantipore workmen, only nine chose to take the pottah, some declared that they had full advances in hand, all of them plainly spoke that

44. Proceedings, 31 Oct., 1783, B.O.T. (Comm.) Proc., vol 39.

45. Ibid.

they were better paid elsewhere and therefore asked for an upward revision of the Company's rates along with many other conditions in their own favour.⁴⁶ Some other such cases may also be found⁴⁷.

But these conspicuous forms of resistance by the weavers were not very numerous. Less visible forms were more in number. The most common among these was the clandestine commercial units that the weavers had with their agents of the foreign companies, the private English traders, the English Company's servants, the indigenous merchants, etc. Evidences of these channels have already been cited earlier in this chapter while speaking about the competition for buying cotton piece goods at different places. The main reason as to why the weavers engaged in the services of private traders, etc., was that they offered better prices for the goods.^{47a} The agents of the foreign Companies as well as the local indigenous merchants, in order to procure a sufficient quantity of cloths in a situation of intense competition, did not hesitate to give higher prices than the Company. Moreover, these agents accepted whatever quality

46. Proceedings, 31 Oct., 1783, B.O.T. (Comm.) Proc., vol.39.

47. Proceedings, 20th Nov., 1783, B.O.T. (Comm.) Proc., vol.40.

47a. Proceedings, 20th Jan., 1790, B.O.T. (Comm.) Proc., vol.84.

was brought to them by the weavers, not rejecting even a single piece of cloth. The weavers were very prompt and eager to deliver them.⁴⁸ The coarser the cloth the more expeditiously they were manufactured. The Company's case was different. Its agents had to select the cloths very minutely and compare each piece with the sample kept in the factory and this selection resulted in the rejection of many of the pieces delivered by the weavers.⁴⁹

Another reason might be the very informal kind of relationship that the agents of the private merchants established with the weavers in contrast to the very formal kind of arrangement that the Company's agents had. Apart from the advances for production, the dalals of the private merchants also provided the weavers with funds for daily consumption needs on some occasions. In this way a good relation was built up with the weavers. This was understood by the English chief at Dacca who felt that the system of exercising complete control over the weavers and forcibly taking their goods was self-defeating. Instead, he suggested that the Company's agents should try to cultivate a good relationship with the weavers so that they can be

48. Proceedings, 20th Nov., 1783, B.O.T. (Comm.) Proc., vol.40; Proceedings, 24th Sept., 1784, B.O.T. (Comm.) Proc., vol.44.

49. Ibid.

dissuaded from offering their services to the private merchants.⁵⁰

How the buyers other than the English Company managed to avoid the sanctions of the Company and maintained their links with the weavers can be seen in an earlier portion of this chapter. Here we are providing some more evidence for this. In 1786, Charles Grant, the resident of Malda, found that in spite of the Company's regulations, the evils clandestinely to individuals cloths manufactured for the Company. Foreign agents found it so much more easy and effectual to procure cloths in their way.... Especially the French gomashtah ...hoists one flag in Malda...(and) has one carried before him and his dalals when they go among the polikies as they are called, or villages where the Company's weavers reside, and being no public hauts they have no business, nor ought by former regulation to appear.⁵¹

50. Proceedings, 2nd June, 1775, B.O.T. (Comm.) Proc. vol.3.

51. Dinajpur District Records, ed. Walter Firminger, (Shillong, 1914), vol.I, Letter No.9, p.15., Letter from Charles Grant to George Hatch, Revenue Collector at Dinajpur.

II Impact of the English Company's export trade on the cotton piece goods industry and the Bengal economy
1. Production Condition and Technology

One thing can be said very certainly that there was no significant technological innovation in the cotton piece goods industry during this period (1750-1800). We have not come across any evidence in the records indicating such an innovation. Of course there are some cases of the production of a slightly improved quality of cloth or an altogether new variety of cloth but these in no way indicate any technological innovation in the correct sense of the term.^{51a}

Let us now turn our attention to the production conditions throughout this period. In this context, I would like to refer to the arguments put forward in a recent book by Hameeda Hossain^{51b}. Hossain argues that the involvement of the East India Company in the procurement and production of cotton goods in Bengal did not contribute to the development of the production sector, for in the last decades of the 18th century it was unable to keep pace with expanding demand. It coincided with the period when the East

51a. F. Watson, The Textile manufacture and the costumes of the people of India.

51b. Hameeda Hossain, The Company Weavers of Bengal (Oxford, 1988).

India Company emerged as a major buyer of textile and acquired political and administrative power. It was thus able to influence economic activity and to provide a centralised direction to trade and production. Yet in spite of its increased procurement targets, the results were a reduction in output, deteriorating conditions of producers points out that the stagnation or decline in production was due to pressures developing within the supply organization and cannot be explained in terms of supply and demand or of one superior economic force supplanting another⁵². The 'pressures developing within the supply organisation' were, according to Hossain, the system of controls that the company imposed over procurement and production⁵³. 'As the Company set out to intimidate its rivals and dispense with traditional trading arrangements in order to restrict the weavers' output to its own channel of procurement, it had to resort to both economic and non-economic pressures. The use of financial controls amounted to forced extraction, while the legal controls, which were introduced to regulate production, created a system of obligatory relationships.⁵⁴ In all, what Hossain argues is that a combination of institutional and individual rapacity marked the pattern of

52. Ibid, p.173.

53. Hossain, op. cit., p.174.

54. Hossain, op. cit., pp.175-6.

producement inhibited the capacity for production and contributed to the economic decline of the artisan community.⁵⁵.

What I am trying here is to develop a critique of Hossain's arguments. Now, Hossain's arguments are drawn by the inductive method from a certain set of evidences or indicators. As we all know, the process of drawing certain conclusions from certain observations by the inductive method also involves certain presuppositions. Here also Hossain has certain presuppositions which can be questioned in their own way. I will come to this aspect later. Again, the evidences or indicators that are being used can be scrutinised in the light of the existing records. For that one has to explore whether the evidences cited have been correctly interpreted or not. So any critique will have to deal with all these aspects.

In an earlier section, I have shown how far all the financial and legal controls were successful. So, we can come straightaway to the indicators on which Hossain bases her arguments about the decline of production in the last decades of the 18th century. Mainly, three indicators are taken: 1. the gap between the orders and production or

55. Ibid.

demand and supply at the different aurungs over the years, 2. the amount of cloth rejected by the company's agents and the outstanding balances due from the weavers,^{55a} 3. the migration of weavers from the aurungs.^{55b} Hossain argues that all these three variables for the Dacca aurungs were rising in the last decades of the 18th century,⁵⁶ thereby pointing out to increased exploitation and the decline of production. A fourth indicator is the per capita real income of the weavers which Hossain holds to be declining in the last decades of the 18th century.⁵⁷ We will take up the question of the per capita real income in the next section.

Let me first take up the first point, i.e., the gap between demand and supply at the Dacca aurungs for the period 1791-1801.^{57a} It is doubtful how far this indicates a decline. Let me first reproduce Hossain's table here (table 3.1a). Take for example, the Sonargaon aurung. Here the number of pieces produced was 5621 in 1791-2, 6287 in 1793-4 and 9692 in 1799-1800. So there was a steady increase. The gap between demand and supply was 304 in 1791-2 but it went

55a. Hossain, op.cit., p.159.

55b. Ibid, p.164.

56. Hossain, op.cit., pp.152,159,164.

57. Hossain, op.cit., pp.160-2.

57a. Ibid, p.152, table 5.4.

Table 3.1a

Production for the Company (Volume)

Arrangs		1791-2	1792-3	1793-4	1799-1800	1800-1
		Pieces	Pieces	Pieces	Pieces	Pieces
Dhaka	Ordered	4795	9690	-	8200	3333
	Received	3871	-	7567	5000	-
Sonargaon	Ordered	5925	7160	-	9770	7679
	Received	5621	-	6287	9692	-
Dhamrai	Ordered	2440	4540	-	-	3540
	Received	2246	-	3757	-	-
Narainpur	Ordered	8000	9600	-	8800	8300
	Received	6136	-	7244	7789	-
Chandpur	Ordered	650	1650	-	1400	1345
	Received	530	-	1289	895	-

continued...

Table 3.1a continued

Arrang ^g		1791-2	1792-3	1793-4	1799-1800	1800-1
Srerampur	Ordered	-	800	-	-	1951
	Received	-	-	461	-	-
Jangalbari- Bajitpur	Ordered	2900	9790	-	7350	7013
	Received	2543	-	9217	4274	-
Titabadi	Ordered	4375	7250	-	1797	5197
	Received	4182	-	5197	1641	-

Source: Hameeda Hossain, The Company Weavers of Bengal, p. 142.

down to 78 in 1799-1800. (The demand went up from 5925 in 1791-2, to 7160 in 1792-3, and 9770 in 1799-1800). Or, take the case of Narainpur. Here the number of pieces produced climbed from 6136 in 1791-2 to 7244 in 1793-4 and 7789 in 1799-1800 (a steady increase). The amount demanded was 8000 in 1791-2 and 8800 in 1799-1800. The gap between demand and supply was 1864 in 1791-2 and 1011 in 1799-1800. These evidences show anything but a decline in production. Improvements are also seen between 1791-2 and 1793-4, in Dhaka, Dhamrai, Chandpore, Jangalbari-Bajitpore and Titabadi aurungs. All these aurungs show signs of decrease of production after 1795 in terms of the amount produced and the gap between demand and supply. In case of Chandpore, and Jangalbari- Bajitpur the gap between demand and supply was more due to rise in amount demanded (perhaps ignoring the production capacity of the aurungs) than to any other factors. In case of Chandpur, the number of goods demanded by the Company increased from 650 in 1791-2 to 1650 in 1792-3 (an increase of nearly 153%). The number of goods demanded was then 1400 in 1799-1800 and 1345 in 1800-1. (see table 3.1a). In case of Jangalbari- Bajitpur, the number of goods demanded by the Company increased from 4375 in 1791-2 to 7250 in 1792-3 (an increase of 66% and thereafter it was 7350 in 1799-1800 and 7013 in 1800-1(see table 3.1a). In case of Titabadi aurung, the decrease in amount of output

after 1793-4 was largely due to drastic fall in the amount demanded from that aurung from 7250 pieces in 1793-4 to 1797 pieces in 1799-1800. Thus one can see that Dr.Hossain's own data does not indicate any decline in production in the Dhaka aurungs in the last decade of the 18th century.

Before taking up the discussion about the other two indicators, I would like to draw attention towards what was the happening at the European market for cotton goods in the last decades of the 18th century. As we noted earlier in this chapter there were certain shifts in demand condition for cotton piecegoods in the European market in the last decade of the 18th century. The average selling price of the Company's piece goods fell from L1.14.0 per piece in 1787 to L1.10.6 in 1799 and L0.15.6 in 1805.⁵⁸ Market conditions reflected a shift towards increased demand for less refined assortments. This was due to the fact that the industrial revolution in Britain in the 1780s made possible the production of finer assortments at lower costs than the Company could possibly do.

We have pointed out earlier that the private merchants offered better prices and demanded coarser and middling varieties which did not require strict inspection.^{58a}

58. Milburn, *Oriental Commerce*, vol.II. p.222.

58a. Hossain, *op.cit.*, pp.67-69.

Table 3.1b

Private Muster	Price	Nearly corres- ponding to Company's muster	Price	Percentage of difference
	Rs. A. P.		Rs. A. P.	
1. Allaballies Fine C20x2 yds	12-4-0	Serbetties Fine A 40x2 yds	10-8-0	16.66
2. Allaballies Superfine B20x2 yds	19-0-0	Allaballies Fine A 40x2 yds. 1700 threads	18-0-0	5.55
3. Terrindams Superfine A40x2 1/2 yds	24-0-0	Terrindams Superfine C40x2 1/4 yds	19-4-0	24.67
4. Terrindams Superfine B40x2 1/2 yds	27-3-0	Terrindams Superfine B40x2 1/4 yds	21-6-0	27.19
5. Nyansooks Chandpur Superfine A40x2 1/4 yds	19-8-0	Nyansooks Chaundpur Fine	12-0-0	62.5

continued....

Table 3.1b continued

Private Muster	Price	Nearly corres- ponding to Company's muster	Price	Percentage of difference
	Rs-A-P		Rs-A-p	
6. Subleems Fine Superfine readymade A40x2 yds	32-0-0	Subleems B40x2 yds	29-4-0	9.40

Source: Proceedings, Board of Trade (Comm)., 26 January 1790, Vol. 84.

That the private merchants offered better prices for the items they purchased than the English company in 1790 can be seen in the following table (3.1b). So it can be argued that the decrease of demand for finer varieties which were exported by the company, increase in demand for coarser varieties by private merchants, While the company sold 717,094 pieces annually in 1784-90; its sales dropped to 535,751 pieces annually in 1802-83 in the European market. The private merchants sales increased from 1,396,655 pieces in 1795-6 to 2,738,509 pieces in 1802-3.^{58b} (both due to market conditions in Europe), better prices offered by the private merchants and the easy production method for the less finer varieties, combined together explain the decrease in production of the finer varieties generally exported by the company in the post 1795 period. They also explain the other 2 indicators put forward by Dr. Hossain and do not suggest any decline in production due to 'pressurs inside the supply organisation', but due to certain forces external to the production system. Thus the increase in the proportion of ferretted goods, and the shift of the weavers from the production of finer varieties in the Dhaka aurangs in the post 1795 period can be explained by the fact that there was a decline in the demand for the goods exported by the

58b. Ibid, pp.66-68.

company into European market and consequently a decrease in the amount of cotton goods (of finer varieties) demanded by the company in Bengal. This, in turn, meant a decrease in the amount of total output of cotton goods (of the finer varieties) and reduction in the number of weavers required in the cotton piece goods (finer varieties) production sector. Parallely, there was an increase in the demand for the less finer assortments in the post 1795 period (which were required by the private merchants), which fetched better price per unit of labour time spent. We have shown earlier that in the 1790s, the private merchants offered better prices per piece for the varieties of cotton goods they demanded than the company. We also noted that the private merchants demanded mostly coarser varieties in this period which required less labour time for production compared to the finer varieties taken mostly by the company. So one can say that the private merchants offered better prices per unit of labour time than the company as far as the varieties which they demanded, were concerned. So there was also a rise in demand for labour in that sector. Consequently, there was some shift of weavers from production of finer varieties to that of the less finer assortments in the post 1795 period. For the same reason, those who continued to produce finer varieties also produced greater number of less finer assortments now and adopted

their production technique more towards the manufacture of inferior assortments that is why the proportion of the ferretted goods was increasing in the post 1795 period.

Thus it is seen that the decrease in the production of the finer varieties was occurring in the post 1795 period due to certain external forces and in no way there was decline in the production system (due to pressures developing within it). Further evidence can be cited to prove that the cotton goods production system did not suffer from any decline in the period 1750-1800. The first set of such evidences relate to cases of improvements with quality of cotton goods and production of new varieties altogether. Here is a case of improvement in quality of coarser cotton goods in Dacca. In 1775, we get a report which says that among the different types of cotton goods, the finer varieties were tallying with the old samples but the coarser varieties had definitely improved in quality so much so that the old samples for these varieties had to be discarded and new ones introduced. It is also interesting to note here that the cost of production per unit of output for these varieties did not however rise in the process of improvement⁵⁹. Improvements in the quality of cloth in terms

59. Proceedings, 5th May, B.O.T. (Comm.), Proc., vol.3.

of fabric, dimensions and bleach were also reported from Burron aurung in 1783.⁶⁰

New assortments of cloths were also reported occassionally from different parts of Bengal throughout this period.⁶¹ The company was interested in these new assortments and whenever any such new assortment came up its agents sent it to the Board of Trade for trial. We have an aexample from Dacca in 1783 when a new variety of cloth was produced. It was ornamented with small springs between the stripes. The weavers had produced it at the cost of Rs.23 per bale, equivalent to the price of 20 and 2 variety of cloth. This new variety was sent for trial. It should be noted here that for any trial of cloth, the actual result could not be obtained if it was judged in corah (unbleached state). The result of the trial was as follows: Initially it seemed that the variety was of lighter ground and more in the nature of keerpay than Dacca dooreas. But after bleaching, it was found that the new variety turned out to be of a thicker measure, the stripes varied and made much closer (Note: broad stripes were then out of fashion). So, it suited the European buyer.

60. Proceedings, 4th Nov., 1783, B.O.T. (Comm.) Proc., vol.40.

61. Ibid.

The evidences in the records pointing out to stability of production as well as the capacity of the aurungs to cater to increased demand for goods⁶² can also be taken as indicating that there was no decline or stagnation in production.

The strength or tenacity of a production system can be judged really in times of crisis. So, the conclusion that the cotton goods production system in Bengal did not suffer any decline in the last decades of the 18th century can be firmly established only if it can cause the test in moments of crisis. In 1788, there occurred great natural calamity in Bengal. These were sufficient to adversely affect any production system. However, from the evidence we have, it seems that although the production was hampered at the initial stage but it was strong enough to recover quickly and attain the same level within a short span of time. For example, on 6th November, 1788, the Board of Trade stated that at Dacca, which was severely affected, the investment had become cheap and good by late October. The clothes bore evident marks of selection and improvement. The business in general could be conducted with ability and zeal. The fabrics of Shantipur and particularly of Burron were also improving. Those of Malda, though that place had been

62. Proceedings, 6th May, 1778, B.O.T., (Comm.) Proc., vol.15.

subjected to particular additional inconvenience from want of silver specie and the evils of debased materials were not yet eradicated there, were in general of a commendable quality this year. The Board also entered hopes likewise from what they had seen of the fabrics of Soonamooky and Mundulghat.⁶³ Thus, one can argue that even under conditions of stress, the cotton goods production system in Bengal showed extreme tenacity and the power to recover fast and did not display any signs of decline even in the late 1780s and hardly 1790s.

Output, Employment and Income

Let us first mention certain very basic figures⁶⁴:

In this period, the value of one pound was equal to roughly Rs.10/- and one maund was equal to 82 lbs. approximately. Another set of figures are: The weavers' real income from a particular piece of cloth constituted about 22% of the real value of that piece on the average in our period 1750-1800. Actually this share varied from 37% to 7% of the

63. Proceedings, 6th Nov., 1788, B.O.T. (Comm.), Proc., vol.73.

64. W.W. Hunter, A Statistical Account of Bengal, vol.IX, pp.160-2.

real value of the piece in our period.⁶⁵ These figures are avreaged from the weavers shares for different varieities of cotton goods at different places in Bengal between 1788 and 1795. For convenience of calculation, I have taken the average figure that is 22% of the total real value of piece goods as the weavers' income share in it for the entire period 1750-1800. Again, we find that the prices of the basic consumer goods rose by 57% over the period, 1750-1800,⁶⁶ that is, it rose by 1.14% per year at simple rate, assuming linear trend in price rise. Before going into further calculations, I would like to make certain assumptions which are of course supported by the available evidence in the Company's records and elsewhere. These are:

- (1) There was only one technique of production for cotton goods, that is, we have constant coefficients of factors of production.
- (2) There was constant production activity of labour and capital, that is, there was no technical change.
- (3) There was constant returns to scale.
- (4) There were no constraints on capital and labour supply.

65. Proceedings, 20th May, 1795, B.O.T. (Comm.), Proc., vol.116.; IOR, Home Misc. 393, pp.261-2, quoted in Hameeda Hossain, The Company Weavers of Bengal, p.56.
I have earlier shown the gross outlay on cotton goods

66. Based on figures in H.Hossain, op.cit., pp.179-183.
I have earlier shown the gross outlay on cotton goods

in Bengal by the East India Company in Table 3.1. Now, let me calculate the real outlays for the different years in the period 1750-1800. ^(Table 3.2) For calculating the real outlay in a particular year, one has to deflate the gross outlay in that year by the price index of consumer goods for that year. The price index for a particular year can be calculated as follows:^{66a} If '0' is the base year, and 't' is the current year, then price index for the year 't' or p^+ is defined as:

$$= \frac{\sum_{i=1}^n p_i^t q_i^t}{\sum_{i=1}^n p_i^0 q_i^t}$$

where p_i^0 = Price of commodity, i, in the base year

p_i^t = Price of commodity, i, in the year, 't'.

q_i^t = Quantity of commodity, i, in year, 't'.

and i = 1.....n.

Here we take the year as 1750 as the base year.

Thus, we see that in the period 1755-1795, the total increase in the real outlay on cotton goods in Bengal by the English company was Rs.1524669. This means that the real

66a. Usher, The Measurement of Economic Growth, p.149.

Table 3,2

Year	Gross Outlay in Cotton goods (Based on Table 3,1)	Real Outlay in Cotton goods (Base year:1750)
	Rs	Rs
(1)	(2)	(3)
1770	70,00,000	57,00,326
1772	69,77,790	55,82,224
1773	50,86,220	40,36,683
1774	46,69,440	36,76,724
1775	65,92,550	51,10,504
1776	44,62,770	34,32,900
1777	61,45,390	46,91,137
1778	59,50,790	45,08,174
1779	25,04,641	18,83,189
1780	25,04,641	18,69,135
1781	25,04,641	18,55,290
1782	25,04,641	18,41,648
1783	32,39,735	23,47,634
1784	38,19,051	27,47,519
1785	56,84,887	40,60,634
1786	56,54,880	40,10,553
1787	55,16,323	38,84,735
1788	55,67,602	38,84,735
1789	56,11,888	38,84,735

continued...

Table 3.2 continued

(1)	(2)	(3)
1790	56,56,174	38,84,735
1791	37,56,686	25,55,569
1792	61,69,686	41,68,707
1793	80,27,230	53,87,403
1794	80,27,230	53,51,487
1795	80,27,230	53,16,046
1796	23,74,950	15,62,467
1797	47,49,900	30,84,351
1798	47,49,900	30,64,452
1799	12,85,759	8,24,204
1755	40,18,860	37,91,377 .
1757	6,09,980	5,64,796
1760	25,29,870	22,79,162
1766	45,47,000	38,53,390

outlay was growing at the rate of Rs.38117 per year during this period, assuming a linear trend in this growth. Or, it may be said that in the period 1755-1795, real outlay was growing at the rate of roughly 1% per year simple rate, compared to the real outlay in 1755. However, after 1795, the real outlay started decreasing.

Let me now try to calculate the number of weavers employed in the cotton goods sector over the years. We get a figure that in Luckipore in 1796, 64188 pieces were produced by 4503 weavers.⁶⁷ Therefore, 14.25 pieces were produced per weaver. In 1799, 34750 pieces were produced by 4165 weavers.⁶⁸ Therefore, 8.34 pieces were produced per labour. Thus, the average equal to 11.3 pieces were produced by one weaver. Or it may be said that 0.088 weaver were required to produce one piece. Using this figure, I will try to calculate the number of weavers employed in the cotton goods sector over the years by relating it with the figures for the number of piece goods produced each year in Table 3.3.

Thus, we see that in 1755, due to the company's export trade in cotton goods from Bengal, employment was provided for 34392 weavers in Bengal. In 1766, There was a 57% increase in the employment level in the cotton goods sector

67. Proceedings, 21st August, 1801, B.O.T. (Comm.) Proc., vol.154

68. Ibid.

Table 3.3

Year	No. of pieces produced (based on Table 3.1)	No. of weavers employed	Add. employ- ment
(1)	(2)	(3)	(4)
1755	3,90,814	34,392	-
1757	82,656	7,274	-27,118
1760	3,77,302	33,203	25,929
1766	6,14,459	54,072	20,869
1770	9,45,946	83,243	29,171
1772	9,42,943	82,979	- 264
1773	6,87,327	60,485	-22,494
1774	6,31,005	55,528	- 4,957
1775	8,90,885	78,398	22,870
1776	6,03,077	53,071	-25,327
1777	8,30,458	73,080	20,009
1778	8,05,010	70,841	- 2,239
1779	3,38,465	29,785	-41,056
1780	3,38,465	29,785	0
1781	3,38,465	29,785	0
1782	3,38,465	29,785	0
1783	4,37,802	38,527	8,742
1784	5,16,088	45,416	6,889
1785	7,68,228	67,604	22,188

continued.....

Table 3.3 continued

(1)	(2)	(3)	(4)
1786	7,64,173	67,247	- 357
1787	7,45,449	65,600	- 1,647
1788	7,45,449	65,600	0
1789	7,45,449	65,600	0
1790	7,45,449	65,600	0
1791	5,07,660	44,674	-20,926
1792	8,33,741	73,369	28,695
1793	10,84,761	95,459	22,090
1794	10,84,761	95,459	0
1795	10,84,761	95,459	0
1796	3,20,939	28,243	-67,216
1797	6,41,878	56,485	28,242
1798	6,41,878	56,485	0
1799	1,73,751	15,290	-41,195

compared to the employment figure in 1765. Between 1766 and 1770, there was a rise of 64% in the employment level. The high water mark in terms of the employment and output levels was reached in the years 1770, 1772, 1793-95 where the output level crossed 9 lakhs and the employment level crossed 80,000. Between 1772 and 1773, the employment decreased by 27% but after 1773, it rose again upto 1778. Between 1778 and 1779, there was a drastic fall by 58%. However, after 1782, it picked up again and between 1782 and 1785 we find that the employment level rose by 127%. Between 1785-87, the employment remained quite steady. In 1792, the employment figure was 73369. Between 1792 and 1793, there was a rise of 30% relative to the figure in 1792. The period 1793-95 was marked by the highest level of output and employment. The output level was 1084761 pieces annually and this provided employment for 95459 weavers every year in this period. However, after 1795, there was a significant fall in both output and employment level. Thus, we find in the period 1755-95, the total additional employment generated was 61067 or one might say, 1527 per year. This means a growth in employment by 4%, approximately every year at simple rate compared to the employment level in 1755.

Let me now try to coordinate the information we have got so far and calculate the per capita real income for the weavers in the cotton goods industry (Table 3.4). In Table

Table 3.4

Year	Real Outlay by the Company in Cotton piece goods (Base year 1750)	Real Price per piece	Weavers employ- ed (Based on Table 3.3)	Per Capita real income per year (Base year 1750)
	Rs	Rs		Rs
(1)	(2)	(3)	(4)	(5)
1755	37,91,377	9.70	34,392	24.25
1760	22,79,162	6.04	33,203	15.15
1766	38,53,390	6.27	54,072	15.66
1770	57,00,326	6.03	83,243	15.07
1772	55,82,224	5.92	82,979	14.80
1773	40,36,683	5.87	60,485	14.68
1774	36,76,724	5.83	55,528	14.57
1775	51,10,504	5.74	78,398	14.34
1776	34,32,900	5.69	53,071	14.23
1777	46,91,137	5.65	73,080	14.12
1778	45,08,174	5.60	70,841	14.93
1779	18,83,189	5.56	29,785	13.91
1780	18,69,135	5.52	29,785	13.81
1781	18,55,290	5.48	29,785	13.70
1782	18,41,648	5.44	29,785	13.60
1783	23,47,634	5.36	38,527	13.41
1784	27,47,519	5.32	45,416	13.31
1785	40,60,634	5.29	67,604 67604	13.21

continued.....

Table 3.4 continued

(1)	(2)	(3)	(4)	(5)
1786	40,10,553	5.25	67,247	13.12
1787	38,84,735	5.21	65,600	13.03
1788	38,84,735	5.21	65,600	13.03
1789	38,84,735	5.21	65,600	13.03
1790	38,84,735	5.21	65,600	13.03
1791	25,55,569	5.03	44,674	12.59
1792	41,68,707	5.00	73,369	12.50
1793	53,87,403	4.97	95,459	12.42
1794	53,51,487	4.93	95,459	12.33
1795	53,16,046	4.90	95,459	12.25
1796	15,62,467	4.87	28,243	12.17
1797	30,84,351	4.81	56,485	12.01
1798	30,64,452	4.77	56,485	11.94
1799	8,24,204	4.74	15290	11.86

3.4, the figures in column II have been taken from Table 3.2. The number of pieces produced in the different years have been taken from Table 3.3. By dividing the real outlay figure in any year by the number of piece goods produced in that year, one can get the real price per piece of cotton piece goods in that year. This is given in column III in Table 3.4. The information column IV comes from Table 3.3. We have earlier worked out that on the average in the period 1750-1800, 22% of the total real value of piece goods went to the weavers as their annual income from the producing those goods. For calculating the per capita real income in this sector (column V in Table 3.4) for a particular year, I have taken 22% of the real outlay on the cotton goods in that year as the total real income of the weavers engaged in producing these in that year. By dividing this total real income figures by the number of weavers employed in this sector in that particular year, we can get the per capita real income per weaver in the cotton goods sector. For example, take the year 1755. We can calculate the per capita real income for weavers in the cotton goods sector as

$$\begin{aligned}
 & 22\% \times \text{Rs.}3791377 \\
 = & \frac{\text{-----}}{34392} \\
 = & \text{Rs.}24.25
 \end{aligned}$$

We follow the same method for the other years as well.

So, one can put it in this way that if the per capita real income was Rs.x in 1766, then in 1799, it became Rs.76x/100. We have got the information that if the price index in 1750 was 100, then in 1800 it was 157. (Price rise equal to 57%). If we assume a linear trend in price rise, then the price index in 1766 can be calculated as equal to 118.24 and in 1799 the price index was 155.86. Therefore, the gross per capita income in 1766 was equal to Rs.x X 118.24/100 = Rs.118.24x/100. The gross per capita in 1799 was equal to Rs.76x/100 X 155.86/100 = Rs.118.45x/100. Thus, we find that the gross per capita income of weavers rose by 2% in 1799 compared to the figure in 1766. However, we find that due to significant price rise of basic consumer goods, the per capita real income was coming down in the period, 1766-1799 by 0.73% per year, simple rate, relative to the 1766 level. (see Table 3.4).

An important point should be noted here. We have noted earlier that there was considerable unemployment and underemployment in the Bengal economy during this period. Therefore, the opportunity cost of labour was zero or nearly zero over a considerable range in the economy.⁶⁹ So it is wrong to argue, as many scholars have, that labour tended to shift away from the cotton goods sector because of low opportunity costs in that sector in the late 1780s and

69. Amartya Sen, Choice of Techniques.

1790s. In fact, it is clear that even in 1799, when the per capita annual real income in the cotton goods sector touched its lowest level in this period, i.e., Rs.11.86, (see table 3.4) it was well above zero and consequently a large section of the labour force found it economically worthwhile to work in the cotton goods sector as weavers and in other capacities.

Let me now try to find out the income generated in the Bengal economy, as a result of the company's outlay on cotton goods in Bengal. Before going into the actual calculations, I will try to make a few points. It should be noted that in the Bengal cotton goods sector outside the domain of the company's exports, there was no decline in the level of demand for cotton goods throughout the period 1750-1800. If there was any fall in the demand for cotton goods from any region, it was made up by a rise in demand from another region.⁷⁰ Therefore, any increase in the company's real outlay on Bengal cotton goods implied a net increase in the aggregate demand for Bengal cotton goods.

I would now introduce a new concept on which much of my calculations are based. This is the concept of the 'multiplier'. The multiplier defines the precise relationship between an original increase in income (due to

70. N.K. Sinha, Economic History of Bengal, vol.I.

an initial increase in investment) and the ultimate total increase in income in the economy.⁷¹

The ultimate rise in income

$$= \frac{1}{1 - a} \quad X \quad \text{original increase in income.}$$

$$\text{here, } \frac{1}{1 - a} = \text{'multiplier'}$$

$$\text{and } a = \text{marginal propensity to consume.}$$

We will assume that there were no leakages from the additional income generated from the economy and so the size of the multiplier would not be reduced. Another point to be noted here is that in the cotton goods sector, the technology of production was highly labour intensive and the capital-output ratio was very low. So, it may be argued that the predominant part of the real outlay on cotton goods went as cost of labour. If we look at it in another way, then we find that the real outlay on cotton goods created an initial income in this sector which through the multiplier effect generated in turn a higher total income in the economy, given the linkages and other conditions being present for the working of the multiplier. It is also assumed that the value of the multiplier remained constant throughout our

71. Stonier and Hague, A textbook of economic theory (5th edn.), (N.Y., 1980), pp.450-4.

period. In algebraic language this can be expressed in the following way. In time period, t_1 , the real outlay was $Rs.x_1$. This created an initial income in the sector equal to $Rs.y_1$. The initial income y_1 , generated in the economy through the multiplier effect, a total final income equal to $Rs.k.y_1$, where $k = \text{multiplier}$.

Now, the 'drain' phenomenon has also to be taken into account since from the mid 1760s, cotton goods 'exported' from Bengal by the company were not really exported but transferred to England. The value of the drain, thus, in time period, t_1 , was $Rs.y_1$ for Bengal which, if the value is transformed into labour time can be denoted by y_1 labour time. Now, we have seen earlier that the total final income generated in the Bengal economy in t_1 was equal to $Rs.k.y_1$. In labour time terms, this is $k.y_1$ labour time. So, the net gain for the Bengal economy in time period, $t_1 = [K.y_1 - y_1]$ labour time or if transformed to monetary units, this is equal to $Rs. [k.y_1 - y_1]$. So, it can be argued that taking into account the drain of wealth phenomenon, we find that the cotton goods sector in Bengal catering to the company's exports generated a net total income in the Bengal economy in time period, t_1 , equal to $Rs.[k.y_1 - y_1]$. Since value of real outlay is equal to the initial income created in the sector, that is, $x_1 = y_1$, $Rs.[k.y_1 - y_1]$ may be written as $Rs.[k.x_1 - x_1]$ where $k = \text{multiplier}$. Similarly, for time

period, t_2 , the nett total income generated in the Bengal economy was equal to Rs. $[k.x_2 - x_2]$, and so on. Now, what was the value of the multiplier? We have to remember that the initial income created in the cotton goods sector, Rs. y_1 was going to a basically low income group, having a high marginal propensity to consume. This group would spend most of their consumption budget on necessities, the demand for which is considered to be price inelastic.⁷² Let us take the marginal propensity to consume for this group as equal to $\frac{2}{3}$. Buchanan - Hamilton estimated that middle level merchants, petty traders, rich and poor peasants, weavers and other artisans generally spent between 60% to 80% of their income on basic necessities, i.e., food, clothing, housing, etc. (M.M. Martin, ed., The history, antiquities, topography and statistics of Eastern India, Book III, Appendix, Tables G to M). Therefore, the value of the multiplier is equal to

$$\frac{1}{1 - \text{MPC}} = \frac{1}{1 - \frac{2}{3}} = 3 = k.$$

Using this value of the multiplier, we can say that in time period, t_1 , the net total income generated in the Bengal economy by the cotton goods sector was equal to Rs. $[3.x_1 - x_1] = \text{Rs.} 2.x_1$. Similarly, in t_2 , the net total income

72. Paul Samuelson and Nordhaus, Economics, 12th edn.

Table 3.5

Year	Real Outlay on Cotton goods in Bengal	Net Real Income generated in Bengal by this outlay	Additional income generated
	Rs	Rs	Rs
(1)	(2)	(3)	(4)
1755	37,91,377	1,13,74,131	
1760	22,79,162	68,37,486	-45,36,645
1766	38,53,390	77,06,780	8,69,294
1770	57,00,326	1,14,00,652	36,93,872
1772	55,82,224	1,11,64,448	- 2,36,204
1773	40,36,683	80,73,366	-30,91,082
1774	36,76,724	73,53,448	- 7,19,918
1775	51,10,504	1,02,21,008	28,67,560
1776	34,32,900	68,65,800	-33,55,208
1777	46,91,137	93,82,274	25,16,474
1778	45,08,174	90,16,348	- 3,65,926
1779	18,83,189	37,66,378	-52,49,970
1780	18,69,135	37,38,270	- 28,108
1781	18,55,290	37,10,580	- 27,690
1782	18,41,648	36,83,296	- 27,284
1783	23,47,634	46,95,268	10,11,972
1784	27,47,519	54,95,038	7,99,770
1785	40,60,634	81,21,268	26,26,230
1786	40,10,553	80,21,106	- 1,00,162

continued....

Table 3.5 continued

(1)	(2)	(3)	(4)
1787	38,84,735	77,69,470	- 2,51,636
1788	-do-	-do-	0
1789	-do-	-do-	0
1790	-do-	-do-	0
1791	25,55,569	51,11,138	-26,58,332
1792	41,68,707	83,37,414	32,26,276
1793	53,87,403	1,07,74,806	24,37,392
1794	53,51,487	1,07,02,974	- 71,832
1795	53,16,046	1,06,32,092	- 70,882
1796	15,62,467	31,24,934	
1797	30,84,351	61,68,702	
1798	30,64,452	61,28,904	
1799	8,24,204	16,48,408	

generated in the Bengal economy was Rs. $[3.x_2 - x_2] = Rs. 2x_2$ and so on. The net total real income generated in the Bengal economy for the different years in the period 1750-1800 by the company's outlay on cotton goods is given in the Table 3.5.

In calculating the real income generated in the economy by the outlay on cotton goods for the years 1755 and 1760, it was not necessary to take the drain of wealth factor into account. However, it has been taken into account for calculating the figures for 1766 and thereafter. We can see that in the period 1760-1795, the annual real income generated in the economy by the cotton goods sector catering to the company's exports rose by Rs. 3794606 over these 35 years, i.e., Rs. 108417 per year or at the rate of 1.6% simple rate compared to the annual real income generated in the 1760.

Summing up, we can say with confidence that in the period, 1760-1795, due to the English company's trade in Bengal's cotton goods, additional real income and additional employment were generated in the Bengal economy. Since the technology in this sector was highly labour intensive, more demand meant more output and consequently increase in employment. In a labour surplus economy, that Bengal was in this period, this was very significant. This is because, the

cotton goods sector absorbed a part of this surplus labour force and created income for them and the economy. Since the people directly employed in the cotton goods sector spent major portion of their income on necessities, this also stimulated increased output, increased employment (since here also the technology was labour intensive) and increased income in the sectors producing the necessities. So, the overall effect on the economy in terms of additional employment and income was quite significant. Another important aspect to be noticed here is that while the total real output and the total real income in the cotton goods sector rose consistently in our period, the per capita real income in the cotton goods sector was falling. This can be accounted for by the fact that in our period, there was continuous increase in the number of people employed in the sector and the rate of increase in the total real income in the sector (1.6%) was lower than the rate of increase in the employment in the sector (4%). As a result, the per capita real income in the cotton goods sector in Bengal during this period was falling. Lastly, it should be noted that although additional income generated in the Bengal economy implied increase in aggregate demand for necessities, and this increased demand was met up by increased production and employment in the sectors producing the necessities, the total amount of capital in the economy remained low. This

was because of the fact, that the technology in the sectors producing the necessities was very much labour intensive and so output in these sectors could be increased by drawing in more labour and did not necessitate the production of significantly more capital goods. Since, the total capital in an economy is measured by the net total value of all capital goods in the economy, the total capital in the Bengal economy remained at a low level.

CHAPTER IV

TRADE, PRODUCTION AND THE BENGAL ECONOMY - II

THE ENGLISH EAST INDIA COMPANY'S TRADE AND THE RAW SILK
INDUSTRY IN BENGAL (1750-1800)

The East India Company's export trade in silk included both raw silk and silk goods. However raw silk was much more important on the company's preference schedule compared to silk goods. We will take up the trade in raw silk in this section.

I COURSE OF THE COMPANY'S EXPORT TRADE IN RAW SILK : BROAD TRENDS

The company's interest in Bengal silk goes back well into the middle of the 17th century. Before this time, though silk was included as an item of the company's trade, the company was more interested in the silk from China, Japan and above all, Persia¹ During 1617-18 Sir Thomas Roe had tried hard to persuade the "sophy" of Persia to grant to the English company the monopoly of trade in Persian silk.² It was the failure of his efforts that turned the company's attention to Bengal silk³. A beginning was made with the

1. J. Geoghegan, Some account of silk in India especially of the various attempts to encourage and extend sericulture in that country (Calcutta, 1572), p.1.

2. Ibid.

3. W. Foster (ed.), The English Factories in India, 1618-21 (Oxford, 1906), p.198.

setting up of a factory at Patna in 1621.⁴ Soon after the middle of the 17th century, the English company's agents were reported to have settled at Kasimbazar, Bengal's major centre for silk production⁵. According to Tavernier, Kasimbazar in the mid-17th century produced around 2,200,000 lbs of silk. Though this might be a grossly exaggerated figure it indicates the preeminence of Kasimbazar in silk production.

During the first half of the 18th century, silk exports from Bangal by the company did not show any appreciable progress. Lack of encouragement greatly hampered the company's efforts in this direction while political turmoils led to the closing of their factories at times.⁶ Of such turmoils the Maratha raids had probably the most depressing effect upon the industry.⁷ This becomes evident if one takes a look at the relative contribution of

-
4. F. Bernier, *Travels in the Moghul Empire*, ed., A. Constable, reprint. (New Delhi, 1972), p.440.
 5. J.B. Tavernier, *Travels in India*, vol.II., tr., V.Ball., ed., W. Crooke, reprint (New Delhi, 1977), p.2.
 6. J.H.T. Walsh, *History of Murshidabad*, p.102.
 7. K.K. Datta, *Studies in the History of the Bengal Subah*, i, p.437.

different areas in the silk imported into Great Britain in the year, 1750.⁸

Flanders	1407 lbs
Spain & Portugal	2564 lbs
Straits	14897 lbs
Italy	36301 lbs
East India(including China)	43876 lbs
Turkey	132894 lbs

from 1757, however, conditions appeared to be improving. In that year, the court of directors sent one Mr.Wilder to Bengal with a view to effecting improvements in silk-winding.⁹ Having served the company for about 4 years, Wilder dies at Kassimbazar in 1761¹⁰.

Meanwhile, in the European market as well as in the market of Great Britain the demand for silk was high and it was also increasing. In 1764, the silk throwsters and others in the silk trade in Britain, presented a memorandum to the Lords of Trade, stating that the quality of raw silk imported was not sufficient to answer the demands of the trade. In order that the manufactures might not suffer for the want of materials, the Parliament took off the old duties paid upon the importation of raw silk and laid a new

8. Milburn, Oriental Commerce, vol.II, p.251.

9. J.H.T. Walsh, op.cit., p.103.

10. Ibid.

duty of 1s 3d per lb of 24 oz on raw silk and 1s 9d per lb on thrown silk, to be paid on importation, without any drawback on exportation, except to Ireland.¹¹ This also gave a fillip to silk exports from Bengal.

From 1751 to 1765, the silk exported from Brngal rose, on an average to about 80340 small pounds of 16oz each, per annum. However, it was not that the Bengal exports cut into the share of the other regions because during this period, the quantities from other parts also increased to an equal, if not a superior, degree of proportion¹². When the company got control of the revenues of the Bengal provinces in 1765, it was judged expedient to extend their commercial concerns, with a view of realising the surplus revenues of India. The article of raw silk appeared the most eligible for the interest of Bengal and the comapny because, firstly, it would help to extend cultivation and secondly provide additional employment for the people¹³. In 1766, there was an export of 195637 small lbs; and, on an average, of the 5

11. Milburn, op.cit., p.251.

12. Ibid.

13. Milburn, op.cit., p.252; Letter from Government of Directors, 16 March, 1768 in Fort William - India House Correspondence, vol.V, 1767-69 (ed.) N.K. Sinha (New Delhi, 1949).

succeeding years, from 1767 to 1771, it increased to 327630 small lbs per annum.¹⁴

All the silk exports we have talked about so far, were of the 'Bengal wound' or 'country wound' variety or the silk reeled in the rude and artless manner immemorially practised by the inhabitants of Bengal¹⁵. This variety of silk was however suited to only a few articles of manufacture, the principal consumption being in sewing silk buttons, twist and other articles of haberdashery and so had a comparatively limited demand. Moreover, the rude manner of the winding of this silk made its quality rather coarse. It was also marked by an unevenness of the thread within the same skein; parts of this skien would be drawn quite indifferently from varying numbers of cocoons. "It was common to find part single, part double, treble an in many instances even quardruple. The mode of assortment was also much neglected."¹⁶ The limited demand and the increased imports caused a reduction in the price of the country wound silk in the European market. The silk which in 1765 sold at 27s per great lb, sold in 1771-2 at 18s 6d great lb. Even large quantities (about 171807 lbs) of silk remained unsold.¹⁷

14. Milburn, op.cit., p.252.

15. Ibid.

16. Georghegan, op.cit., p.2.

17. Milburn, op.cit. p.252.

A relatively higher demand (and this demand was also increasing) in the European market was for a variety of silk that was much finer and was made more even. In order to tap this source of demand, the company decided to produce better quality silk in Bengal itself. Accordingly, a plan was suggested for introducing into Bengal the mode of winding practised in the filetures or winding houses of Italy and other parts of Europe; which, is carried into execution might create an opening for a still further consumption, by its becoming a substitute for some of the silks of Italy, Turkey and Spain.¹⁸ It could then also be used for many of the manufacturing branches, where the country-wound variety was not applicable.

In 1770, the company took a major step. It sent a team of Italians led by James Wiss of Piedmont to oversee the introduction of the Italian filature system, (then the most advanced in methods of silk winding) in Bengal. They were given the responsibility of training Indian winders in "raising and improving the produce of the worms and in spinning and drawing the silk from the cocoons in the perfect manner in which the same is done in Italy and other parts of Europe."¹⁹ Steps were also taken to encourage the

18. Ibid.

19. General Letter, 31 January, 1770, in General Letters to and from the Court of Directors, 1765-1854.

ryots to cultivate the mulberry plant, sometimes waste lands given rent-free for 2 years²⁰. However, at this moment occurred the terrible famine which "swept away one-third of the entire population engaged in silk cultivation all over Bengal"²¹ Despite this havoc the company persisted in their efforts to encourage the production of raw silk. From 1771, supplies of eggs of silk worms were obtained from China.²² The cultivation of mulberry was extended to the Bihar province.²³ A number of reeling factories were also established about this time. The first attempt to establish a silk reeling factory in Bengal on the part of the company was made at Budgebudge, a place situated to the south-west of Calcutta. But this was not successful. Some reeling factories were, however, established between 1770 and 1775, that of Jangipur (Murshidabad district) being erected in 1773²⁴. In the initial period the progress was slow, in terms of the total output of filature silk. But the quality was up to the mark. The court expressed its satisfaction by stating that the 'samples of filature silks received were deemed good marketable silk and approach near to the

20. J.H.T. Walsh, op.cit., p.103.

21. Bengal: Past and Present, XXIX, p.37.

22. J.H.T. Walsh, op.cit., p.103.

23. Bengal: Past and Present, XXIX, p.39.

24. Valentia's Travels, i, p.77.

Table 4.1

Season	Imported into England (small lbs)	Sold in Europe (small lbs)	Total of prime cost, duties, freight, other charges (£)	Sale Amount deducted (£)	Loss (£)
1776	5,15,913	3,11,551	4,09,851	3,65,653	44,198
1777	5,63,121	5,47,045	4,40,877	3,23,031	1,17,846
1778	6,02,964	5,89,245	4,72,114	3,25,505	1,46,609
1779	7,37,560	5,96,343	4,21,899	2,99,053	1,22,846
1780	2,35,216	5,47,065	2,88,933	2,17,599	71,334
1781	7,85,673	5,53,863	6,29,438	4,81,584	1,47,854
1782	77,610	2,92,141	64,160	56,752	7,408
1783	6,11,071	5,92,831	4,80,515	3,88,233	92,282
1784	11,49,394	4,86,336	8,74,097	7,79,626	84,471
1785	3,24,307	5,76,275	2,52,617	2,12,721	39,896
Total	56,02,829	51,19,595	43,34,501	34,49,757	8,84,744

Source: Milburn, Oriental Commerce, vol. II, pp. 252-3.

Table-4.2

Season	Prime cost including freight and other charges (£)	Sale Amount (£)	Profit (£)	Loss (£)
1786	1,92,898	1,98,507	5,609	-
1787	1,33,795	1,45,712	11,917	-
1788	2,12,357	2,21,888	9,531	-
1789	2,76,732	2,89,271	12,539	-
1790	2,68,790	3,02,993	34,203	-
1791	2,90,159	3,20,395	30,236	-
1792	2,62,902	2,76,317	13,415	-
1793	2,74,553	2,21,329	-	53,224
1794	2,90,419	3,09,743	19,324	-
1795	3,78,512	3,81,385	2,873	-
1796	3,35,315	3,27,427	-	7,888
1797	2,62,917	2,58,644	-	4,273
1798	2,77,990	3,22,873	44,883	-
1799	3,24,460	3,90,149	65,689	-
1800	2,08,969	2,97,645	88,676	-

Source: Milburn, Oriental Commerce, vol. II, p. 257.

Italian.²⁵ James Wiss also reiterated the sentiment and found the Bengal filature silks almost as perfect in their kind of any that come from Italy.²⁶ In terms of quantity the average annual export from Bengal between 1772 and 1775 of raw silk, which included mainly the country wound assortments, was around 1,87,494 lbs. The effects of the spread of the filature method of silk winding were more clearly felt after 1775. Between 1776 and 1785 the export of all kinds of silk from Bengal averaged 5,60,283 lbs annually while the exports from Italy, Turkey, etc., figured around 2,82,304 lbs.²⁷ It is also evident from the table 4.1 that the total amount of silk imported into Great Britain increased greatly in the period between 1776 and 1785 and Bengal's share in the total also went up.²⁸ However, the price, total output produced, total output sold and costs were such that during the period 1776-85 the Company suffered a total loss of L 884,744.²⁹ The details are given in the table 4.1.

25. Extract of General Letter from Court of Directors, 24 May, 1779, General Letters, vol.I.

26. Letter of Mr. Wiss to Court of Directors, 26 February, 1784., General Letters, vol.I.

27. Reports and Documents connected with the Proceedings of the East India Company in regard to the Culture and Manufacture of Cotton-Wool, Raw-Silk, and Indigo in India. (Printed by Order of the East India Company, London, 21 December, 1836), p.XXIV.

28. Milburn, Oriental Commerce, vol.II, p.256.

29. Milburn, op.cit., p.253.

Faced with this situation the Company tried to control costs on the one hand and to reduce the total purchase of filature of silk/ total output of filature silk in Bengal. Here we are making an important assumption (which is quite reasonable) that almost the whole of the filature silk produced in Bengal was exported by the Company since domestic consumption of filature silk was negligible compared to the quantity exported. The importance of this assumption will be realised at a later stage when we come to a more theoretical analysis of the economic events.

The fact that the Company reduced its purchase/ total production of filature silk in Bengal is evident from both the sales figures, which also throw light on the demanded conditions in Europe, as well as from the quantity of actual exports from Bengal, (Tables 4.3 & 4.4), while the sales figures give a rough idea about what was happening over a certain period of time, the tables give the yearly variations quite precisely. From the information available we can note that in the period 1783 to 1787 the Company sold around 2,437,384 small lbs of Bengal silk while during the 5 years from 1788 to 1792, it sold about 1,693,784 small lbs of Bengal silk or about 338,757 small lbs per year³⁰. So this was a reduction of about one third of the previous five

30. Ibid.

years (1783-1787) average quantity. It is also important to note in the second period, that is 1788-1792, the Company was making an annual profit ranging from L 9,531 to even L 34,203 on the sale of silk in the European market³¹. It seems that compared to the earlier period, in the period between 1788 and 1792, the quantity of silk produced/purchased and the costs were better adjusted by the Company vis-a-vis the prevailing conditions so that it could make profit. So by 1792 one can argue that the situation had improved considerably for the Company. But, then came the French Revolutionary war in Europe which made the future of the silk somewhat gloomy. In a letter to the Bengal Government, dated the 25th June 1783, the court of Directors painfully remarked that it was really unfortunate that 'as the silk trade really beginning to revive in Bengal, it should suffer a depression in Europe.'³² And they thought it expedient to reduce, rather than extend, the importation of raw silk for a time³³. There was a noticeable shrinkage in the demand for silk all over Europe, in consequence of which its price at the Company's sales in London suddenly

31. Milburn, op.cit., p.257.

32. Bengal, Board of Trade (Commercial), Consultations, Nov. 25, 1793.

33. Ibid.

went down.³⁴ At their September sales of 1793 the Company had a loss of more than 4% of raw silk, while many of the articles of silk manufacture remained unsold³⁵. Early in 1794 an attempt was made to force a sale of the stock of unsold silk at a much reduced rate; but it involved them in a loss of L47,746³⁶.

With a view to guard against future losses and to stimulate the production and export of silk from Bengal, the Company proposed that the surplus quantity of silk beyond what the markets could take in its raw state be thrown into organzine in England for the purpose of its being brought into use as a substitute for part of the thrown silk imported from Italy³⁷. Some very experienced persons in the silk trade also felt that it would be found sufficiently adapted to the warp for producing ribbands and broad goods. However, there were also many objections to this proposal. In one such memorandum by silk merchants addressed to the Lords of Trade, it was argued that as ~ Bengal raw silk had attained its utmost possible state of perfection, it could only, when worked into organzine, be used in a few articles

34. Bengal, Board of Trade (Commercial), Consultations, Dec.23., 1793.

35. Ibid.

36. Milburn, op.cit., p.254.

37. Ibid.

of the silk manufacture; that in most others, from its irremediable deficiency of staples, it could not be substituted for Italian organzine; and that the attempt to introduce it into a more general consumption, would produce the greatest discontents tumutles among the journeymen weavers, particularly of Spikalfields, who universally reprobated Bengal organzine"³⁸ But the issue was too serious to be hastily abondaned. Further trials were made, and as the article became more known and the views of the Company were better understood, much of the prejudice that had been encited against the measure, subsided. By 1796 the reputation of this article had been so much established that a great number of the most eminent houses in the various branches of silk manufacture, presented a memorandum to the Court of the Directors, which is as follows:

"We the undersigned silk manufactures, understanding from the reports published by the East India Company, that the Bengal provinces are capable of furnishing a more abundant supply of raw silk than hitherto, are of the opinion, if due attention is paid, in the first instance, to reel the same of proper sizes, so that, after making a due provision for singles, trams and sewing silks, the surplus by being thrown into organzine in the country, can be

38. Ibid.

successful brought into use in our respective manufactories to a very considerable extent, in lieu of part of the thrown silk at present supplied from Italy. Considering, therefore, the measure now being carried on by the East India Company as highly laudable and meriting every degree of support, we trust that they will persevere in the same with firmness being well convinced that it cannot fail of proving highly beneficial to the national interest".³⁹ They also felt that the proposal to throw silk into organzine would benefit the silk producers in Bengal and generate employment in both Bengal and England. It would also ensure a steady supply of silk to the silk manufacturers and also shelter the "silk market from alarming fluctuations". This gave the Company a great deal of confidence to pursue this measure. As a consequenc of this the Campany sent directions to its Bengal Government to extend their silk consignment to 4000 bales per annum. Instructions were also forwarded, asking them to pay most attention to the quality; means were also suggested for remedying certain defects and samples transmitted for their guidance in regard to sizes.⁴⁰ As a result, the quality of silk showed a steady improvement in the post 1794 period. In terms of quantity, silk production showed a considerable

39. Milburn, op.cit., pp.254-5.

40. Ibid.

increase in Bengal after 1794 till the early years of the nineteenth century. In the period 1795-6 to 1802-3 (both inclusive), the raw silk exports from Bengal rose from 380352 lbs in 1795 to 644819 lbs in 1799, dropped to 583086 lbs in 1800, 444862 lbs in 1801 and then rose again.⁴¹ In the same period the amount of thrown silk imported into Britain in which Bengal had a major share also rose from 398948 lbs in 1796 to 401662 lbs in 1797, 402917 lbs in 1798, 467349 lbs in 1799 and so on⁴². The Company also earned increased profits during the period 1798-1803 compared to the period between 1786 and 1793. Whereas in the seven years, 1786 to 1793 the Company earned a net profit of L 117450 on its silk sales, in the period 1798 to 1803 (six years) the net profits amounted to L 542519⁴³. Regarding Bengal thrown silk, one can find that between 1794 and 1803, about 1453 bales were thrown (or about 140 bales per annum) and this quantity sold at the sales for L 268395, the whole of which some went to the aggrandizement of Italy. This sum may be split up as follows:

Bengal benefited in the prime cost, or in other words in the manufacture and culture L 124711 (roughly 50 % of the total sales proceeds)

41. Milburn, op.cit., p.256.

42. Ibid.

43. Milburn, op.cit., p.257.

The remainder included:

The charge of throwingL 78167
In freight and dutiesL 25066

And after deducting from the sale amount 5 percent for the charges of merchandise, which are principally labour.....L13420. This yielded the company a profit in the last 5 years of L 28688, from which deducting a loss in the previous of L 1637, leaves a net gain of L 27031.⁴⁴ Thus we find that after 1794, the total filature silk production in Bengal rose significantly (as is indicated by the export figures)⁴⁵ This also meant increase in the number of filatures and number of people employed, assuming that the productivity of labour and capital did not rise appreciably in this period. (and this assumption is brone out to be reasonable by the available evidence).

So far we have discussed the course of the EIC's trade and production of silk in Bengal in the 2nd half of the 18th century. Now, we will take up certain other issues such as the procurement methds, the impact of the company's trade on the silk industry such as the procurement methods, the impact of the company's trade on the silk industry and other related issues.

44. Ibid, p.255.

45. See Tables 4.3 and 4.4

First let us take up the procurement methods and some issues related to that field. Upto July 1787, the company purchased the raw silk through a system of contract⁴⁶ The system of contract in this case was very much similar to that in case of the cotton goods purchase. Under this system, the company entered into contract with the big indigenous merchants dealing in silk and also some English private merchants for the supply of silk. It even could approach smaller operators, a special class of brokers known as paikars, who advanced money to the silk rearers and collected the material in small lots. The number of different groups present in the market and the keen competition among them made it unsafe to rely on spot transactions, and forward contracting first before the main racolta (bund) was gathered appeared as the surest way of securing an adequate supply of silk. There were 3 main bunds of which the March and November ones were the best. The company's agents (factors) always arranged to meet the leading merchants directly at the factory and details of the contracts were entered into the official proceedings, even though the negotiations and the subsequent dealings were mostly conducted through the broker. The committee of correspondence each year specified the quantity required in

46. Proceedings, 30 May, 1793, B.O.T. (Comm.)

the list of investment, which reached the silk factories about 15 months later having passed through the Calcutta Council earlier. Demand conditions in Europe and price fluctuations at the supply end determined the limits within which the servants had the discretion to vary the relative quantities of the different types of silk. The actual contracts given to the silk merchants laid down the price to be paid by the company, the delivery date and the amounts of each grade of silk to be included in a particular variety. After the silk had been delivered in the spun form, it was inspected for any deviation from the sample quality and the final price paid to the contractors was only a proportion of the original agreed rate, as a discount known as dasturi and reductions for unevenness in thread were payable by the merchants. In spite of the many deductions made on delivery, the contract price for silk was an object of intense bargaining between the merchants and the English company.⁴⁷

One thing that has to be noted here is that the silk market in Bengal, especially that of the country-wound variety, was a highly competitive one. Competition arose from a number of sources. The indigenous merchants, the rival companies and English private merchants all were

47. Ibid.

competing for the country wound variety of raw silk.⁴⁸ Even if the East India company was a substantial customer it could not wholly control the market. Prices rose or fell according to the general level of demand. By means of contracts made early in the seasons, the company tried to set the prices for the remaining period under this highly competitive situation as it was supposed by the company that this would serve as a guideline on the both sides of the market. But given the number of buyers and the mismatching between demand and supply, the prices set by the company were liable to break in the middle of a trading season.⁴⁹

The other method used by the company was to restrict the buyers from making their purchase by administrative means.⁵⁰ Although these were more or less successful against most of the 'other' buyers but it was difficult to have significant effect against the indigenous merchants. This was because the indigenous merchants quite often had strong local roots and enjoyed immense prestige among the local population and particularly the primary producers. This can be illustrated by an incident that took place in Radnagore in 1775.⁵¹ A substantial merchant, Gozul Gosaul

48. Ibid.

49. Ibid.

50. Proceedings, 29th June, B.O.T. (Comm.), Proc. vol.3.

51. Ibid.

was involved in the raw silk trade in Radnagore and posed serious problems for the company's raw silk supply. The incident took place like this. Two agents of Gozul Gosaul, Govindram Comroe and Girrindar Dalal had forced two ryots, who had already received advances from the company, to accept advances for providing silk (300 maunds). When the English chief of the Radnagore factory confined the ryots for accepting advances from Gozul's men, Girrindar Dalal's harcurrahs freed them. Later when the company's men captured the harcurrahs, about 100 armed men attacked the English factory and the company was forced to back out. The indigenous merchants' connection with the local trade networks and the financial networks also helped them to hold out against the company.

Once the contracts were given out, the company had to only wait for the delivery of the silk. The contractors in their turn, placed orders and made advances to the silk rearers and the silk winders. In case of the country-wound silk, the silk rearer was very often doing the job of a silk-winder also. As we have seen earlier, raw silk of the country-wound variety was produced by small independent producers based on family labour and some hired labour.⁵² So the contractors had to advance money to these producers

52. Proceedings, 30th May, 1793, B.O.T. (Comm.) Proc.

for the supply of silk. In some cases, the contractors obtained unspun filament or pattani silk and employed spinners in their own houses for production⁵³.

However, in case of filature wound silk the procurement method was broadly the same but there were certain variations also. The variation were more due to the nature of filature - silk production. As we have noted in an earlier section, the Company owned or hired out a substantial number of filatures. So, for producing silk on these filatures, the Company needed to buy cocoons. But these filatures were not sufficient to answer its own demand for filature silk. So it had to purchase filature silk from the market. Upto July 1787, the Company did this by giving out contracts to indigenious as well as European private merchants.⁵⁴ The contract system here was also very much similar to that in case of the country-wound silk. One can get an idea of the terms and conditions if an actual contract can be mentioned.⁵⁵ On 25th February 1778, the Company entered into a contract with Mr. David Killuan of Calcutta, a Bengal merchant for obtaining filature wound raw silk. The contract runs as follows : 'Contract for

53. Ibid.

54. Proceedings, 7th April, 14th April, B.O.T. (Comm.) Proc. 3rd April-26th June, 1778, vol.15.

55. Proceedings, 6th May, B.O.T. (Comm.) Proc. vol.15.

supplying 750 mounts of filature raw silk or silk wound of after the Italian method for three years at the rate of 250 mounts each year. The quantity to be delivered in the first year could be supplied as follows: one third in October, 1778, one sixth in December, 1778, and the remainder in February 1779. In case of failure, Mr. David Killuan has to pay the Company the balance that might be due at the expiration of each year with interest at the rate of 12% per annum. However, he would be allowed for every seer of silk (of 72 Sicca weight) equal in goodness to the muster presented by him as aforesaid 11 sicca rupees and 10 anna. Without being liable to any drawback or deduction whatever in weight. The Company was also to remit the duties on the same at Hooghly and Calcutta. Mr. David Killuan was also to receive in advance on signing the contract one half of the amount of the quantity deliverable in the first year; one fourth more on the delivery of 175 mounds of the silk and the remaining quarter on the delivery of 250 mounds, the quantity proposae to be delivered in the first year. He would receive advances and make deliveries in the like manner for each of the succeeding years of the proposed term of the contract.

The contractors, in turn, either owned filatures or hired them out. They would also give sub contracts for supply of filature raw silk to other filature owners. In

both cases what is significance is that the owners of the filatures had to buy cocoons from the rearers of silk worm or the chassers.⁵⁶ An important filature-wounded silk was that the Company was more or less the sole purchaser of filature - silk.⁵⁷ So in case of filature - wound silk the Company did not have to face much competition from other buyers and enjoyed a nearly monopsonist position. But the main competition in this case was for buying the best cocoons in the market.⁵⁸ Every buyer tried to acquire the best quality cocoons from the best bund at the lowest possible price. The method of procurement of the cocoons was more or less the same for all the buyers. Either direct arrangements were made with the silk rearers or middle men (paikars) were employed to get the cocoons from the silk rearers, or the chassars.⁵⁹ The cocoons varied considerably in quality and price and these also affected the cost of this silk produce from them⁶⁰. One variation in quality was due to the different seasons in which they were produced. Those produced in March and November where the

56. Proceedings, 14 April, B.O.T. (Comm.) Proc., vol.15

57. Milburn, Oriental Commerce, vol.II, pp.253-7.

58. Proceedings, 14 April, B.O.T. (Comm.) Proc., vol.15.

59. Ibid.

60. ibid.

best for strength and beauty and yield, those of January and April were next in quality. The produce of June and August belong to the third grade. Quality also depended to some extent on the situation. Those of Rangpur were the best. Radanagore, Cassimbazar, Bauleah, Jangipore and Commercolly followed in the order in which they are mentioned ⁶¹. Now, whichever method was adopted by the buyers for purchasing the cocoons, this system also worked on advances.⁶² Advances had to be given out quite early in the season for the supply of a particular bund. A little delay in making the advances could deprive the buyer of the supply of the best cocoons in that seasons. The buyer would then be obliged to wind off some dried cocoons, instead of getting them green and which also implied considerable loss for the buyer.⁶³ Further, since there was considerable uncertainty on the supply side, the buyer had always to keep some ready money to cover both advances as well as to take advantage of any increase in production in a good season. As the situation was very competitive, one had to buy the increased produce at the first opportunity.⁶⁴ Although I have referred to this

61. Ibid.

62. Proceedings, 5th May, 18th May, B.O.T. (Comm.) Proc. vol.3.; Proceedings, 31 October, B.O.T. (Comm.) Proc. 24 Nov-30 Dec., 1774, vol.1.

63. Ibid.

64. Ibid.

phenomenon while speaking about the cocoon market, it is equally applicable for the market in country-wound raw silk. Once a buyer had placed orders for a certain quantity of silk or cocoons and made the advances, he could not generally reduce the quantity originally ordered for even if he had financial, transportation or other difficulties⁶⁵. If he did it, that was at the cost of too many hassels. The East India Company quite often resorted to this practice of reducing the orders in the middle of the season. As has been noted earlier the quantity of export commodity to be purchased in Bengal in a particular season was decided by the Company's court of Directors long before the commencement of a season⁶⁶. This decision was also dependent on a number of factors. It could happen that some of the factors would change in the meanwhile. Naturally the Company had to adjust the quantity originally ordered for to prevent a possible loss otherwise. However, this abrupt change of decision created considerable problem on the supply side. One can get an idea of this from the following example⁶⁷. In May 1775, we find the chief of the Cassimbazar factory writing to the Board of Trade that 'the merchants had

65. Ibid.

66. Ibid.

66. Ibid.

67. Proceedings, 19th May, B.O.T. (Comm.) Proc., vol.3.

complained to him about the disappointment from the unexpected alteration in the engagement for silk, formally entered into and executed by them nearly six weeks back, for the fulfilling of which they had made ample preparations. They had also asserted that their originally acceding to the Company's proposals very materially affected their further concerns and engagements with others'. So once there was a reduction of the orders the Company lost its credibility with the suppliers and the suppliers found it better to go into contract with the private merchants or the rival companies. In case of the producers much of the production that had already started in consequence of the initial advances, would remain unfinished for want of the money required to complete it. This meant a considerable loss for them. As a result, the Company's prospect for future procurements was badly affected. The Company suffered in many other ways, e.g., the same charges in many respects would be incurred on a small provision of goods as was intended for a large provision. Moreover, if the sudden cut took place in season when the supply conditions were excellent and the prices were also favourable, it meant a greater loss for the buyer, i.e., the Company, because such seasons were very rare. The year 1775 was one such season. So we find the English chief at Cassimbazar earnestly appealing to the Board of Trade not to reduce the orders and

instead take the silk already ordered for. The contract system however suffered, a number of defects. Under this system a number of flagrant abuses prevailed:⁶⁸ the company's interests were sacrificed; the manufacturers were oppressed; and, as a result the goods furnished were of the best quality and were purchased at extravagant rates. And for this, the servants of the company were largely responsible. The contracts were made by the company through its chiefs at the subordinate factories and other servants. But wherever Indians appeared as contractors they were either trustees for the company's servants or made them certain payments out of the profit from the contract. As a result prices became high and quality also deteriorated. The company also suffered as a result of its servants' private trade.⁶⁹ The practice was that in every district the ferrit and three-lettered putney usually rejected by the company appraisers were purchased by private traders, who were mostly the company's servants. Now, the servants of the company need not have to pay for these rejected ferrit and three-lettered putney as cash advances had already been made for them by the company to the paikars. This meant that the company had to make fresh advances to make up for the rejected quantity.

68. Letter from Court, April, 1786.

69. Proceedings, 29 April, 1793, B.O.T. (Comm.) Proc. vol.103.

In order to do away with these abuses, Lord Cornwallis wrote a minute on 22nd January, 1787, in which he decided to introduce the Agency System for purchasing the goods and this later received the approval of the directors.⁷⁰ Under this new system, the company's commercial residence themselves accepted the offer to supply raw silk on a contractual basis. Their names were listed as direct suppliers to the company and an official agency commission payable to the commercial resident was agreed upon.⁷¹ One can get an idea about the amount of commission from the following bit of information. In 1790, the commission accruing to the residents was thus distributed⁷² : Rajshahi, Rs.15491; Radanagore, Rs.17082; Rangpur, Rs.11104; Commercolly, Rs.20016; Jangipur, Rs.18262. The agent at Gonatea got Rs.11191. The new system, however, did not mean that the private trade of its servants was totally stopped. In fact, the Board of Trade permitted the commercial agents to trade on the own account, because they considered it inexpedient to attempt the abolition of a privilege so long established. But the extent and conduct of the private trade of the commercial agents were regulated by certain

70. Letter from Court, 22 December, 1786.

71. Ibid.

72. Proceedings, B.O.T. (Comm.) Vol.88, October, 1790.

regulations.⁷³ However, on an overall basis the new system benefitted the Company because the total cost including the commission was less than in the period under the contract system, the quality of the goods improved and the manufacturers were also better trained.

Regarding the production conditions in Bengal in the second half of the 18th century, we find that at least for silk, the production system in Bengal was quite developed to be able to supply the amount demanded by the company and all the buyers for all the varieties of silk. However, it should not be overlooked that a number of factors, e.g., natural calamities, inadequate supply of the factors of production, etc., sometimes affected the production of silk. For example, in 1770 there occurred a terrible famine which swept away about one third of the entire population engaged in silk cultivation all over Bengal. However Bengal recovered from this shock remarkably fast and within a year or two production attained the pre-famine level.⁷⁴ There were also calamities which were more frequent than famines, for example, floods and droughts. Incidentally silk production was more prone to extensive damage in case of natural disasters. Whether there was drought or inundations, both

73. Proceedingsw, 23 May, 1786, B.O.T. (Comm.) Proc.

74. Bengal: Past and Present, XXIX, p.37.

the quantity and quality of the produce were badly affected.⁷⁵ An excessive rise in the price of raw materials, the consequence of a defective produce, inadequate demand, unavoidably enhanced the cost of the manufactures. An increase still more exorbitant on the rate of the necessities of life rendered the ordinary allowance for labour insufficient. In these circumstances the buyers had to pay increased prices and admit of certain deviations from the sorts or quantities of goods originally ordered for. The deviations occurred sometimes due to the fact that in critical times the producers tended to encroach upon the advances for subsistence needs. Consequently, they bought inferior raw materials and production suffered. Otherwise they had to forego the investment. The company found it very difficult to adjust to these sudden changes because its prices, quantity required etc., were fixed a long time back.

75. Proceedings, 6th Nov. 1788, B.O.T. (Comm.) Proc., 6th Nov-25th Nov, 1788, vol.73.

II. IMPACT OF THE COMPANY'S TRADE ON THE RAW SILK PRODUCTION SECTOR IN BENGAL

A. Technology, Production system, etc.

In the country wound silk production sector, the level of technology was quite low and highly labour intensive. It required very less capital per unit of output.⁷⁶ From the records it is clear that the technological level in this sector remained more or less unchanged.⁷⁷

Regarding the organisation of production, country wound silk was produced by individual producers dispersed all over the country and this form remained the same throughout.⁷⁸ In the country method of winding silk, all the different letters (types) were reeled in the same tank at the same time and by the same person in just the same manner. In that state, the silk was purchased on the company's account under the denomination of pukey and subsequently classed into the different letters by winders employed for that purpose in the company's factories. The cuttanies who manufactured the putney were dispersed all over the land. There were neither under any substantial control or inspection. They were also not concerned about the quality or the sale of the silk or

76. Proceedings, 23 June, 1778, B.O.T. (Comm.) Proc. vol.15.

77. B.O.T. Proceedings

78. Proceedings, 23 June, 1778, B.O.T. (Comm.) Proc. vol.15.

any other aspect except their daily pay which they received from the chassars.⁷⁹ The silk thus produced was very uneven and course. Its chief defect was unevenness of the thread within the same skein; parts of the skein would be drawn quite indifferently from varying number of cocoons.⁸⁰

In the mid 1770s, a new technique of raw silk production was introduced by the company into Bengal which was designed to eliminate the defects of winding and reeling in the country wound variety. This was the filature silk production system.⁸¹ Filature reeling involved the construction of a concrete and spacious building, a concrete furnace for each basin and the installation of a cog-wheeled apparatus which would draw the yarn from cocoons, and reel it at one go. The cocoons were to be carefully selected for their quality and four to six cocoons were to be used for winding the yarn. The threads drawn from the cocoons for winding of the yarn were to be crossed several times to give the yarn a roundness and evenness, valued so highly in the market. The threads passed through loops to guide-pegs in an oscillating bar, whence to the reel turned by the cog-wheeled apparatus which was operated by a small boy rotating

79. Ibid.

80. Geoghegan, op.cit., p.2.

81. Letter from Court of Directors, 17 March, 1769. Fort Williams - India House Correspondence, vol.V.

its crank handle. The oscillating bar facilitated the even spread of the yarn along the breadth of the reel.⁸² Initially, the cog-wheels were made of wood.⁸³ However partly owing to the cracking up of the English wood in Bengal's humid environment and the strong sun, and in part because of the lack of familiarity with any gearing mechanism which laid the Bengal winders to mesh wheels with 25 and 35 cogs instead of the ones with 22 and 25, resulting in their collapse.⁸⁴ The wooden structures were soon replaced by the hardier brass and afterwards, by steel contraptions. Even these machines did not function quite as smoothly as the Court of Directors had imagined so that greatly reinforced new apparatuses were despatched from England.⁸⁵

Thus one can argue that this new technology implied higher capital requirement per unit of output and higher fixed costs than the country wound variety. The labour

82. General Letter from Court of Directors, 14 April, 1779, General Letters to and from the Court of Directors, etc., 1765-1854, Vol.I, (W.B. State Archives, Calcutta).

83. General Letter from Court of Directors, 14 July, 1779, General Letters, vol.I.

84. General Letter from Court of Directors, 11 April, 1785, General Letters, vol.I.

85. General Letters from Court of Directors, 12 May, 1780, 12 July, 1782, 11 April, 1785, General Letters, vol.I.

requirement for unit of output in filature production was also higher than the other variety. If a person could wind 4 skeins of silk off the filature in a day, he could do 12 of the country variety.⁸⁶ Thus we find, that in the filature method, both the capital and labour requirement for producing one unit of output rose compared to the country variety. In that sense it was a technological retrogression. However its positive aspect lay in the improved quality of its product (i.e., filature raw silk).

The production organisation was also different in the filature method. The filatures were located in a separate building presumably at some distance from the residential part of the town. Production was done by a factory kind of organisation. The winding was done there by adult males, with some help from young boys, under the supervision of alien eyes, with a strict time schedule.

Although the general technological level remained constant throughout this period, certain improvements were carried out from time to time in filature production. We have said earlier that in the beginning the structure of the filature was made up of wood, and later on it was made of brass. But this transformation was not so smooth. Actually,

86. N.G. Mukerji, A Monograph on the Silk Fabrics of Bengal, p.30.

in the initial stage the filatures were built of palmira trees with a choppa of mats and bamboo and tiled. But during the rainy season the palmira posts used to settle into the ground because they were there for a long time and consequently decayed. This caused the bamboo to give way and loosen the tiles causing dirt to be continually thrown down from the choppa, damaging considerable amount of silk. Moreover, the furnaces were all kutchas and the constant working of them necessitated continuous repairs. Later on the palmira posts were replaced by saul ones and the bamboo on the roof was replaced by the timber. The choppas were also reviewed before the rainy season every year. This made the structure stronger and more durable. The cost of these improvements was not too high and was also a necessary disbursement when considered as a security against the possible loss of the whole production.⁸⁷

Water was a great necessity in silk production. In the initial stages, water used to be taken from the river. But often the river water was not clean and it damaged the quality of silk. In 1778, the English chief at Jungypur ordered the construction of a tank of 150 feet square (at the cost of sicca Rs.12000) and a pucca cistern (at the cost

87. Proceedings, 7th April, 1778, B.O.T. (Comm.) Proc. vol.15.

of sicca Rs.1135) of the following dimensions : length 96 feet, depth 6 feet and breadth 472 feet in order to store clean water for production.⁸⁸

Certain faults sometimes cropped up in the production of filature silk, but these were readily rectified. For example, in 1778, problem arose with the size of the skeins of filature silk. Actually skeins of lesser size were required. For doing so, it was necessary to increase the number of reels in the filature which required a moderate expense. The compnay carried out this small change in its own filatures and the contractors were given an allowance for carrying this out in the filatures under their control.⁸⁹ Another frequent defect was the smoky colour of the silk. One reason was that the contractors sometimes did not care to separate the bad cocoons from the good ones. So the quality of the silk produced was smoky. Another more funtamental reason was the badly constructed filatures. Many of the filatures were nothing but straw bungalows or kutiha work, not open enough or of sufficient height to discharge the smoke and steam of the furnaces before it got within the circle of the reel and discoloured the silk. These technical defects were corrected later on.⁹⁰ Certain other defects

88. Ibid.

89. Proceedings, 24th April, 1778, B.O.T. (Comm.)Proc.vol.15.

90. Ibid.

took place due to lack of proper care and attention. This was reflected in the quality of the silk produced. For example, Mr.Phipp's filature silk was very perfect compared to others' in all respects: it was drawn finer, it was reeled, clean and very even and production took place using the entire capacity with little wastage.⁹¹

Thus, one can argue that although the technology in the filature production remained almost unchanged in the second half of the 18th century, certain improvements also took place in this system. So it was not a wholly static system.

Apart from these, certain other types of innovations occurred in the silk industry in Bengal during this period. For example, Mr.Joseph Hodgson, a silk contractor introduced the white breed of silk worms from China in Bengal. However, even after working on it for 10 years, this experiment was not successful because the worms from China could not adapt to the climate of Bengal. Apart from this, Mr.Hodgson started the winding of silk by the new double crossing machine which yielded as much profit to the company as the silk most in repute of the other contractors.⁹²

91. Proceedings, 23rd June, 1778, B.O.T. (Comm.) Proc. vol.15.

92. Proceedings, 6th November, 1783, B.O.T. (Comm.) Proc. vol.40.

B. Output, Employment and Income :

I will first mention certain basic facts before going into the calculations. One set of figures are as follows⁹³ :

45 European owned large filatures contained 3500 basins. Therefore, one large filature had 78 basins. Again, 67 medium sized filatures contained 1600 basins, i.e., one medium sized filature had 24 basins. On the average one can say one filature contained 51 basins. Each basin is known to have been worked by two persons. Therefore one filature employed 102 persons on an average.

We have another set of figures⁹⁴ :

The ratio of productivity per unit of labour between country wound silk and filature wound silk was 3 : 1. Therefore, the ratio of the number of persons required for producing one unit of output between country wound and filature wound silk = 1 : 3.

Again, we get a figure for the company's raw silk exports from Bengal in 1801. On that basis, we find that the ratio of the amounts of the filature wound and country wound

93. W.W. Hunter, A Statistical Account of Bengal, Vol.IX, p.150.

94. N.G. Mukerji, A Monograph on the Silk Fabrics of Bengal, p.30.

silk in the total raw silk exports from Bengal was 3 : 1 in 1801.⁹⁵

We also find that between 1772 and 1775, the average annual export of country wound silk from Bengal was 187494 lbs. Between 1776 and 1785, the average annual export of raw silk (both country wound and filature wound) from Bengal was 560283 lbs. In this, the country wound silk content was 187494 lbs.⁹⁶ Therefore, in 560283 lbs of raw silk, filature silk constituted 372789 lbs. So the ratio of the amount of the filature wound and country wound silks in the average annual raw silk exports from Bengal between 1776 and 1785 was 2 : 1.

On the average one can say that the ratio of the amounts of filature and country silks in the annual raw silk exports from Bengal for the period 1776-1800, was 2.5 : 1 or 5 : 2, i.e., to say, in any export contingent of raw silk from Bengal, filature silk constituted 5/7th part, while country silk constituted 2/7th part. On this basis we can calculate the filature silk and country silk content in the annual exports of raw silk from Bengal by the East India

95. Proceedings, 5 June, 1801, B.O.T. (Comm.) Proc.

96. Reports and Documents Connected with the Proceedings of the East India Company in regard to the Culture and Manufacture of Cotton-Wool, Raw Silk and Indigo in India, (London, 1836), p.XXIV.

Table 4.3

Season	Raw Silk Exported from Bengal		
	Total (Small lbs)	Filature Wound (small lbs)	Country wound (small lbs)
(1)	(2)	(3)	(4)
1776	5,15,913	3,68,509	1,47,03
1777	5,63,121	4,02,229	1,60,892
1778	6,02,964	4,30,688	1,72,276
1779	7,37,560	5,26,828	2,10,732
1780	2,35,216	1,68,011	67,205
1781	7,85,673	5,61,195	2,24,478
1782	77,610	55,435	22,175
1783	6,11,071	4,36,479	1,74,592
1784	11,49,394	8,20,995	3,28,399
1785	3,24,307	2,31,647	92,660
1786	2,52,985	1,80,703	72,282
1787	1,78,180	1,27,271	50,909
1788	3,05,965	2,18,546	87,419
1789	4,27,263	3,05,187	1,22,076
1790	3,20,826	2,29,161	91,665
1791	3,73,503	2,66,787	1,06,716
1792	3,80,107	2,71,505	1,08,602
1793	7,36,081	5,25,772	2,10,309
1794	5,21,460	3,72,471	1,48,989

continued.....

Table 4.3 continued

(1)	(2)	(3)	(4)
1795	3,80,352	2,71,680	1,08,672
1796	3,47,936	2,48,525	99,411
1797	92,204	65,860	26,344
1798	3,53,394	2,52,424	1,00,970
1799	6,44,819	4,60,585	1,84,234
1800	5,83,086	4,16,490	1,66,596
1801	4,44,862	3,17,758	1,27,104
1802	2,44,809	1,74,863	69,946

Note: Column 2 is based on Mblburn, Oriental Commerce, II, P. 256.

Company. The annual export figures for the period 1776-1800 can be calculated from the information given in Milburn, Oriental Commerce, Vol.II, pp.254,256. The information is given in table 4.3. One should note that the total export figures from 1795-1802 do not include the filature silk exported for producing thrown silk.

Now, we also find that for producing 228000 lbs of filature raw silk, 334.3 filatures were required⁹⁷. 334.3 filatures employed $334.3 \times 102 = 34100$ persons as manufacturers. Therefore for producing one lb of filature raw silk, $34100/228000 = 0.15$ person was required (although the figure 0.15 person is absurd, take it as a mathematical fact).

Before going into further calculations, let me state the basic assumptions that are made here. These assumptions are of course supported by the evidence from the Company's records and elsewhere. The assumptions are as follows:

- i. There was only one technique of production each in the filature and country method of raw silk production, i.e., we have constant coefficients of the factors of production.

97. W.W. Hunter, op.cit., vol.IX, p.151.

Table 4.4

Season	Filature silk produced/ exported (lbs)	Persons employed as manufacturers	Additional employment per year
(1)	(2)	(3)	(4)
1776	3,68,509	55,276	
1777	4,02,229	60,334	5,058
1778	4,30,688	64,603	4,269
1779	5,26,828	79,024	14,421
1780	1,68,011	25,202	-53,822
1781	5,61,195	84,179	58,977
1782	55,435	8,315	-75,864
1783	4,36,479	65,472	57,157
1784	8,20,995	1,23,149	57,677
1785	2,31,647	34,747	-88,402
1786	1,80,703	27,105	- 7,642
1787	1,27,271	19,091	- 8,014
1788	2,18,546	32,782	13,691
1789	3,05,187	45,778	12,996
1790	2,29,161	34,374	-11,404
1791	2,66,787	40,018	5,644
1792	2,71,505	40,725	707
1793	5,25,772	78,865	38,140
1794	3,72,471	55,871	-22,994

- ii. There was constant productivity of labour and capital, i.e., there was no technical change in the raw silk sector (of both types).
- iii. There was constant returns to scale.
- iv. There were no constraints on labour and capital supply.

On the basis of these assumptions and the information available to us, I will try to calculate the number of manufacturers employed in the filature silk sector in Bengal in the period 1776-1800 (Table 4.4).

From 1795, the policy of throwing a part of of Bengal raw silk into organzine was adapted. This implied that the company could not only maintain the level of demand for Bengal raw silk at the pre-1795 average annual level but in fact had to step up its total demand by a very substantial margin. It was very clear that due to comparative low cost of Bengal raw silk and its good quality, the Company could capture the thrown silk market and push the Italian suppliers of thrown silk out. So in the post 1795 period, the bulk of the thrown silk in Great Britain came to be manufactured from raw silk exported from Bengal. However, for Bengal, this meant that for 1795 onwards there was a great increase in demand for raw silk and this consequently stimulated increased production of raw silk, both filature and country wound. In the following table 4.5 we will see

Table 4.5

Season	Additional Output of Raw Silk in Bengal for Producing Thrown Silk		
	Total (lbs)	Filature wound (lbs)	Country wound (lbs)
(1)	(2)	(3)	(4)
1795	3,36,995	2,40,711	96,284
1796	3,98,948	2,84,963	1,13,985
1797	4,01,662	2,86,901	1,14,761
1798	4,02,917	2,87,798	1,15,119
1799	4,67,349	3,33,821	1,33,528
1800	3,33,717	2,38,369	95,348

Note: Column 2 is based on Milburn, op. cit., II,
p. 256.

how much additional raw silk (both filature and country wound) was producing in Bengal for manufacturing thrown silk in the period 1795-1800. Taking the ratio between filature silk and country silk contents in raw silk exports, i.e., the ratio is 5 : 2. Therefore in any consignment of raw silk, filature silk = 5/7th part and country silk = 2/7th part.

We continue with the table 4.4 for the period 1795-1800. Due to the necessity for additional production of filature silk (also country silk) for providing for thrown silk, the total filature silk production in Bengal went up tremendously from 1795. (Table 4.5a)

Thus we find that in the period 1776-1800 (24 years), the total additional employment created in the filature silk sector in Bengal was = 42953 persons. This means that the average annual additional employment in this sector in the given period, 1776-1800, was = 1790 persons per year, i.e., to say, employment rose in the filature silk sector in Bengal in 1776-1800, at the rate of 3.24 % per year, simple rate, compared to the employment figure in this sector in 1776, assuming a linear trend in this growth.

Let me now try to see what was happening in the other branch of raw silk production, i.e., the country wound silk sector. According to one Sadanand Bandopadhyay, a gomastha

Table 4.5.a

Season	Total filature silk produc- tion both for pure raw silk exports and for thrown silk, lbs	Persons employed	Additional employment per year
1795	5,12,391	76,859	20,988
1796	5,33,488	80,023	3,164
1797	3,52,761	52,914	-27,109
1798	5,40,222	81,033	28,119
1799	7,94,406	1,19,161	38,128
1800	6,54,859	98,229	-20,932

of Girdhar Das, a Gujarati merchant at Cassimbazar, the average annual exports of country raw silk from Bengal to Bombay and Surat in the 1750s was about 15000 maunds or 1230000 lbs.⁹⁸. Using the figure for the productivity per unit of labour in filature silk and the ratio between the productivity per unit of labour in filature and country silk, we can calculate that the exports of 1230000 lbs of country silk from Bengal implied the employment of 61500 manufacturers in Bengal (in this connection it is also important to note that the productivity of capital in case of filature silk was also lower than that in country silk). Another bit of information comes from the reports of the Manglee custom house.⁹⁹ In 1789, country raw silk worth Rs. 1995524 at current prices was exported from Bengal to Hindustan and the Deccan. At the price of Rs. 8 per seer, Rs.1995524 represents the value of 511673 lbs of country silk. This means that for producing 511673 lbs of country silk, about 37884 manufacturers were employed in Bengal. So in the country raw silk sector in Bengal outside the domain of the company's export there was a drop in the employment level by 23616 persons in 1789 compared to the level in 1750.

98. Proceedings, B.O.T. (Comm.), 27 April, 1791.

99. Proceedings, B.O.T. (Comm.), 27 April, 1791.

Let us now take the company's exports of the country-wound raw silk from Bengal. In 1750s the average annual exports by the company amounted to 46249 lbs.¹⁰⁰ This implied the employment of 2312 manufacturers of country silk in Bengal in 1750. In 1789, the annual exports by the company stood at 165468 lbs.¹⁰¹ This implied the employment of 8273 manufacturers. So in this sector, there was an increase in the employment level by 5961 persons in 1789 compared to the level in 1750.

So in the entire Bengal raw silk production sector one can say, that by 1789, 17655 manufacturers lost their jobs (here the employment level in 1789 is being compared to that in 1750) mainly due to a drastic fall in demand for Bengal country silk in the Deccan and Hindustan due to a variety of reasons.¹⁰² In this context the introduction of filature silk production in Bengal becomes significant. We have shown earlier that filature silk production provided employment for 55276 persons in 1776 and this level rose by 3.24 % annually at the simple rate in the subsequent period ending in 1800, assuming a linear trend in the rise. So, even if we

100. K.N. Chaudhuri, *Trading World of Asia and the English East India Company*, Appendix 5, Table C.16, pp.533-4.

101. Calculated from tables 4.3 and 4.4

102. N.K. Sinha, *op.cit.* vol.I.

take the minimum employment level in filature silk sector, i.e., 55276 manufacturers, and we assume that the entire labour force laid off in the country silk sector was employed in the filature silk sector, then we find that the filature silk sector provided a net additional employment for 37621 persons so far as the entire raw silk sector was concerned and perhaps for the entire Bengal economy. Given the fact that Bengal in this period was a predominantly a labour surplus economy, it is not likely that workforce in the filature silk sector came as a result of real displacement from any other sector in the economy.

Now I will try to calculate the outlay (both gross and real) on raw silk (of both varieties) in Bengal at different points of time. One should note that for calculating the real outlay in a particular year, the gross outlay for that year has to be deflated by the consumer price index for that year. The formula for calculating the price index and the movement of prices in 1750-1800 has been given in the previous chapter.

We have taken 1750 as the base year. In 1750 the annual outlay on country raw silk outside the company's domain (hereafter will be referred as Branch I) was about Rs.2091000. In 1789-90, the annual gross outlay in the branch I was Rs.1995524. In real terms this was Rs.1385781

(deflating the gross figure by the consumer price index for 1789; base year 1750). Therefore the annual real outlay went down in 1789-90 by Rs.705219 compared to the figure in 1750 (i.e., a decrease of 34%) in this branch.

In case of the company's export of country wound raw silk from Bengal (Branch II), one finds that in 1750, the annual outlay was Rs.180371.¹⁰³ In 1789-90 this became Rs.645325 (gross figure).¹⁰⁴ In real terms this was Rs.448142. Therefore, in this Branch II, in 1789-90 there was an increase in the annual real outlay level by Rs.267771 or 148% compared to the figure in 1750.

Let us now take up the filature wound raw silk production in Bengal catering to the company's export. We call this Branch III. The real annual outlays in this branch can be seen from the following table (4.6).

One can find from the above table that in the period 1776-1800, the annual real outlay on Bengal filature silk by the Company (in Branch III) rose by Rs.664260. This equals Rs.27678 per year, i.e., 1.9% increase per year, simple rate, compared to the annual real outlay level in 1776.

103. K.N. Chaudhuri, op.cit. pp.533-4.

104. Based on tables 4.3 and 4.4; note that the current price of country silk in 1789-90 was Rs.3.90 per lb. (N.K. Sinha op.cit., vol.I).

Table 4.6

Year	Filature silk produced/ exported (in lbs)	Gross annual outlay on filature silk (in Rs)	Real annual outlay on filature silk (in Rs)
(1)	(2)	(3)	(4)
1776	3,68,509	18,42,545	14,21,278
1777	4,02,229	20,11,145	15,37,808
1778	4,30,688	21,53,440	16,32,383
1779	5,26,828	26,34,140	19,79,663
1780	1,68,011	8,40,055	6,25,972
1781	5,61,195	28,05,975	20,73,278
1782	55,435	2,77,175	2,03,088
1783	4,36,479	21,82,395	15,85,812
1784	8,20,995	41,04,975	29,58,327
1785	2,31,647	11,58,235	8,27,902
1786	1,80,703	9,03,515	6,40,609
1787	1,27,271	6,36,355	4,47,570
1788	2,18,546	10,92,730	7,62,441
1789	3,05,187	15,25,935	10,56,303
1790	2,29,161	11,45,805	7,86,954
1791	2,66,787	13,33,935	9,09,047
1792	2,71,505	13,57,525	9,17,991
1793	5,25,772	26,28,860	17,64,099
1794	3,72,471	18,62,355	12,40,247

continued.....

Table 4.6 continued

(1)	(2)	(3)	(4)
1795	5,12,391	25,61,955	16,93,295
1796	5,33,488	26,67,440	17,49,829
1797	3,52,761	17,63,805	11,48,460
1798	5,40,222	27,01,110	17,45,805
1799	7,94,406	39,72,030	25,48,460
1800	6,54,859	32,74,295	20,85,538

Note: The price of filature silk in Bengal in 1776-1800 was Rs 5 per lb.

Again we find the average annual real outlay in Branch III in the period 1776-1800 (both inclusive) was around Rs.1373686 (= Sum of annual real outlays / number of years =34342159/ 25 = Rs.1373686)

Combining Branch I and Branch II, we find that the total annual outlay on country raw silk in Bengal in 1750 was Rs.2271371. In 1789-90, this became Rs.1833923. Thus there was a decrease in real annual outlay level in 1789-90 by Rs.437448. We have seen about that the average annual real outlay in the filature silk Branch in Bengal catering to the Company's exports (Branch III) was about Rs.1373686 in the period 1776-1800 (both inclusive). Thus one can say that this Branch contributed to a net increase in the annual real outlay on raw silk in Bengal of Rs. 936238 in the period around 1789-90. We have used the average annual real outlay figure in branch III for 1776-1800 as the real outlay figure for the year 1789-90 in branch III. Here lies the real significance of the introduction of filature silk production in Bengal by the company and the export trade in it.

Let me now turn to the income generated in the Bengal economy by the raw silk sector as a whole. The basic principle for the calculation here will remain the same as in the case of the cotton goods sector (refer chapter 3 of

the dissertation). Here also we will take into account the multiplier effect in calculating the total income generated in the economy as a result of an initial rise in income in the raw silk sector. Another thing to be noted is that in both the methods of raw silk production in Bengal, the technology was highly labour intensive and the capital-output ratio was quite low. So the predominant part of the real outlay on raw silk went as cost of labour. Since the persons, who received this income also spend a part of this on consumption expenditure (depending upon their marginal propensity to consume), the initial income in the sector generated much higher final income in the economy through the multiplier effect. The value of the multiplier here will also be taken as $= 3$, for the same set of reasons as mentioned in the Chapter III. Taking the drain phenomenon into account for the post-1765 period it can be seen (as has been done in Chapter III) that if in time period, t_1 , the real outlay is x_1 (Rs.), then, when t_1 is before 1765, the net total income generated in the Bengal economy by the raw silk sector would be Rs. $k.x_1$, where k is the multiplier. Taking the value of $k = 3$, this will be Rs. $3x_1$. When t_1 is after 1765, then the net total income generated in the Bengal economy by the raw silk sector would be Rs. $[k.x_1 - x_1]$ where k is the multiplier. Taking the value of $k = 3$, this becomes Rs. $[3x_1 - x_1] = Rs. 2x_1$.

In 1750, the net total real income generated in the Bengal economy by the country raw silk sector outside the domain of the company's exports (Branch I)¹⁰⁵ was = Rs. 1.70 x 1230000 x 3

= Rs.6273000.

In 1789, the net total real income generated in Bengal by Branch I was = Rs.1385781 x 3

= Rs.4157343.

(here the drain factor is not being taken into account as this branch is outside the domain of the Company's exports).

Again, in 1750, the net total real income generated in the Bengal economy by the country silk sector catering to the company's exports (Branch II) was = Rs.180371 x 3 = Rs.541113. In 1789, the net total real income generated in the Bengal economy by Branch II was = Rs 448142 x 2 = Rs.896284.

In case of the filature silk sector catering mainly to the company's exports (Branch III), the net total real income generated in the Bengal economy by Branch III for the period 1776-1800, is given in the following table 4.7.

105. Note that the price of country raw silk in Bengal in 1750 was Rs.1.70 per lb. (N.K. Sinha, op.cit. vol.I).

Table 4.7

Year	Real annual outlay on filature silk in Bengal (Rs)	Net Annual total income generated in the Bengal economy by this outlay (Rs)
(1)	(2)	(3)
1776	14,21,278	28,42,556
1777	15,37,808	30,75,616
1778	16,32,383	32,64,766
1779	19,79,663	39,59,326
1780	6,25,972	12,51,944
1781	20,73,278	41,46,556
1782	2,03,088	4,06,176
1783	15,85,812	34,71,624
1784	29,58,327	59,16,654
1785	8,27,902	16,55,804
1786	6,40,609	12,81,218
1787	4,47,570	8,95,140
1788	7,62,441	15,24,882
1789	10,56,303	21,12,606
1790	7,86,954	15,73,908
1791	9,09,047	18,18,094
1792	9,17,991	18,35,982
1793	17,64,099	35,28,198
1794	12,40,247	24,80,494

continued.....

Table 4.7. continued

(1)	(2)	(3)
1795	16,93,295	33,86,590
1796	17,49,829	34,99,658
1797	11,48,460	22,96,920
1798	17,45,805	34,91,610
1799	25,48,460	50,96,920
1800	20,85,538	41,71,076

Let me now calculate the per capita real income in the raw silk sector in Bengal over the years. To produce 2.5 seer of filature silk, one maund of cocoons was needed,¹⁰⁶ i.e., to produce 5.125 lbs of filature silk, 82 lbs of cocoons were needed, or to produce 1 lb of filature silk, 16 lbs of cocoons were needed.

In 1789, 305187 lbs of filature silk were produced in Bengal for the Company's exports. This needed 4882992 lbs of cocoons. We find that the price of cocoons in 1789 was Rs.12 per maund or Re.0.15 per lb.¹⁰⁷ Therefore, 4882992 lbs of cocoons were worth Rs.732449. The gross outlay on filature silk by the Company in Bengal in 1789 at current prices was Rs.1525935. Therefore the cost of cocoons constituted roughly 48% of the gross outlay. Thus one can say that 52% of the gross outlay went to the manufacturers of filature silk, the percentage of other expenses in the gross outlay being negligible. We assume for convenience that 52% of the real outlay went to the manufacturers of filature silk and this remain constant through out.

Let us take the case of country wounds silk now. To produce 3 seers of country silk required one maund of

106. N.G. Mukherjee, op.cit., p.30.

107. N.K. Sinha, op.cit., vol.I, p.193.

Table 4.8

For Branch 1 (base year 1750)

Year	Real outlay on country would silk (Rs)	Number of persons employed	Per capita annual real income for the manufacturers (Rs)
1750	20,91,000	61,500	17
1789	13,85,781	37,884	18.29

Table 4.9

For Branch 2

Year	Real outlay on country would silk (Rs)	Number of persons employed	Per capita real income for the manufacturers (Rs)
1750	1,80,371	2312	39
1789	4,48,142	8273	27.08

Table 4.10

For Branch 3

Filature silk for Company's exports

Year	Real outlay on filature silk (Rs)	Number of persons employed	Per capita annual real income of the manufac- turer (Rs)
(1)	(2)	(3)	(4)
1776	14,21,278	55,276	13.37
1777	15,37,808	60,334	13.25
1778	16,32,383	64,603	13.14
1779	19,79,663	79,024	13.03
1780	6,25,972	25,202	12.92
1781	20,73,278	84,179	12.81
1782	2,03,088	8,315	12.70
1783	15,85,812	65,472	12.60
1784	29,58,327	1,23,149	12.49
1785	8,27,902	34,747	12.39
1786	6,40,609	27,105	12.29
1787	4,47,570	19,091	12.19
1788	7,62,441	32,782	12.09
1789	10,56,303	45,778	12.00
1790	7,86,954	34,374	11.90
1791	9,09,047	40,018	11.81
1792	9,17,991	40,725	11.72

continued.....

Table 4.10 continued

(1)	(2)	(3)	(4)
1793	17,64,099	78,865	11.63
1794	12,40,247	55,871	11.54
1795	16,93,295	76,859	11.46
1796	17,49,829	80,023	11.37
1797	11,48,460	52,914	11.29
1798	17,45,805	81,033	11.20
1799	25,48,460	1,19,161	11.12
1800	20,85,538	98,229	11.04

cocoons¹⁰⁸ or one can say, 1 lb of country silk required 13 lbs of cocoons. In 1789 we find 511673 lbs of the country silk were produced in Bengal for exports outside the Company's domain. Therefore, we can say that 511673 lbs of country silk required 6651749 lbs of cocoons. At the 1789 price of cocoons, 6651749 lbs of cocoons cost Rs.997762. We also see that in 1789 at current prices, 511673 lbs of country silk cost Rs.1995524. Therefore, the cost of cocoons constituted about 50% of the total costs. Rather, one can say that the manufacturers' income constituted about 50% of the total price they obtained for a particular quantity of country silk. Thus, we take that 50% of real outlay of country silk went to the manufactureres as their income in this period.

Let us now try to calculate the per capita real income for the manufacturers for the different varieties of raw silk in Bengal over the different years between 1750 and 1800. (Tables 4'8, 4'9, 4'10)

Summing up, one can say that the English Company's export trade in Bengal's raw silk (of both varieties), in spite of all its drawbacks, had a net positive impact on the Bengal economy in the second of the 18th century. This

108. N.G. Mukherjee, op.cit. p.30.

trade help to create additional employment and additional real income in the raw silk sector and in the economy as a whole. Since Bengal was a highly labour surplus economy, it is unlikely that the labour in the silk sector came through a displacement of labour from other sectors. Basically the surplus labour present in the economy was drawn in. Therefore any rise in employment in the silk sector as a whole implied an increase in employment in the entire economy. So a net increase in real income in the silk sector meant increased total real income in that sector. Since the persons receiving the income spent a major part of this income on necessities, it stimulated production in the sectors producing the necessities and contributed to increase in employment and income in those sectors and ultimately, rise in the net total income in the entire economy.

The Company's trade in Bengal's raw silk was significant because of another reason. As we have seen earlier, there was a significant fall in the level of demand for Bengal raw silk in other parts of India in late 18th century. This implied decrease in output, employment and income in the Bengal raw silk sector. In this context, the company's export trade in raw silk, particularly of the filature wound variety acquires special significance. The fall in demand for Bengal's raw silk in other parts of India

was more than made up by the increase in demand by the English Company. The demand for filature raw silk by the company, needs special mention here because of its high volume of demand, its greater requirement of labour per unit of output compare to country silk and the consistently increasing real outlay on it. Thus we find that the filature silk sector in Bengal created a significant net additional employment in the Bengal economy in the late 18th century. This also implied a significant increase in net total income in the Bengal economy. From table 4.5 we find that in the period 1776-1800, the filature silk sector in Bengal generated a total real income of Rs.2747372 in the Bengal economy per year on the average. Taking into account the net fall in the total income generated by country silk sector exporting silk to Hindustan and the Deccan and the rise the total income generated in the economy by the country silk and filature silk sectors catering to the company's exports, we find that around 1789-90, the entire raw silk sector in Bengal generated a net total income of Rs 986886 in the Bengal economy $[(2747372 + (896284 - 541113)) - (6273000 - 4157343)] = 986886$.

Another aspect which needs to be mentioned is this. We find that in the period 1776-1800, while the total real output and the total real income in the filature silk sector rose consistently, the per capita real income in this sector

was falling. This can be accounted for by the fact that there was continuous increase in the number of people employed in the sector and the rate of increase of total real income in the sector (1.9%) was lower than the rate of increase of employment in the sector (3.24%). As a result, the per capita real income in the sector was falling. However, the value of the lowest per capita real income in the sector in this period was well above zero. Given the fact that Bengal was a highly labour surplus economy with the opportunity cost of labour being zero over a large range, the lowest value of the per capita real income in the filature silk sector in this period was high enough to attract people to work in the sector. Lastly, it should be noted that though the additional income generated in the Bengal economy implied increase in aggregate demand for necessities, and this increased demand was met up, the rate of capital formation in the economy remained very low. This was due to the phenomenon that, the technology in the sectors producing the necessities was very much labour intensive and so output in these sectors could be increased by drawing in more labour and did not necessitate the production of significantly more capital goods. Since the total capital in an economy is measured by the net total value of all capital goods in the economy, the capital in the Bengal economy remained at a low level.

C. A CONTROVERSY

Let me now try to discuss the issue of the restricted spread of filature silk production in Bengal in the second half of the 18th century which has received lot of attention from different scholars . The slow diffusion of the new technique was commonly explained by contemporary observers in terms of 'native character'. The Board of Trade in Bengal, in one its letters to the silk residents, observed that the greatest obstacles to the spread were the well known habits and prejudices of the natives. In the opinion of the Governor - General and his council, the native's bigoted attachment to ancient customs stood in the way of rapid conversion to the filature system.¹⁰⁹ Similar observations were made by almost all 19th century European authors who have written on this subject - Milburn, Captain Hutton, J.A.H.Louis, George Watt, etc.¹¹⁰

109. B.O.T. to Silk Products, 31 March, 1813, Reports and documents connected with the proceedings of the East India Company in regard to the culture and manufacture of cotton-wool, raw silk and indigo in India (London, 1836).

110. Milburn, Oriental Commerce vol.II; Capt. Hutton, Remarks on the cultivation of silk in India (Calcutta, 1870); J.A.H. Louis, A few works on the present state and future prospects of sericultures in Bengal (Calcutta 1882) pp.14-15; George Watt, A Dictionary of the Economic Products of India (Calcutta, 1983), vol.VI, Part III, 'Silk', p.60.

Dr. Sabyasachi Bhattacharya,¹¹¹ has offered a more economic explanation. He argues that in the filature production, the position of the wholesale dealer, paikar, or the broker became very vital as far as the supply of cocoons was concerned. As result of this, the chassar's (silk worn rearer) position vis-a-vis the wholesale dealer or the paikar became weaker, for he had to sell at any price he was offered or see his cocoons spoilt.¹¹² Dr. Bhattacharya conjectures that probably the chassar could understand the process which commenced with the separation of the use and ownership of the impliments of production. The chassars probably felt it in their bones that the new system weakened his position and increased his economic dependency vis-a-vis the paikar and the owners of the filatures . And therefore, the chassars did not welcome the filature system and resisted its spread.¹¹³

Dr. Harbans Mukhia has offered a slightly different type of explanation.¹¹⁴ It is strictly economic in its thrust. He argues that around 1788, the lowness of the

111. Sabyasachi Bhattacharya, "Cultural and Social Constraints on Technological Innovation", Indian Economic and Social History Review, vol.III, No.3, September 1966.

112. Maxwell-Lefory, op.cit., pp.4-5.

113. Bhattacharya, op.cit., p.246.

114. Harbans Mukhia, "Social Resistance to superior technology: the filature in Eighteenth Century Bengal", Indian Historical Review, vol.XI, Number 1-2, pp.56-64.

price of filature silk offered by the English Company along with the productivity of silk (of both types) per unit of labour and per unit weight of cocoons and the price differential made winding of country silk far more attractive for the artisan. They thus resisted the spread of filature silk production in Bengal. As a consequence, the company had to promote the production of filature silk in Bengal by offering a price attractive enough for the artisan to compensate him for the relative advantages of winding country silk.¹¹⁵

But, I feel that there are genuine problems with the explanations offered by Dr. Bhattacharya and Dr. Mukhia. I am not taking the other explanations very seriously. What I am trying to do here is to offer a critique of these two explanations and try to offer an alternative framework.

Before going into the actual critique, I would like to make some basic observations. One has to note that the main demand for Bengal filature silk came from the English Company. So production of filature silk was bound to be dependent on the demand conditions in Europe for filature silk mediated through the quantity of filature silk demanded in Bengal by the company. A question naturally arises as to

115. Ibid.

why the company wanted the 'general spread' of filature silk production in Bengal. One explanation might be that the company genuinely wanted to ensure that in case of an increase in demand for filature silk in Europe, Bengal would be able to meet up that demand. However we might think of another possible explanation. The company produced a small part of its filature silk requirement in its own filatures but had to purchase a large part of its requirements from other filature silk producers. Therefore price was an important factor in the company's consideration. The company wanted to ensure that if the spread of filature silk production was wide, then there would always be an excess supply vis-a-vis demand and this would enable the company to purchase the filature silk at low prices.

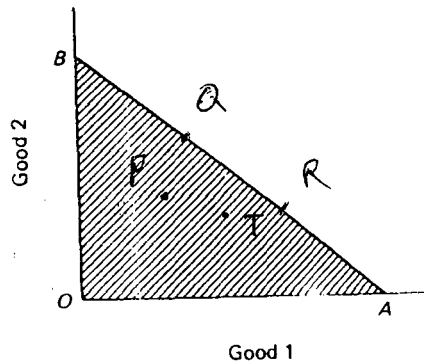
But there is another point to be considered. The general spread of filature silk production was dependent on the amount of investment that was made by the investors in the sector. The amount of investment was again determined by the investors' estimate of the demand conditions for filature silk. The actual investment and production can be higher (or lower) than the optimal level only in case of imperfect knowledge about demand conditions by the investors and producers. However, the investors and owners of filatures in Bengal (mostly English private merchants and other Europeans) were sufficiently equipped to get the

correct estimate about demand conditions in Europe. Moreover, these investors and filature owners were not price-takers but had a certain degree of collusion (direct and indirect) among them. Due to these factors, they make only the optimal level of investment and production of filature silk in Bengal according to their correct estimate of demand conditions in Europe. Thus we can argue that the general spread of filature silk production in Bengal was determined by demand conditions in Europe.

Now, there is an underlining assumption in the arguments of Dr. Mukhia and Dr. Bhattacharya that the spread of filature silk production was restricted because it was constrained by the supply of labour. In Dr. Mukhia's argument, the supply of labour for filature silk was determined by the relative returns for the artisans in filature silk vis-a-vis country silk. In Dr. Bhattacharya's framework, the supply of labour in filature silk was restricted because the artisan had less or no independence in the use and ownership of the means of production in case of filature silk. So in both cases, the basic premise is that all the artisans in filature silk production had necessarily to come to it only after making a clear choice for filature production vis-a-vis country silk. Now this basic premise also implies a near full employment situation

in Bengal. This is because only in a near full employment situation, (assuming population level to be constant) the supply of labour to one sector will depend on the relative returns for labour in that sector compared to the other sectors. And it also rules out increase in the supply of labour in all sectors at the same time. However, from the evidence we have presented earlier in the chapter, it is clear that there was increase in employment (labour supply) in both filature and country silk sectors and this labour did not come from other sectors. Secondly, we have shown earlier that Bengal was nowhere near full employment in our period. In fact it was a highly labour surplus economy with high level of unemployment and under employment. So the opportunity cost of labour was zero for a large range in the economy. In such a situation, even the lowest returns level in filature silk in this period was high enough to induce people to work in filature silk production. An interesting bit of information may be presented here. It is seen that only 30% of the total workforce in filature silk sector in the 1780s came from the country silk sector. The rest that is 70% came from the vast section of unemployed people in Bengal.

What I have discussed so far can be made much more clear with the help of the following diagram.



In this figure, let good 1 be filature yarn silk and good 2 be country wound silk. First assume that all of the available labour is used to produce good 1. Then OA represents the maximum amount of the filature silk that could be produced in the economy given the total labour supply and the technological relationship between the labour and output of filature silk remaining constant. Similarly, we could derive OB as the maximum amount of good 2 that could be produced if all the available labour were deployed to produce it. With constant labour/output ratios in both commodities, it follows that the economy could produce any linear combination of these two output levels by employing the available labour fully. Hence the line AB represents the locus of all feasible full-employment production points, given the total labour supply and the technological level.

The shaded area OAB represents the set of production possibilities. Any point in OAB but not on AB (for example, point P or T) involves some unemployment. Hence the locus AB, described variously as the production possibility curve or the production possibility frontier, is the Pareto-efficient locus of production possibilities. This means that, from a point on AB, one can not increase the production of one commodity without having to reduce the other. Take for example, the movement from point Q to point R. It involves a reduction in the output of good 2 for having an increase in the output of good 1. On the other hand, from any point inside OAB and off the line AB, because there is an employed labour available one could always move northeastwards and get more of one good and no less of the other. In fact, if we move from point P to point T in the figure, there is *decrease in output of one commodity and increase in output of the other* and also *decrease in employment in one and increase in the employment level in the other but the amount of the increase in one is greater than the decrease in the other.*

Now, both Dr. Bhattacharya and Dr. Mukhia assume that in Bengal in the 1780s, raw silk production of both the varieties (good 1 and good 2) could be represented only at some full employment production point, say, point Q, on the production possibility curve AB. So any movement for increasing filature silk production, i.e., movement from point Q to point R involved reduction in output of country wound silk and flow of labour from country silk production

to filature silk production with the aggregate labour supply in the economy and the level of technology as constant. The further argue that the movement from Q to R was restricted because of the low comparative returns level in filature silk production. But actual conditions in Bengal reveal that silk production of both the varieties in Bengal was in the late 1770s at some point inside OAB and off AB, say, at point P. So in the period 1780-1800, silk production moved from point P southeastwards to point T which, implied decrease in output of the country and filature silk and increase in employment level in filature silk. The position of the point T will depend upon the demand for both the commodities in the market. Since there is considerable under employment, and unemployment in the economy, the relative rates of returns in each of the sectors are not the determining factors as only a part of the increase in output and employment in filature silk was due to the decrease in those in country silk.

This brings me to offer an alternative explanation for the phenomenon of the so called restricted spread of filature silk production in Bengal. I would like to argue that it were the demand conditions in Europe mediated in Bengal to the company's level of demand and the investors' estimates of this demand that determined the spread of filature silk production and other factors such as the relative rates of returns, etc., were secondary factors.

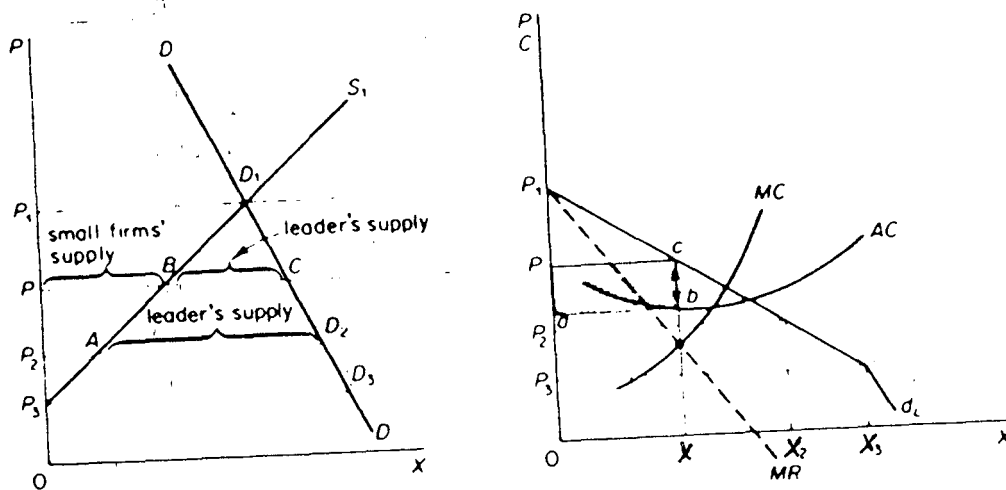
The proof that it was really so can be given in the following way.

From the available evidence one can note that the company's position in the European raw silk market was that of a dominant firm and the European silk market reflected the existence of a dominant firm price leadership oligopoly. The characteristic of the traditional price leader is that he sets his price on marginalistic rules, that is, at the level defined by the intersection of his marginal cost and marginal revenue curves. For the leader, the behavioural rule is $MC = MR$. The other firms are price-takers who will not normally maximise their profit by adopting the price of the leader. If they do, it will be by accident rather than by their own independent decisions. However, this position is also advantageous to them because they prefer to avoid uncertainty about their competitors' reaction even if this implies departure from the profit maximising position. Another thing that should be noted in this case is that the price leadership in most of the cases is practised informally.

In our framework, the English Company represented the dominant firm with price leadership while the suppliers of raw silk from Italy, Turkey, China, etc., were the firms who were the price takers in the European silk market. However,

the dominant firm price leader position of the company was not very stable due to a number of reasons. The leader has to have the power to make the other firms in that industry follow his price increases or price decreases, so that the other firms produce the right quantity which is required to maintain the price set by the leader, with himself producing as much as is compatible with the profit maximising policy (the quantity represented by Ox in the figure at which $MC = MR$). But this power of the leader firm dependent on its costs and size. Once the dominant firm loses its cost advantage, it also loses its power to impose an increase in price, since the smaller firms having lower costs, will not normally follow it in price increases. In this case, the price leader firm's demand curve will be kinked: there will be asymmetry in his power in setting the price. His power will then be larger in lowering the price than in increasing it.

The East India Company's main problem was one of costs. It often found it hard to keep down its costs and there were occasions when it lost its cost advantage.



In this figure it is assumed that the market demand DD , is known to the dominant firm. It is also assumed that the dominant firm knows the MC curves of the smaller firms, which he can add horizontally and find the total supply by the small firms at each price; or at best that he has a fair estimate of the likely total output from this source at various prices. With this knowledge the leader can obtain his own demand curve as follows. At each price the larger firm will be able to supply the section of the total market not supplied by the smaller firms. That is, at each price the demand for the product of the leader will be the difference between the total D (at that price) and the total S_1 . Having derived his demand curve (d_L) and given his MC curve, the dominant firm will set the price P at which his $MC = MR$ and his output is OX . At price P , the total market demand is PC , and the part PB is supplied by the small

firms, while quantity $BC = OX$ is supplied by the leader. The dominant firm leader maximises his profit by equating his MC to his MR, while the smaller firms are price takers, and may or may not maximise their profit, depending on their cost structure. It is assumed that the small firms cannot sell more at each price than the quantity denoted by S_1 . However, if the leader is to maximise his profit, he must make sure that the small firms will not only follow his price, but that they will also produce the right quantity (PB, at price P). Thus, if there were no tight sharing-the-market agreement, the small firms may produce less output than PB and thus force the leader to a non maximising position.

In our particular case, the company's position in terms of quantity of silk supplied into the European market was between 0 and X (both points excluded) and between X and X_3 (both points excluded). It was trying to come to the point X so as to maximise its profits. If the company's supply to the market was between 0 and X, then MR is greater than MC, but total profits were not maximised. So the need was to increase the purchase of silk from Bengal. If, however, the position was between X and X_3 then MC is greater than MR and need was to decrease the amount of silk purchased from Bengal.

As we noted earlier, one of the main problems for the company was of rising costs which threaten its cost advantage. Costs were rising due to a number of factors beyond the control of the company. In the given situation, rising costs necessitated that the company should get higher prices in the European market for silk. This it could do by varying the output or the quantity of silk bought from Bengal.

If we look at the period 1775-1784, (see table 4.1) we find that the company was maintaining its supply at such a point where MC is higher than MR. This meant that price it got in the European market was quite low. However, the company did this presumably to capture a considerable share of the market, in which it was successful. But rising cost due to forces beyond its control necessitated higher prices and reduction of the purchase of silk from Bengal. This is evident from the year 1785 as seen from the table. The company had to resort to this measure even if this meant giving up a part of the European market to the other firms. Now, if the company reduced its purchase of silk from Bengal, or more precisely, filature silk from Bengal, it meant a reduction in production of filature silk in Bengal and a consequent reduction of labour requirement in that sector. When we look at the figures for filature silk

Table 4.11 (Note: calculation based on tables 4.1, 4.2, 4.3)

Season	Marginal cost (£)	Marginal revenue (£)
1777-78	0.784	0.062
1779-80	0.265	0.162
1780-81	0.619	0.479
1781-82	0.798	0.600
1782-83	0.889	0.621
1783-84	0.731	0.727
1784-85	0.753	0.687
1786-87	0.79	0.71
1787-88	0.61	0.60
1788-89	0.53	0.56
1789-90	0.80	0.96
1790-91	0.33	0.41
1791-92	0.52	0.64
1793-94	0.07	0.41

exports from 1785 - 1788 we find that the amount was quite low compared to the earlier period. So one can argue that around the 1788, there was a reduction in output and employment in the filature silk sector in Bengal. This explains the phenomenon of decline in filature silk production that is seen in the records and the shift of labour out of filature silk production. So one can reasonably argue that decrease or increase in the level of output and employment in the filature silk production and its spread was largely determined by demand conditions in Europe and factors like the relative rates of returns were of secondary importance. Another interesting point to be noted is that around 1788-89, the company's supply position was to the left of point X where MR is greater than MC (this is corroborated from table 4.11), and the company's position was quite comfortable in terms of the prices it was receiving in a situation of rising costs.

After 1795-96, due to certain changes in the nature of market demand for silk in the European market, there was a shift in the market demand curve DD to the right and also a shift to the right of the company's demand curve. This means that points P_1, P, P_2, P_3 move upwards and points X, X_2, X_3 move to the right. This implies that the company could now increase its purchase of silk from Bengal as well as get higher prices for it (in order to cover rising costs). This

was precisely what was happening after 1795-96 when we find that the quantity of silk produced from Bengal rose substantially and the rising costs were comfortably met up by the Company.

CONCLUDING REMARKS

In bringing this work to a close, I would like to present certain specific findings about trade, production and the Bengal economy in the 2nd half of the 18th century. Then, from these specifics I would try to arrive at some broad generalisations and their implications. Towards the end I would attempt to integrate all the generalisations in order to construct a model of trade and production in Bengal in this period.

In the 1st chapter we have seen that there existed in Bengal during this period a well-integrated and well organised structure of trade and markets. Bengal presented a picture of a predominantly monetised economy with goods flowing inside Bengal or moving out of it to far off lands regulated by force of demand and some other factors such as communication facilities, etc. Prices were determined primarily by the interaction of demand and supply although other factors played an important role at times.

The monetary system has been discussed in the 2nd chapter. Although there existed a multiplicity of currencies, the monetary system including indigenous banking was well developed and systematised and possessed a dynamics of its own. The strength of the system was reflected in the way it managed to stall the various attempts by the

Company's government to establish domination over it through administrative means. The net outcome was that both sides had to retreat from their original positions and undergo certain modifications. The company's government could establish its own uniform currency only towards the end of the 18th century and early in the 19th century. However much of the older methods of banking and financial transactions remained almost intact. The indigenous moneylenders and moneychangers not only survived but also thrived in their business. The links between the monetary system and the trade structure deserve special attention. I have argued that the monetary system of Bengal derived much of its strength from its close links with the trade networks. It is also evident that at least upto the end of the 18th century, the company or the English private traders could not establish total hegemony over the indigenous trade networks. In fact both the company, and the European private merchants and companies had to depend substantially on the Indian trade networks and the indigenous moneylenders and moneychangers for carrying out their export trade upto at least the early 19th century. Further, the indigenous moneylenders and moneychangers could adopt themselves to changing circumstances when it was necessary and thereby managed to thrive in their business.

In the 3rd and 4th chapters, I have discussed the interrelationship between trade and non-agricultural production in Bengal. Basically, here I have taken up two specific industries, namely, the cotton goods industry and the raw silk production sector and tried to analyse the nature of the impact that the English Company's export trade had on these industries and on the Bengal economy as a whole. The impact has been analysed by studying certain variables such as the technological level and the condition of production in these sectors, the employment level, in them, and the income generated in the respective sectors and in the economy as a whole. The impact of the Company's trade on these variables has been studied in details. The technological level in both these industries remained more or less constant and was highly labour intensive. Production conditions in these 2 industries also did not show any significant evidence of a stagnation or decline. I have shown how some scholars have reached the conclusion about decline or stagnation in these industries through an incorrect interpretation of certain indicators. I have tried to provide an alternative interpretation of these indicators. The most interesting observation that I have found here is that far from displaying significant decline or stagnation, there were occasionally marked improvements in the quality of production in these industries.

Real output (outlay) and employment rose substantially in both these industries. In the cotton goods industry we find that the level of real output in any year was quite high and real output (outlay) in fact rose at the rate of 1% per year, simple rate relative to the real output level in 1755 in the period 1755-95. In the same period, the employment level in any year in the cotton goods industry (considering the number of weavres employed) was also quite high and between 1755-95, employment rose at the rate of 4% per year, simple rate, compared to the employment level in 1755 (it can be noted that total number of weavers employed in the cotton goods industry catering to the company's exports in 1755 was 34,392). In the case of raw silk production, it can be seen that while in the country wound raw silk sector catering to the company's exports, the real output/outlay rose by 148%, there was a decrease in the real output/outlay by 34% in the country raw silk sector exporting silk to Hindustan and the Deccan, between 1750 and 1790. The filature silk sector started around 1776 with a high initial annual real output/outlay level valued at Rs.1,421,278 and this increased between 1776 and 1800 at the rate of 1.9% per year, at the simple rate compared to level in 1776. In case of employment, we find that between 1750 and 1790, there was a fall in the employment level in the country raw silk sector sending silk to Hindustan and the

Deccan while there was a rise in the same in the country silk sector catering to the company's exports. In this situation, the introduction of filature silk production had a significantly positive impact. I have calculated that around the late 1770s, the filature silk sector contributed to the creation of a net additional employment in the entire raw silk sector and in the economy as a whole, for 37621 persons between 1776 and 1800 this employment level rose by 3.24% per year, simple rate, compared to the employment level in the entire sector in 1776.

Given the high level intensive technology of production, we have seen that more real output/outlay implied greater employment. However, the rise in employment level also meant increase in total income in the respective sectors and also in the entire economy through the multiplier effect. Even after taking the effects of the drain of wealth phenomenon into consideration for the post 1765 period, we find that the cotton goods sector generated a net total income of Rs.6837486 in the Bengal economy as a whole in 1760 and this amount went on increasing at the rate of 1.6% per year, simple rate, upto 1795. On the other hand, there was a fall in the level of net total income created in the Bengal economy by the country silk sector exporting silk to Hindustan and the Deccan in 1789-90 compared to that in 1750. This fall was partially mitigated by the rise in

the level of the net total income generated in the Bengal economy by the country silk sector catering to the company's exports in 1789-90 relative to that in 1750. The gap was more than made up by the significant rise in the level of net total income generated in the Bengal economy annually by the filature silk sector since 1776. We find that this level was Rs.2842556 in 1776 and it went on increasing at the rate of 1.9% per year, simple rate, upto 1800. Thus around 1789-90, we find that the entire raw silk sector in Bengal contributed to the generation of a net total income of Rs.986886 in the Bengal economy per year and it went on increasing at the rate of 1.9% (approximately) per year, simple rate, upto 1800. Taking the cotton goods industry and the raw silk industry together, one can say that around 1789-90, both these sectors were passing the generation of a net total income of Rs.10,996,972 in the Bengal economy annually and this level was also growing.¹

The implications of these findings are as follows:

We began by stating that Bengal was in this period a predominantly labour surplus economy. So the opportunity cost of labour was zero over a large range in the economy. In this context, the generation of additional employment in

1. $[Rs.\{(6837486 \times 1.6 \times 29) / 100 + 6837486\} + Rs.986886]$
 $= Rs.10,996,972.$

the economy by the manufacturing sector (non-agricultural production sector) has a significant positive implication. Its main contribution lay in absorbing a part of the surplus labour available in the economy. Additional employment also meant creation of additional income in the economy. Since a major part of this additional income was spent on necessities, this again created additional aggregate demand in the economy and stimulated the production of more real output in the sectors producing the necessities. This in turn, implied creation of more employment in these sectors, so, absorbing more surplus labour. Since the necessities were mostly agricultural goods, one has to seek for the confirmation of this growth in the agricultural sector. The available evidence actually indicates an expansion in cultivation and increase in output of agricultural items in the late 18th century. The increase in cultivation seems to have been quite substantial in the eastern districts of Bengal. The growth in the district of Dacca was reported by James Taylor². In Tipperah and Faridpur, growth and some decline co-existed, though the area of new cultivation was considerably larger than the decadant one. In Tipperah, between 1793 and 1860, cultivation increased from 40% of the

2. James Taylor, A sketch of the topography and statistics of Dacca (Calcutta, 1840).

district area to 74.6%³. In Faridpur, cultivation increased in the eastern and southern part.⁴ The growth in the northern Bengal district such as Rangpur and Dinajpur seems to have been much slower process.⁵ In the western Bengal district, however, the record was not that much impressive. In Midnapur, cultivation increased mainly in the western parganas.⁶ One can note that this increase in cultivation started slowly more or less after the 1780s but the pace of growth quickened later on.⁷

Various reasons have generally been given for this expansion. A more or less general impression of the contemporaries was that part of the new cultivation was due to a natural growth of the local population. The only striking exception was Colebrooke who argued that in the late 18th century, the existing population of Bengal was big enough for bringing about a large increase in the cultivation and that the main obstacle in this was the

3. B.B. Chaudhuri, "Regional Economy: Eastern India, II", The Cambridge Economic History of India, Vol.II, pp.302-6.

4. Ibid.

5. Ibid.

6. Ibid.

7. Ibid.

limited market for agricultural products.⁸ I think, in this context, the increase in income in the manufacturing sectors due to the trade in them, led to a rise in aggregate demand and consequently, an expansion of the market for agricultural products in the late 18th century. This, in turn, led to an expansion of cultivation and increase in agricultural output. In this context, as B.B. Chaudhuri points out, the population growth did not by itself lead to increased cultivation, but constituted one of its primary conditions.⁹ In the several of the regions, the increase in cultivation was only partly due to a natural growth of the local population, and was mostly due to immigrant labour, largely tribal and semi-aboriginal in character.¹⁰

Secondly, the phenomena of growing real output, total employment and net total income in Bengal economy in the second half of the 18th century lead us to seriously question the arguments about the decline or stagnation in the manufacturing sector and also in the Bengal economy due to the drain of wealth and the company's 'misrule', put forward by some economic historians such as R.C. Dutt, N.K. Sinha, Sabyasachi Bhattacharya and very recently, Hameeda

8. Quoted in B.B. Chaudhuri, op.cit., p.309.

9. B.B. Chaudhuri, op.cit., p.307.

10. Ibid.

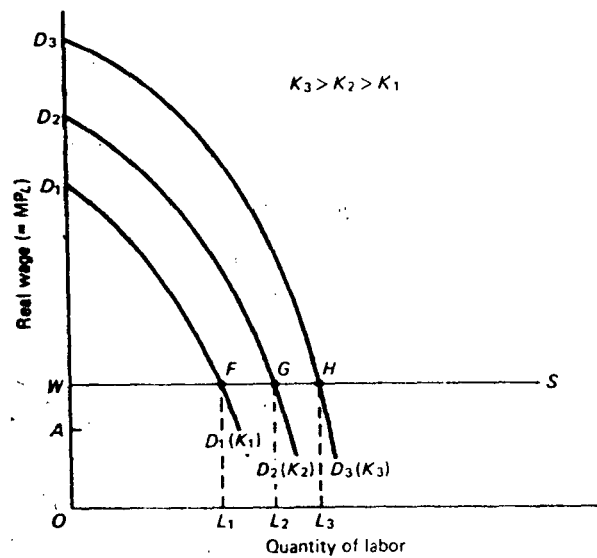
Hossain, among others. Instead, the picture we get is of a growing economy. The annual rates of growth of the different variables that we are getting for this period are significant even by modern standards, when the average rate of growth for the Indian economy or some other modern economies, fluctuates around 4% - 5% per year. And we have to note that the rates of growth we have obtained here, have been calculated by taking into account the effects of the drain of wealth from Bengal in this period. So, after considering all the issues involved here, I would argue that if we take a macro economic view considering variables in the economy such as output, employment and income, the Bengal economy in this period displays the signs of a more or less growing economy.

Before concluding, however, I would like to add certain qualifications which should also be taken into account. One has to admit that there was not any significant technical change in the economy. Technology of production remained highly labour intensive and did not require much capital goods. So, demand for increased aggregate output was met up by incorporating more labour and did not necessitate production of substantially more capital goods. Thus, the level of capital formation in the Bengal economy remained low. Secondly, one has to remember that much of the companies so called exports were really speaking, transfers.

So if these had been real exports then the gain for economy would have been much greater. Basically, much of the controversy regarding the analysis of the Bengal economy during this period arises partly from the fact that the economic historians arguing for the phenomenon of decline and stagnation have taken this ideal situation of a potential gain due to real exports as their standard of measurement. Instead, what I have tried to do here is to analyse the economic events keeping the real picture of the pre-1760 and post-1760 Bengal in mind. Following this methodology, I have been able to show that inspite of the drain of wealth, there was growth in the Bengal economy during the period 1750-1800, seen in terms of output, employment and aggregate income in the economy. Let me express this with the help of algebraic symbols. Following the method developed in chapters 3 and 4, we can see that if the aggregate real outlay on the manufacturing sector as a whole was X_1 in t_1 period, then taking the drain of wealth into account we find that the net total income created in the Bengal economy in t_1 was $= k.X_1 - X_1$, where K = multiplier and $X_1 = \sum_{i=1}^n x_{i1}$ because the total real outlay in the manufacturing sector in t_1 period is the sum of the real outlays on the different industries in the manufacturing sector in t_1 period. If this movement of manufactured items out of Bengal had been real exports then the net total gain for the economy in t_1

period, would have been $= k.X_1$. Therefore, the potential loss in net total income in t_1 period $= k.X_1 - (k.X_1 - X_1) = X_1$.

Let me conclude by constructing a model to explain what was happening in Bengal during this period.



On the vertical axis of the figure, we have the real wage or the per capita real income in a manufacturing sector and the marginal productivity of labour (assumed to be equalised in the competitive manufacturing sector labour market). On the horizontal axis, we have the quantity of labour or the number of persons employed in the manufacturing sector. The economy is a labour surplus economy. Segment OA represents the average level of real subsistence income in the traditional rural sector. Segment OW represents the real wage or per capita real income in the

manufacturing sector. At this per capita real income level, the supply of rural labour is assumed to be 'unlimited' or perfectly elastic, as shown by the horizontal labour supply curve, WS. Given a real outlay level in the manufacturing sector X_1 in t_1 time period the demand curve is determined by labour's declining marginal product (due to the principle of diminishing marginal yields) and is shown by curve $D_1 (X_1)$. Since the employers in the manufacturing sector are assumed to be profit maximising, they will employ labourers upto the point where their marginal physical product is equal to the real wage (or for the labourers, the per capita real income), i.e., upto the point F of intersection between the labour demand and supply curves. Therefore, the total employment in the manufacturing sector in t_1 , is equal to OL_1 . Total manufacturing sector output would be given by the area bounded by the points OD_1FL_1 . In time period, t_2 , the real outlay is X_2 (X_2 is greater than X_1). This rise would cause the total product curve of the manufacturing sector to rise, which in turn induces a rise in the marginal product demand curve for labour. The outward shift in the labour demand curve is shown by the line $D_2 (X_2)$ in the figure. A new equilibrium manufacturing sector employment level will be established at point G with OL_2 labourers now employed. The total output rises to OD_2GL_2 . Similarly, when in t_3 period, the total real outlay becomes X_3 ($X_3 > X_2 > X_1$), we find

that OL_3 labourers would be employed. This process can go on as long as there is surplus labour in the economy. This was exactly what was happening in Bengal in the second half of the 18th century. Due to the English company's export trade, and the export trade of other foreign companies and private traders, the total real outlay in the manufacturing sector was rising over the years ($X_3 > X_2 > X_1$). This necessitated greater output and greater employment. Thus, we see that as the total real outlay, X_i , increased over time, the employment level rose and more and more of the surplus labour available in the economy was being drawn into the manufacturing sector. However, from the early 19th century, X_i started decreasing slowly initially and faster later on, bringing about also a decline in the employment level in the manufacturing sector.

BIBLIOGRAPHY

I. MANUSCRIPT AND UNPUBLISHED SOURCES

1. National Archives of India, New Delhi
Mint Committee Proceedings : 1792 (Vol. I & II),
1804-1805
2. West Bengal State Archives, Calcutta
 - i. Proceedings of the Bengal Board of Trade (Commercial),
1774 to 1833 (547 volumes)
 - ii. General Letters to and from the Court of Directors,
etc. 1772-1800.
 - iii. Letters issued by the Reporter of External Commerce,
Bengal, 1806-12.

II. PRINTED RECORDS

- Colebrooke, J.E. A Digest of the Regulations and
Laws Enacted by the Governor-General in
Council for the Civil Government of the
Territories under the Presidency of Bengal,
Vol. I-III, Calcutta 1807.
- Harrington, J.H., Analysis of the Bengal Laws and
Regulations, Calcutta 1805-17, Vols. I-III.
- I.R.S., Fort William - India House Correspondence,
New Delhi, Vols. I-VIII.
- Long, Rev. J., Selections from Unpublished Records
of Government for the years 1748 to 1767 and
1784 to 1805, Calcutta 1973.

III. PARLIAMENTARY AND OFFICIAL PAPERS

Third, Fourth and Eighth Report from the Committee of Secrecy Appointed to Enquire into the state of the East India Company, 1773.

Reports of the Select Committee appointed by the Court of Directors of the East India Company upon the subject of the Cotton Manufacturers of this country, 1793.

The Fifth Report from the Select Committee of the House of Commons on the East India Company, ed. W.K. Firminger, vols. 1-3, 1812, Calcutta, 1927.

Reports and Documents Connected with the Proceedings of the East India Company in regard to the Culture and Manufacture of Cotton-Wool, Raw Silk and Indigo, London, 1836.

IV. TRAVEL ACCOUNTS AND CONTEMPORARY SOURCES

Baines, E. History of the Cotton Manufacture in Great Britain, London, 1837.

Bolts, W., Consideration on Indian Affairs, London, 1772.

Chundar, B., The Travels of a Hindu to Various Parts of the Bengal and Upper India, 2 vols. London, 1869.

Geoghegan, Some Account of Silk in India especially of the various attempts to encourage and extend sericulture in that country (Calcutta, 1872).

Hunter, W.W., A Statistical Account of Bengal, Vols. I-XX, London, 1875-77.

Hutton, Capt., Remarks on the Cultivation of Silk in India, Calcutta, 1870.

Khan, G.H., Seir-ul-Mutakherin, Vols. I-III, Calcutta, 1799.

Medlicott, J.B., Cotton Handbook for Bengal, Calcutta, 1862.

Martin, R.M., The History, Antiquities, Topography and Statistics of Eastern India, Vols. I & II., London, 1838.

Milburn, William, Oriental Commerce, Vols. I-II, London, 1883.

Orme, Robert, Historical Fragments of the Mughal Empire, London, 1805.

Price, J., Five letters from a Free Merchant in Bengal, London, 1778.

Prinsep, G.A., Remarks on the External Commerce and Exchanges of Bengal, London, 1823.

Rennell, J., Memoir of a Map of Hindoostan, London 1785.

- Rennell, J., A Bengal Atlas, London, 1780.
- Salim, G.H., Riyaz-uz-Salatin, Calcutta, 1890.
- Stavorinus, J.S., Voyages to the East Indies,
Vol. I-III, London, 1798.
- Stewart, Charles, The History of Bengal, Calcutta,
1813.
- Taylor, James, A Descriptive and Historical Account
of the Cotton Manufacture of Dacca in Bengal,
London, 1851.
- _____, A Sketch of the Topography and Statistics
of Dacca, Calcutta, 1840.
- Trevelyan, S.C., A Report upon Inland Customs and
Town Duties of the Bengal Presidency, Calcutta,
1835.
- Vansittart, H., A Narrative of the Transactions
in Bengal from 1760-1764, London, 1766.
- Verelst, H., A View of the Rise, Progress and
Present State of the English Government in
Bengal, London, 1772.
- Watson, I. Forbes, The Textile Manufacturers and
the Costumes of the People of India, London,
1866.

V. SECONDARY WORKS

Books

- Balkrishna, Commercial Relations between India and
England (1601-1757), London.

- Bhattacharya, S., East India Company and the Economy of Bengal from 1704 to 1740, London, 1954.
- Birdwood, G.C.M., Industrial Arts of India, London, 1884.
- Branson, William, Macroeconomic Theory and Policy, 2nd edn., New Delhi, 1983.
- Caves, Richard, E., Trade and Economic Structure, Harvard, 1967.
- Chaudhuri, B.B. Growth of Commercial Agriculture in Bengal, Calcutta, 1964.
- Chaudhuri, K.N., The Trading World of Asia and the English East India Company, 1669-1760, Cambridge, 1978.
- _____. The Economic Development of India under the East Company, 1814-1858: A Selection of Contemporary Writings, Cambridge, 1971.
- Chaudhuri, S., Trade and Commercial Organisation in Bengal, 1600-1720, Calcutta, 1975.
- Chickerov, A.L., India : Economic Development in the 16th to 18th Centuries, Moscow, 1971.
- Datta, K.K., Survey of India's Social Life and Economic Conditions in the Eighteenth Century (1707-1813), Calcutta, 1961.
- Dutt, R.C., Economic History of British India, London, 1906.
- Elster, Jon., Explaining Technical Change, Cambridge, 1983.

- Feldback, O., India Trade under the Danish Flag, Copenhagen, 1969.
- Furber, H., John Company at Work, London, 1951.
- Ganguli, B.N., Readings in Indian Economic History, London, 1964.
- Ghosal, H.R., Economic Transition in Bengal, 1793-1833, Patna, 1950.
- Greenberg, M., British Trade and the Opening of China, Cambridge, 1951.
- Guha, R., A Rule of Property for Bengal, Paris, 1963.
- Habib, I., The Agrarian System of Mughal India (1556-1707), London, 1963.
- Hossain, Hameeda. The Company Weavers of Bengal, New Delhi, 1988.
- Hug, Mazhurul, The East India Company's Land Policy and Commerce in Bengal, 1698-1784, Dacca, 1964.
- Jain, L.C., Indigenous Banking in India, London, 1924.
- Marshall, P.J., East India Fortunes, Oxford, 1976.
- Mitra, D.B., The Cotton Weavers of Bengal, 1757-1833, Calcutta, 1978.
- Morris, Morris D., et al., Indian Economy in the Nineteenth Century : A Symposium, New Delhi, 1969.
- Mukherjee, N.G., A Monograph on the Silk Fabrics of Bengal
- Mukherjee, R., The Rise and Fall of the East India Company, New York, 1974.

- O'Malley, L.S.S., Bengal District Gazetteers.
- Prakash, Om, The Dutch East India Company and the Economy of Bengal, New Delhi, 1988.
- Rosenberg, Nathan, Inside the Black Box, Cambridge, 1982.
- Samuelson, Paul, Economics, 12th edn.,
- Seton-Karr, W.S., Selections from Calcutta Gazettees, Vols. I-III.
- Sinha, J.C., Economic Annals of Bengal, London, 1927.
- Sinha, N.K., Economic History of Bengal, Vols. I-III, Calcutta, 1965.
- The Cambridge Economic History of India, Vols. I-II, Cambridge, 1982-3.
- Tripathi, A., Trade and Finance in the Bengal Presidency, 1793-1833, Bombay, 1956.
- Unwin, G., Studies in Economic History, London, 1927.
- Walsh, J., History of Murshidabad, London, 1902.
- Watt, Sir G., Dictionary of the Economic Products of India, London, 1890.

Articles

- Arasaratnam, S , 'Indian Commercial Groups and European Traders, 1600-1800 : Changing Relations in South Eastern India', South Asia, N.S. vol. 1, no. 1, 1978.

- Bhadra, G., 'A Preliminary Note on the Role of Pycars in the Silk Trade and Production of Bengal, 1757-1857,' Indian Historical Records Commission, Proceedings, 1975.
- Bhattacharya, S., 'Cultural and Social Constraints on Technological Innovation and its Migration to East and West', Indian Economic and Social History Review, vol. 3, no. 3, 1966.
- Chaudhuri, K.N., 'The Structure of Indian Textile Industry in the Seventeenth and Eighteenth Centuries', Indian Economic and Social History Review, vol. 11, Nos 2 & 3, 1974.
- _____, 'India's International Economy in the Nineteenth Century : An Historical Survey', Modern Asian Studies, 2, 1968.
- Mukhia, H., 'Social Resistance to Superior Technology : The Filature in Eighteenth Century Bengal', Indian History Review, vol. XI, Nos. 1-2.
- Perroux, Francois, 'The Domination Effect and Modern Economic Theory', Social Research, XVII, 1950.
- Skinner, G.W., 'Marketing and Social Structure in Rural China', Journal of Asian Studies, vol. 24, Nos. 1-2, Nov. 1964, Feb-May, 1965.