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THE EMPLOYMENT ASPECT OF THE THIRD FIVE YEAR PLAN (1985-90) :
THE CASE OF HANDLOOM AND POWERLOOM SECTOR

SYED TANWEER MURSHED
MIR OBAIDUR RAHMAN
NASIRUDDIN AHMED



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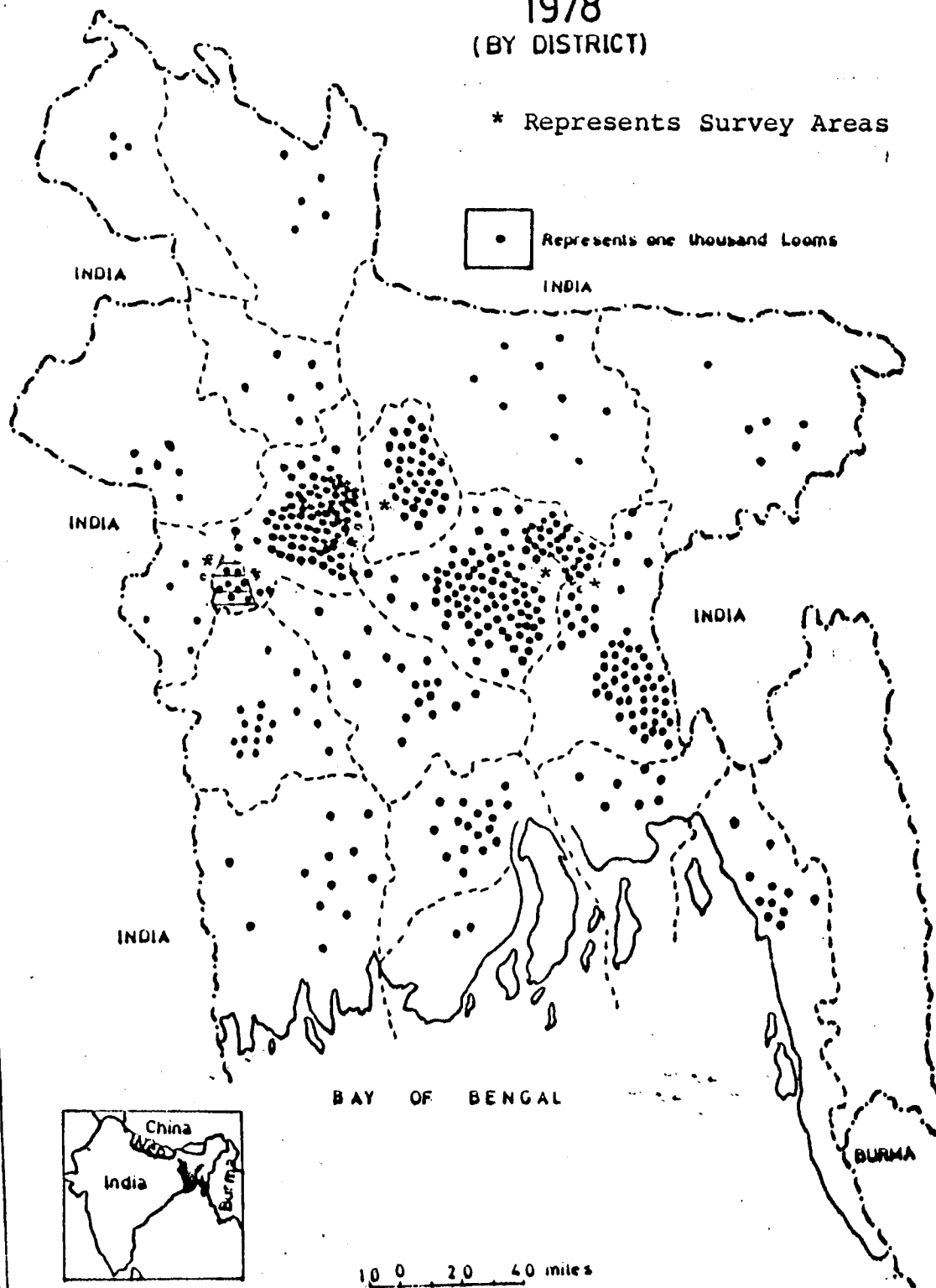
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Syed Tanweer Murshed
Mir Obaidur Rahman
Nasiruddin Ahmed

BANGLADESH
DISTRIBUTION OF HANDLOOMS
1978
(BY DISTRICT)

* Represents Survey Areas

• Represents one thousand Looms



Map-1

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Chapter I

Background

The main theme of the Third Five Year Plan is the alleviation of poverty. Roughly two thirds of our population are below the poverty line in terms of minimum calorie intake. Shortage of basic necessities is so acute that the government is pursuing a strategy of growth with equity. From this perspective, effort has been made in the Third Plan through sophisticated modeling so that the distributional impact of various policy prescriptions can be adequately taken care of.

The Third Five Year Plan became operative since July 1985 although the plan document was published in November, 1985. The eight major objectives outlined in the plan represent the genuine development needs of the economy. The objective of expanding productive employment may satisfy two cardinal aspects of the development needs: First, productive employment may release forces for the optimum use of land and labour with appropriate technology, compatible with comparative cost advantage. Secondly, employment may ensure access of poor people to the basic needs basket, an indirect effect of which will be the expansion of wage good industries.

Employment Scenerio During 1973-85

Ever since Bangladesh initiated planned development efforts in 1973, emphasis has been laid on employment expansion; but with little success.

Currently, over one-third of the labour force is estimated to be unemployed or underemployed implying shortfall in the attainment of the targets for employment generation in the past plans. The First Five Year Plan envisaged 5.4 million man-years of employment generation, but as investment fell short employment expansion to the tune of only 3.0 million man-years was possible. The target for employment generation in the Two Year Plan was 1.8 million man-years but actual employment creation was much below the target. The interim nature of the plan and lack of specific policy failed to attain target for employment expansion. Unemployment situation was thus aggravated during the period 1973-80 than what it was in 1972/73. Against the Second Plan (1980-85) target of creation of 3.7 million job opportunities during the plan period, no more than 3.2 million jobs were created indicating a further deterioration of unemployment situation. The plan laid emphasis on development of small and cottage industries as a strategy for employment generation. One such area was the handloom industries, where the number of idle looms was 1,77,000.

These looms if reactivated could employ 4.46 lakh people on weaving alone at the rate of 2.5 persons per loom. However, employment oriented rural development programmes were mostly slow to start and had considerable time overrun. Their impact on employment was weak because of absence of adequate focus on employment generating activities. Major investment were made in labour saving, capital intensive industries.

Employment Situation During TFYP

The Third Plan, which emphasises self-employment and non-farm employment, envisages creation of 5.1 million job opportunities against the existing estimated unemployed of 7.0 million plus an entry of 4.0 million people into the labour market during the plan period. The total labour force in the age group of over 10 years for the Plan period has been estimated. According to the Manpower Survey of 1980, over 31 percent of the population constitutes the civilian labour force. On the basis of this ratio, the labour force will increase from 31.0 million in mid-1985 to 35.0 million in mid-1990 i.e., labour force will increase by 4 million. Adding to this the existing unemployment which is estimated to be around 7 million, total number of people looking for jobs will rise to 11 million. The social Accounting Matrix (SAM) developed for the

Third Plan gives the estimated employment generation for 1981-85 period (which has been arrived at by sectors and socio-economic groups) at 19.29 million in man-year terms. Given the participation rate of 31 percent, civilian labour force stood at 31.1 million on the basis of mid-1985 population of 100.5 million; implying an unemployment rate of 38 percent. The break-up of planned target of creating about 5.1 million new employment during the plan period is shown in Table 1.1.

Table 1.1: Employment Target During the TFYP

Sector	(in million of man-year)		
	1984/85 (Benchmark)	1989/90 (Target)	Percentage of Total (Target)
Agriculture	11.64	15.06	61.8
Industries	1.90	2.43	10.0
Public Utilities	1.69	1.87	7.7
Construction	0.59	0.73	3.0
Public Services	2.00	2.52	10.3
Trade and Others	1.47	1.77	7.3
Total	19.29	24.38	100.0

Source: The Third Five Year Plan (1985-90) p.114.

It is evident from Table 1.1 that 61.8 percent of additional employment is estimated from expanded activities in the agricultural sector. The remaining additional employment opportunities of 38.2 percent will have to be created in non-agricultural sector especially in industrial sector.

The Third Plan has assigned increasing emphasis on non-farm employment generation in rural areas, in non-crop sectors like fisheries and livestock, rural infrastructure and in rural industries. The main thrust is on development of rural industries. There is already a modest rural industrial base in the cottage industries. Currently about 1.5 million persons or about 7 percent of the labour force is directly employed in rural cottage industries. However, historical data shows uneven growth in the different types of cottage industries in Bangladesh. Table 1.2 furnishes information on the number of enterprises and employment in the major cottage industries in Bangladesh as revealed in the Cottage Industries Survey of BSCIC in 1961 and 1980.

Table 1.2: Trend in Number and Employment in Major Cottage Industries in Bangladesh, 1961-1980.

Type of cottage industries	No. of units (000)			Total employment (000)			Percentage of employment.	
	1961	1980	Annual rate of growth (%)	1961	1980	Annual rate of growth (%)	1961	1980
Agricultural food processing	51.5	24.7	-3.8	154.3	81.8	-3.3	13.18	4.65
Forestry product processing	74.1	94.5	1.3	231.9	278.2	1.0	19.81	15.81
Handlooms	137.3	205.9	2.1	521.2	897.5	2.9	44.52	51.01
Other textiles (Fish netting and tailoring)	28.5	65.6	4.5	78.1	161.0	3.9	6.67	9.15
Pottery	24.3	16.5	-2.0	85.1	76.1	-0.6	8.27	4.33
Blacksmithy	12.0	10.6	-0.7	28.6	25.7	-0.6	2.44	1.46
Goldsmithy	10.2	12.3	1.0	10.6	16.6	-0.9	1.67	0.94
Total:	337.3	499.5	1.3	1118.8	1536.9	1.7	95.57	87.35
All cottage industries	354.3	499.5	1.8	1170.6	1759.4	2.1		

Source : BSCIC, Cottage Industries Survey, 1961 and 1980.
 Figures for Handlooms are estimated from the Bangladesh Handloom Census of 1978.

It would appear that handloom was the single major cottage industry accounting for about 45 percent of total employment in all cottage industries in 1961, the share rising to 51 percent in 1980. Except other textiles (fish netting and tailoring), the percentage of employment in all other cottage industries showed a downward trend. The rate of growth of

employment at 2.9 percent per annum in handloom industry was higher than 2.1 percent per annum for cottage industries sector as a whole. Rural Industries Study Project (RISP) conducted by BIDS also revealed handloom as the largest cottage industry accounting for about 42 percent of total cottage industry employment recorded in all the survey areas.

The above findings have certain policy implications. Since handloom sector has potential in terms of its contribution to GDP and employment, development policy of the government must have focus on promotion of handloom sector in Bangladesh.

Chapter II

Scope

The scope of the study as enunciated in the proposal are to-

1. determine the present status of employment situation within the sampling units;
2. trace and analyse employment and production trends in the handloom industry pre and post implementation of the Third Five Year Plan period;
3. estimate national employment potentialities to meet TFYP employment target;
4. gather information on the current state of marketing of handloom products;
5. assessment of training needs of the weavers and identification of the sources of capital;
6. establish causal relationship between the major determinants of employment generation in the handloom sector;
7. identify major problems in the development of the industry and recommend suitable measures for strengthening the handloom industry.

Methodology

Initially, the study encompassed the following activities:

Sample surveys were originally envisaged in 1,000 handloom units in the districts of Pabna, Kushtia, Khulna, Barisal, Dhaka, Comilla and Tangail. The selected units mainly comprised the service centres of the Bangladesh Handloom Board. The sampling units and areas thus constituted were:

<u>Division</u>	<u>District</u>	<u>Area</u>	<u>Sampling Unit.</u>
Rajshahi	Pabna	Belkuchi Shahazadpur	300
Khulna	Kushtia	Kumarkhali	100
"	Khulna	Satkhira	100
"	Barisal	Gournadi	100
Dhaka	Dhaka	Narsingdi	100
"	Tangail	Tangail Sadar	200
Chittagong	Comilla	Shovarampur	100

Subsequently, in view of the magnitude of workload and time constraints, reviewers of the study suggested exclusion of Khulna and Barisal districts from the purview of this study. Consequently, total sample units increased to 1,162 units and five districts instead of seven were represented. For convenience of tabulation, classification and analysis of data, the locations have been converted into "Zone". Each zone was assigned a number.

The units studied under each zone with upazila, union and village are presented below:

ZONE I

District: Brahmanbaria

<u>Upazila</u>	<u>Union</u>	<u>Village</u>	<u>No. of units</u>
Bancharampur	Rupsudi	Rupsudi	83
	Tajkhali	Tajkhali	14
	Dariadaulat	Dariadaulat	8
	Salimabad	Salimabad	17
	Nabinagar	Shahpur	15
Total:			137

ZONE II

District : Narsingdi

Upazila	Union	Village	No. of units
Narsingdi (Sadar)	Chinispur	Ghoradia	16
"	Pasdonā	Pasdonā	11
"	Mohisasura	Mohisasura	60
		Hamti	54
		Total:	141

ZONE III

District : Sirajganj

Upazila	Union	Village	No. of units
Shahjadpur	Shahjadpur (Sadar)	Khonjandia	61
		Pokurpur	43
		Ruppur	35
		Dariapur	13
		Miscellaneous (Nandalalpur, Faridpangsi, Shahpara)	45
	Potazia	Potazia (Sadar)	32
		Dargar char	8
	Norina	Parkhola	22
		Pannatpur	13
	Porzona	Porzona (Sadar)	13
Garadah	Garadah (Sadar)	10	
		Total:	295

ZONE IV

District : Tangail

Upazila	Union	Village	No. of units	
Tangail (Sadar)	Gala	Brahman Kushia	59	
		Barta	8	
		Kandila	2	
	Karatia	Karatia	21	
		Goramin	26	
	Pathrail	Pathrail	134	
		Chondi	9	
	Tangail		Sabila	14
			Adi Tangail	12
			Bajetpur	4
Total:			289	

ZONE V

District : Kushtia

Upazila	Union	Village	No. of units
Kushtia (Sadar)	Harinarayanpur	Harinarayanpur	29
		Mozampur	18
		Udibari	18
		Chowhas	4
Kumarkhali	Sadki	Khairsara	13
		Batikamara	10
		Zaotala	4
"	Kumarkhali	Sherkandi	41
		Komarkhali	4
		Tebari	24
		Alongi	25
		Chapra	Saota
	Baglot	Basgram	42
Total:			300

The classifications were made on the basis of density of operational loomage in each area as evidenced in the Report on Bangladesh Handloom Census, 1978 and also on the unit survey cost. The loom units within each zone, however, were determined by Random Sampling Methods.

Design of Questionnaire

Initially two sets of questionnaires were designed. The first set was intended to collect basic data on employment situation during pre and post-implementation of the Third Five Year Plan (TFYP) period while the second one was to determine the status of the units in terms of employment potentialities, shortcomings and problems associated with marketing of handloom products, credit policy and input distribution policy with explicit causal link in employment generation.

The questionnaires so designed were administered in the Sanora, Kushura and Amta unions of Dhamrai Upazila. The researchers alongwith their associates visited several handloom units to determine the suitability of the questionnaires in terms of coverage of the topics and accessibility of data in terms of record management. Pre-testing of the questionnaires necessitated minor revision and subsequently one set of questionnaire was designed covering the whole issues with little modifications therein.

The questionnaire covered the following topics:

1. Name and address of weavers, identification number and location of the loom viz., village, union, upazila and district.
2. Particulars of loom i.e., loom type handloom, semi and powerloom, Licensed and Non-licensed.
3. Employment generation.
4. Working hours.
5. Production capacity and actual production.
6. Marketing information.
7. Source of capital.
8. Employment and production trend annually during 1984/85, 1985/86, 1986/87 and 1987/88.
9. Training need assessment.
10. Major problem in the handloom sector.

Collection of secondary data were also envisaged to serve as a check to primary data.

Plan of Presentation

The purpose of this study is to evaluate the handloom sector (including the powerloom) in the context of employment expansion against the target of Third Five Year Plan. Broadly divided into five chapters, the study attempts to assess the potentialities of the sector in employment generation covering various facets of its management aspects which include marketing of products,

financing and a myriad of other variables such as government distributional facilities, role of service centres and the role of Handloom Board in promotional activities. Chapter I provides a perspective of employment in handloom sector. Chapter II outlines the scope and methodology of the study. Chapter III in brief, covers current state of information about handloom sector. Chapter IV presents the findings both in a micro and aggregate perspective. Chapter V attempts to identify problem areas and recommend appropriate solution.

Chapter III

Evolution of Handloom Industry : Pre-Partition Period

Weaving is one of the time-honoured crafts in Bangladesh. Crafts and small-scale industries have deep seated roots in South Asia's indigenous economic environment. The early part of the 17th century and the period 1904-47 are considered to be two golden periods for weaving industry in Bangladesh. Mass production of cloth in mills, one of the inventions of Industrial Revolution, virtually replaced the handloom products even fine cotton cloth. The average weaver could hardly survive in the competition against mill made cloth which was also cheap. This situation continued until the early part of the 20th century. Import of cloth practically ceased during the World War I and the industry prospered following "Swadeshi Movement" of 1906. The boycott of imported cloth gave a new lease of life to handloom industry. This movement encouraged weavers to increase production supported by strong local demand.

In the Indian sub-continent, the Gandhian ideology which had profound impact on the people, helped revival of the traditional crafts. In a revealing passage, Gandhi stated "our villagers are on the verge of destruction owing to the disappearance of village industries. They can be revived only by a revival of village industries"¹. One essential element of this

1. Gunar Myrdal : Asian Drama (Vol. II) p. 1209.

traditionalist ideology is defending and protecting the rural crafts against further encroachment by modern industry, whether foreign or domestic, so that they might grow and develop. A number of supplementary ideas such as glorification of frugality and the concept of moral superiority of self-employment and independent work to wage employment emerged. In Gandhi's view, India needed not to industrialize but revive her village crafts. This contention was indeed the central theme of his whole approach to village uplift. Among the rural crafts, the strategic one was spinning, for the following reasons²:

"The charkha (the traditional spinning wheel) supplemented the agriculture of the villagers and gave it dignity. It was the friend and solace of the widow. It kept the villagers from idleness. For the charka included all the anterior and posterior industries - ginning, warping, sizing, dyeing and weaving. These in their turn kept the village carpenter and the blacksmith busy. The charkha enabled the seven hundred thousand villages to become self-contained. With the exit of the charkha went the other village industries, such as the oil press. Hence, if the villagers are to come into their own, the most natural thing that suggests itself is the revival of the charkha and all it means".

2. Ibid, pp. 1211-2.

Gandhi's "village revival" issue inspired struggle for freedom of India since it drew powerful and otherwise diverse interests into a common cause; rural people, traditionalists everywhere, and urban upper class modernists who sought independence all carried its banner.

Profile of Handloom Industry in Bangladesh

Handloom is the largest cottage industry of Bangladesh accounting for production of an estimated 400 million yards of cloth per annum. According to the Bangladesh Census of Agriculture and Livestock (1983-84), about 2 lakh (1.93 lakh) households had reported handloom industry. This was 1.4 percent of total households and 20.7 percent of the households operating cottage industries. Details may be seen at Table 3.1.

Table 3.1 : Distribution of Households by Type of Cottage Industry.

Type of Cottage Industry	(Figure in "000")	
	No. of households	Percentage
Handloom	193	20.7
Blacksmithy	29	3.2
Pottery	32	3.4
Bamboo and Cane Works	144	15.4
Carpentry	76	8.1
Brass Works	7	0.8
Jute and Cotton Works	56	6.1
Ghani (oil Press)	31	3.3
Others	363	39.0
Total	932	100.0

Source: Bangladesh Census of Agriculture and Livestock (1983/84) p. 63.

As per the Bangladesh Handloom Census 1978, total number of handloom units and looms in Bangladesh was 1,97,280 and 4,37,015 respectively. The Division-wise break-up of handloom units and looms is given below:

Table 3.2 : Handloom Units and Looms in Bangladesh.

Division	Number of units (Percent)	Number of looms (Percent)
Dhaka	84,415 (42.79)	1,83,612 (42.02)
Chittagong	43,050 (21.82)	83,136 (19.02)
Khulna	38,272 (19.40)	64,967 (14.87)
Rajshahi	31,543 (15.99)	1,05,300 (24.09)
Total	1,97,280 (100.00)	4,37,015 (100.00)

Source : Bangladesh Handloom Census, 1978. p. 17.
: Figures in parentheses indicate percentage of total.

Table 3.2 indicates that among the four Divisions of Bangladesh, Dhaka has the highest concentration accounting for about 43 percent of the total number of units in the industry, followed by 22 percent, 19 percent and 16 percent. Traditionally, Dhaka is famous for its handloom industry and the census finding relating to unit concentration testifies this. The census data also shows that Bangladesh had 4,37,015 number of looms in 1978. Dhaka Division has the highest number of looms (42 percent) followed by Rajshahi (24 percent), Chittagong (19 percent) and Khulna (15 percent).

Operational Status of Looms

Out of the total looms, 59.48 percent was found to be operational. Dhaka Division has the highest proportion of operational looms (63 percent), followed by Rajshahi (60 percent), Chittagong (58 percent) and Khulna (50 percent). Khulna Division has the highest proportion of non-operational looms (50 percent). The Division-wise status of operational and non-operational looms is shown below:

Table 3.3 : Operational Status of Looms.

Division	Operational looms	Percent	Non-operational looms	Percent
Dhaka	116,002	63.18	67,610	36.82
Chittagong	48,489	58.32	34,647	41.68
Khulna	32,282	49.69	32,685	50.31
Rajshahi	63,148	59.97	42,152	40.03
Total	2,59,921	59.48	1,77,094	40.52

Source : Bangladesh Handloom Census, 1978. p. 17.

Typology of Looms

In the census, loom was classified into: pit fly, pit throw, fly shuttle frame, semi (Chittaranjan) and power loom. The relative position of the three types of loom in four Divisions is shown below.

Table 3.4 : Loom Typology in Bangladesh.

Division	(In number)			Total
	Pit loom	Semi	Power loom	
Dhaka	1,47,100 (43.97)	36,298 (35.52)	214 (77.26)	1,83,612
Chittagong	81,159 (24.26)	1,963 (1.92)	14 (5.05)	83,136
Khulna	63,095 (18.86)	1,872 (1.83)	-	64,967
Rajshahi	43,193 (12.91)	62,058 (60.73)	49 (17.69)	1,05,300
	3,34,547 (100.00)	1,02,191 (100.00)	277 (100.00)	4,37,015

Source : Bangladesh Handloom Census, 1978. p. 44.

Note : Figures in parentheses indicate percentage.

Table 3.4 shows that Dhaka Division leads both in respect of handloom (44 percent) and powerloom (77 percent), while Rajshahi Division has the highest percentage of semi (61 percent). Khulna Division has no powerloom. The above table also brings out another interesting finding. Of the three types of looms, handloom constitute the highest proportion (75.55 percent) followed by semi (23.38 percent) while powerloom has an insignificant proportion (0.06 percent).

Employment Status of the Industry

The handloom industry provides employment to about 8.48 lakh persons throughout the country. Persons employed in the industry (Division-wise) and as well as employment status are provided in Table 3.5.

Table 3.5 : No. of Persons Employed in the Industry.

Division	Total No. of persons.	No. of family members	No. of Hired Hands		
			Regular	Casual	Total
1	2=(3+6)	3	4	5	6
Dhaka	4,02,252	2,14,989	1,36,015	51,248	1,87,263
Chittagong	1,68,128	82,446	65,787	19,895	85,682
Khulna	98,146	81,592	9,978	6,578	16,554
Rajshahi	1,79,071	1,12,733	39,169	27,169	66,338
Total of Bangladesh	8,47,597	4,91,760	2,50,949	1,04,888	3,55,837
Percentage of Total	100.00	58.02	(70.52)	(29.48)	41.98
Persons per unit	4.30	2.49	1.28	0.53	1.81
Persons per Operational loom	3.26	1.89	0.97	0.40	1.37

Source : Bangladesh Handloom Census, 1978. p. 30.

It is evident from the Table 3.5 that of the total number of people employed in the industry, majority accounting for 58 percent are family members and 42 percent are hired hands. Of hired hands, majority constituting 71 percent are employed on regular basis, while the remaining 29 percent are employed on casual basis. Per unit and per operational loom personnel involvements were 4.30 and 3.26 respectively.

Handloom Industry in India

In India handloom industry is next in importance to agriculture in terms of the number of people it employs. There are about 3.8 million handlooms in the country employing over 10 million people during 1986/87. Thirty percent of the total textile production in the country is produced in the handloom sector. During 1985/86, total production stood at 3,236 million metres³. There were 0.05 million power-operated looms in the country as on December 31, 1981. Handloom and power looms together produced about 6 billion metres of cloth in 1981, the export earning being Rs. 330 crores during 1980/81.⁴

The Textile Policy announced by the Government of India in June 1985 also accorded priority to the handloom sector. According to the Textile Policy, "in the weaving sector, the distinct and unique role of the handloom shall be preserved. The growth and development of this sector shall receive priority."⁵

The main thrust of the handloom development programme has been to provide assistance in terms of inputs to the industry including raw materials, credit and marketing of the products as well as progressive co-operativisation of handloom weavers so as to prevent exploitation at the hand of the middlemen. A National

3. Ministry of Textiles (Government of India): Annual Report 1986-87, p.25.

4. P.N. Chopra: India: An Encyclopaedic Survey (1984), p.208.

5. Department of Textiles, (Government of India): Statement on Textile Policy (June, 1985), p.2.

Handloom Development and Financing Corporation (NHDFC) has been set up to attend, inter alia, to the problem of yarn supply to handloom weavers at reasonable prices. The Rural Marketing Centres (RMC) were set up on pilot basis at the block level for the supply of raw materials required by the artisans and tiny units and provide necessary marketing support.

With a view to ensuring adequate flow of bank finance, the village and small industries sector have been recognised as a priority sector and commercial banks have been advised to extend loan/credit facilities to the priority sector borrowers particularly the weaker groups.

In order to provide necessary technical inputs to the rural industries, a Council for Advancement of Rural Technology (CART) was registered in October 1982 and the Council and Executive Committee was formed in April 1983. Technical and technological improvements have been made in the spinning as well as in the weaving sector. The Institute of Handloom Technology has been working in this direction. Subsequent to the introduction of New Model Charkha (NMC) and semi-automatic looms, the productivity of spinners and weavers have gone up and the level of employment also has moved from 7-8 per cent about 10 years ago to about 30 percent in 1983.⁶

The first ever comprehensive national study on the status and problems of the handloom industry was conducted

6. Planning Commission (Govt. of India): Sixth Five Year Plan 1980-85 (Mid-Term Appraisal), p. 57.

by a High Powered Study Team headed by Mr. B. Sivaraman, a former Member, Planning Commission. One of the important recommendations of the Team was that an agency at the centre should be created exclusively for the development of handloom industry. Government accepted this recommendation and, as a result, the office of the Development Commissioner for Handlooms was created and it was entrusted with the overall development of handloom sector. In addition to the agency mentioned above, non-official participation in the development of handloom sector has always been considered to be a vital input. With this end in view, the All India Handloom Board which is the highest advisory body to the Government of India in handloom affairs was set up in October 1952 under the chairmanship of the Textile Commissioner. The Board was reconstituted in December 1978 consisting of a large number of experts in handloom, textiles, marketing, cooperation etc. The Board has helped in devising a variety of measures for rehabilitating and developing the handloom industry. Its advice is carefully considered by the Government before any policy decision in the handloom sector is taken.

Development of handloom is essentially a state subject in India. In fact, in states with a large handloom presence there are already special Directorates to look after the development of handlooms, as in

Andhra Pradesh, Kerala, Tamil Nadu, U.P., West Bengal, Bihar etc. As principal operational instruments of the Directorate of Handlooms, most States have set up an Apex Cooperative marketing Union to take care of marketing of handloom products. As the coverage of cooperatives is inadequate, several states have set up State Handloom Development Corporation to examine the needs and problems of weavers outside the cooperatives. At the end of March 1979, there was a network of Apex (including regional apex) Unions and 18 State Handloom Development Corporations.⁷

7. Planning Commission (Govt. of India), Report on Village and Cottage Industries (March, 1981), p.13.

Chapter IV

Findings of the Study. Aggregate Framework

The findings of the study delves mainly on two basic counts - aggregate and micro. The aggregate findings reflect the diversity of character of the sample units in terms of number of looms, their operational status, and the types of looms. The broad features of employment situation such as employment structure and working conditions, marketing and other ancilliary supporting activities are also discussed in aggregate framework. An in-depth analysis in micro framework was carried out pertaining to the employment and production trend over the period 1984-88. The analysis is preceded by a brief review of the various zones' economic and social characteristics.

A brief attempt is made at loom type classification observed in sample units. The most primitive type of loom is waist loom run by the Hill tribes for domestic consumption. Another variety of traditional pitloom is the throw-shuttle loom, which is designed for production of specialized products such as jamdani and muslins. This type of loom is mostly found in Rupganj and Siddhirgonj upazila in Dhaka district and a few places in Tangail district. The loom units of the surveyed area constitute I. handloom comprising (i) fly-shuttle pitloom, (ii) Chittaranjan or semi automatic loom, and II. Decentralized powerloom.

Fly shuttle loom is technologically superior to Throw-shuttle loom. The average speed of a throw-shuttle loom is about 30 rounds of the shuttle per minute. On the other hand, the average speed of fly shuttle loom is about 80 rounds of shuttle per minute. In the ordinary fly-shuttle variety, some are pitlooms, while others are frame loom. A fly-shuttle pit loom is suspended from two cross bars on four bamboo posts, and the upper ends of the loop of the loom are fastened to the two sides of a ceiling bar. The price of a fly-shuttle pit loom varies from Tk. 1000-1500. The fly-shuttle pit loom is most extensively used handloom in Bangladesh. Most of the handloom products such as saree, lungi, bedsheet, table cloth, napkin etc. are produced by fly-shuttle pit loom. The Tangail saree is woven on this loom

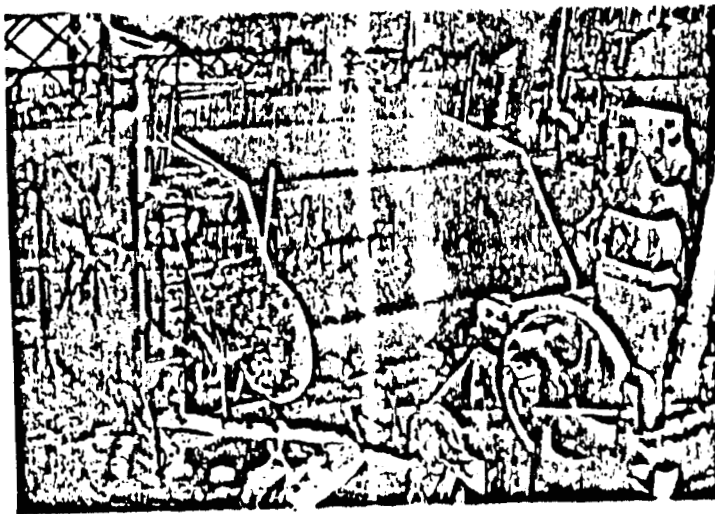
An improvement over an ordinary fly-shuttle loom is the Chittaranjan/semi-automatic loom. The Chittaranjan loom uses seasoned timber for basic structure and construction is almost like a fly-shuttle frame loom with the added feature of long length cloth winding devices and an iron wheel attachment. The former mechanism facilitates the use of long warps, usually 500-600 yards and the latter expedites the battening and shuttle throwing operations. The jacquard attachment is relatively comfortable in this loom as it is controlled by the wheel. Thus this loom is much more suitable for weaving patterned cloth as compared to the pit fly-shuttle loom.

A good average speed of this loom is around 110 rounds of the shuttle per minute. The average physical productivity estimated to be about 30-35 percent higher than that of fly-shuttle pit loom. The price of such a loom is reported to vary from Tk. 5,000-6,500.



A Fly-shuttle Pit Loom.

FIGURE A



A Chittaranjan/Semi-automatic Loom.

Figure:B

The Chittaranjan loom is mostly used in the production of coarse to fine varieties of sarees and lungis, gamcha, mosquito net, gray markeen. Figure A and Figure B depict the physical structure of a Fly-shuttle pit loom and a Chittaranjan/semi-automatic loom respectively.

The operational status of the sample units according to loom types viz. handloom and power is given in Table 4.1.

Table 4.1 : Operational Status of Looms.

	(in number)										Grand Total
	Handloom						Powerloom				
	Unit	Fly-shuttle			SEMI			Op	N.op		
	Op	N.op	Tot	Op	N.op	Tot	Op	N.op	Tot		
Zone I	137	749	137	886	-	-	-	-	-	-	886
		(85)	(15)								
Zone II	141	398	80	478	-	-	-	-	-	-	478
		(83)	(17)								
Zone III	295	687	511	1198	-	-	-	-	-	-	1198
		(57)	(43)								
Zone IV	289	746	81	827	40	7	47	22	8	30	904
		(90)	(10)		(85)	(15)		(73)	(27)		
Zone V	300	735	91	826	1570	80	1650	199	4	203	2679
		(89)	(11)		(95)	(05)		(98)	(2)		
	1162	3315	900	4215	1610	87	1697	221	12	233	6145
		(78)	(22)	(100)	(94)	(6)	(100)	(95)	(5)	(100)	

Figure in parenthesis indicate percentage of total according to loom type.

Prior to analysis, an attempt is made to define the operational and non-operational status of looms. An operational loom has been defined as loom currently in use and whose beam has yarn in it or is in the process

of yarning at the time of field investigation. The operationality as defined here can be influenced by many factors such as availability of yarn, marketing of product, weather conditions at the time. The non-operational loom includes those loom that are not in use and whose beam has no yarn at the time of data collection.

As evidenced in Table 4.1, Zones I, II and III concentrate on fly-shuttle loom only while in other zones, IV and V, fly-shuttle loom, semi and powerloom are available. Zone IV has the lowest non-operational handlooms (10 percent). Likewise, Zone-II accounts for 17 percent non-operational looms and zone III 43 percent of non-operational looms. Zone V seems to be more efficient in terms of operational loomage, only 5 percent and 2 percent semi and power looms respectively are non-operational while 11 percent are non-operational fly-shuttle loom. On an average, Semi type has the lowest non-operational loom accounting for 6 percent only, while fly-shuttle loom occupy the highest representing 22 percent non-operational looms.

Tabulated census figure of 1978 represents 40.52 percent looms with non-operational category - the national average. The current study, however, reflects an weighted average of 25 percent of non-operational looms. Average non-operational looms in zone III is the highest while zone IV is the lowest.

It is evident that since 1978, non-operational status of the looms has reduced from 40.52 percent to 25.00 percent. This improvement may be the outcome of the institutional support such as the creation of Handloom Board and the Service Centres. However, this needs more elaborate evaluation which has been done in subsequent chapters. Table 4.2 shows average operational and non-operational looms.

Table 4.2 : Average Operational and Non-Operational Looms.

	Unit	Total Looms	Average loom	
			Operational	Non-operational
Zone I	137	886	5.46	1.00
Zone II	141	478	2.82	0.57
Zone III	295	1198	2.32	1.73
Zone IV	289*	904	*2.79	0.33
Zone V	300*	2679	*8.34	0.58
	1162	6145		
Looms per unit	-	5.28	4.42	0.86

* Includes both semi and power looms.

The average size of unit zone-wise varies between 2.32 and 8.34 in terms of total operational loomage while 0.33 and 1.00 in terms of total non-operational loomage. Only zone III represents an average unit which is close to the national average of 2.2. The non-operational zone-wise loomage, however, is close to the national average of 0.90. The wide divergence from

national average as observed in zone I and zone V may be partly attributed to the economic characteristics of zone I and in case of zone V, the dominance of semi looms (1,650 units) may yield an higher average value. The micro analysis will try to explain this divergence of average units as compared to national average.

Table 4.3 gives licensing and non-licensing status of looms zone-wise.

Table 4.3 : Licensing and Non-Licensing Status of Looms.

	Handloom									Grand Total
	Fly-shuttle			SEMI			Powerloom			
	Lic.	Un-lic	Tot	Lic.	Un-lic	Tot	Lic.	Un-lic	Tot	
Zone I	775 (87)	111 (13)	886 (100)	-	-	-	-	-	-	886
Zone II	363 (75)	115 (25)	478 (100)	-	-	-	-	-	-	478
Zone III	-	*1198 (100)	1198 (100)	-	-	-	-	-	-	1198
Zone IV	-	*827 (100)	827 (100)		47 (100)	47 (100)	+	30 (100)	30 (100)	904
Zone V	816 (99)	10 (01)	826 (100)	1625 (98)	25 (2)	1650 (100)	203 (100)	-	203 (100)	2679
	1954 (47)	2261 (53)	4215 (100)	1625 (96)	72 (04)	1697 (100)	203 (87)	30 (13)	233 (100)	6145

* Renewal of license did not carried out after 1971.

The categorization in the study divides the units into two: looms licensed in the name of the unit and looms which are not entitled and are not eligible to any government support in terms of delivery of input

and credit facilities. It transpires that there is no licensed loom in zone III and IV. In these regions, license had not been renewed after 1971.

Licensing status in zone V is high. There is no unlicensed power loom in this zone while unlicensed fly-shuttle loom and semi constitutes 1 percent and 2 percent respectively. Zone I, II and III concentrates on fly-shuttle loom only and accounts for 13 percent, 25 percent and 100 percent unlicensed looms respectively. Percentage of unlicensed looms is much higher in fly-shuttle loom in comparison to semi and power looms. Out of total 6,145 looms, 2,363 looms are unlicensed of which 2,261 alone are fly-shuttle loom accounting for 96 percent of total unlicensed looms.

Employment Structure

Unemployment or its reverse employment is connotative of various meanings and it is difficult to measure the concept of a comparative basis. Predominance of family labour in the fly-shuttle loom however, precludes any standard textbook definition on employment situation. Table 4.4 gives the employment data classified on the basis of family labour and hired labour for 1986/87.

Table 4.4 : Employment Structure in the Handloom Industry (1986/87) including Semi and Power.

Zone	No. of family members		Hired Hands						Total no. of persons	
			Regular		Seasonal		Total			
			M	F	M	F	M	F	M	F
Zone I	543	212	353	165	135	48	488	213	1031	425
Zone II	260	116	200	78	10	4	210	82	470	198
Zone III	2173	436	158	40	90	16	248	56	2521	392
Zone IV	700	153	258	40	35	13	293	53	993	206
Zone V	848	304	3511	75	90	18	3601	93	4449	397
Total	4524	1221	4480	398	360	99	4840	497	9464	1618
	5745		4878		459		5337		11082	
Percentage of total	52 (58)		44		4		48 (42)		100	
Persons per operational looms	1.12 (3.26)		0.95 (0.97)		0.09 (0.40)		1.04 (1.37)		2.15 (3.26)	

Figures in parentheses indicate Census data of 1978.

M: Male, F: Female,

Source: Sample survey.

Primarily, the fly-shuttle looms are run by family labour. Most of the family members directly or indirectly work in handloom in various stages of looming operation. When the number of looms in a pit loom unit exceeds 4, the owner may employ a skilled weaver and the terms and conditions of employment depend on piece rate. The wage, however, depends on the quality of cloths produced. There is no fixed working hour for family members, they usually work round the clock even at night. The involvement of women is significant; they constitute 21 percent of family labour and 9 percent of hired labour. They participate various stages of weaving such as reeling of yarn.

Total employment in different sampling units show 48 percent of hired labour and 52 percent of family labour. Wage employment on regular basis is 44 percent whereas seasonal employment constitutes only 4 percent. The census data show 58 percent and 42 percent of family members and wage earners respectively. The higher percentage of wage earners in this study is a reflection of concentration of semi and power looms in zone IV and V and relatively larger wage employment in pit loom units in Zone I. Persons employed per operational loom shows declining trend both in the absorption of family labour and hired labour. In family labour, the downward trend is more prominent. The major reason is the wide divergence between available capacity and actual production in the fly-shuttle looms. However, in case of hired hands, the

downward trend is not so significant. Since semi and power units are run on profitable basis, absorption of wage labourers maintains a reasonable level.

Wage labourers work from dawn to dusk. This includes the time required for meal, bath and modest recess from work. The salary structure is also based on piece rate. A worker usually gets Tk. 25-50 per day for a saree or a lungi. This amount ranges between Tk. 40-70 for a good quality lungi or a jackared saree. In power loom, the wage bill is a function of the number of yards weaved. The wage per yard of woven shirting and lungi ranges between Tk. 1.00 and Tk. 1.25. Per piece wage for a finished silk saree in Tangail area (Zone IV) is about Tk. 100 - Tk. 125.

Most of the owners of the semi units (Chittaranjan) are not weavers. They only supervise the work of hired labour who constitute the bulk of labour force. This is most prominent in Zone V (Kushtia). Labourers in semi and power units are mostly of regular nature. Size of fixed capital in power and semi units compel the owner to be engaged in year long operation so that per unit fixed production cost does not exceed a critical level in order to justify operation at a profitable level.

Micro Findings:ZONE - I (Brahmanbaria)

Zone-I of the study area covers Bancharampur and Nabinagar upazilas of Brahmanbaria district. This zone consists of three unions namely, Rupasdi and Salimabad unions of Bancharampur and Ratanpur union of Nabinagar upazila. Of the total population of Rupasdi union of Bancharampur Upazila, 95 percent are weavers, while 2 percent are service holders and 3 percent engaged in other trades. About 80 percent of the people in Salimabad are engaged in weaving. Muslin is exclusively produced in this area.

Lungi is the only produce of the weavers. Bancharampur alone produces about 50 percent of total lungi production of Bangladesh. Lungis are marketed in Baburhat of Narsingdi district which is about 30 miles away from the area. The communication is very underdeveloped.

Ratanpur is a union under Nabinagar upazila of Brahmanbaria district. About 10 percent of the total population of this union worked as weavers in 1971. But owing to shortage of credit, inputs and other facilities, most of them have switched over to agriculture. A few of them work in power looms at Narsingdi.

The number of looms and employment in Zone I shows declining trend. The number of looms in 137 of the sampling units registered decline of 100 units over the period 1984-88. The corresponding loss of employment is

348 man years. This zone depicts an uneven trend, the major downward movement is observed during the period 1987/88. This situation is more pronounced in Rupasdi which maintains a poor transportation linkage to major marketing centres such as Baburhat. Even skill weaver from Rupasdi migrated to Tripura State of India and are working as Training Master. Following table gives year-wise production, number of looms and employment scenerio over the survey period.

Table 4.5 : Number of Looms, Production and Employment Situation

Year	Production '000' yards	Number of Looms	Employment Man-years	Employment Ratio
	Lungi			
1984/85	2785	853	1590	1.86
1985/86	2688	824	1538	1.86
1986/87	2563	787	1456	1.85
1987/88	2204	749	1242	1.66

Zone - II (Narsingdi)

Zone-II of the study area covers Mohishasura, Chinishpur and Panchdona unions under Narsingdi Sadar Upazila of Narsingdi district.

Mohishasura union has a population of about 30,000. Fifty percent of them are engaged in weaving, 30 percent in agriculture and remaining 20 percent in trade, service etc. Main pit loom product is lungi . Communication network of the area is very underdeveloped

hampering marketing of product.

Chinishpur Union is at present within the jurisdiction of Narsingdi Municipality. Most of the population of this area engaged in trade. Fly-shuttle looms are found almost in every homestead. Most of the weavers produce saree with the help of hired labourers. Communication system is developed and the area is electrified. Weavers are still maintaining a brisk business.

Panchadona Union known as the Manchester of the East is located near Baburhat. About 80 percent population of a Panchadona union are weavers. Both handloom and powerloom are found in this Union. Most of the weavers produce shirting and saree with the help of family as well as hired labourers. The communication network is developed. The proximity to Baburhat is a major advantage of this area in marketing the products. The transportation cost is minimum. Almost 90 percent of weavers sell their products to the traders in Baburhat and depending on demand, price fluctuate within a reasonable limit.

Number of looms and employment (in man years) in zone II also show declining trend but not to the extent of Zone I during the period 1987/88 over 1986/87. Evidently, this zone adjusted itself with the deteriorating situation of 1985/86 over 1984/85.

Except Mohishasura, which is a flood prone area, the other two areas may be classified as prosperous. Recent flood in Mohishasura caused serious disruption to weaving operation. Shortage of working capital and indebtedness to moneylenders forced weavers to switch-over to other profession viz., agricultural activities.

Table 4.6 gives year-wise production, number of looms and the employment scenerio over the period.

Table 4.6 : Number of Looms, Production and Employment Trend

Year	Production '000' yards		Number of looms	Employment (Man-Years)	Employment Ratio
	Lungi	Saree			
1984/85	1394	582	501	798	1.59
1985/86	1192	544	454	748	1.65
1986/87	1002	507	397	668	1.68
1987/88	987	503	398	666	1.67

ZONE - III (Sirajgonj)

Zone-III of the study area includes Shahjadpur Upazila of Sirajganj district. Shahjadpur is famous for handloom industry. Unions of Shahjadpur covered in the study are Sadar, Narina Potazia, Porjona, Garadah. Shahjadpur Sadar Union has the highest concentration of looms (197), followed by Potazia (40), Narina (35), Porjona (13) and Garadah (10). This zone produces both saree and lungi. Most of the weavers of Sadar and Narina

Unions sell their products in Shahjadpur hats, while weavers of other areas go to nearby hats and sometimes Shahjadpur for selling their products. If reasonable price is not obtainable in local markets, they move to Shohagpur, Ullapara, Baghabari and Bera. Modes of transport are rickshaw, bus, van and bullock cart.

Table 4.7 : Number of Looms, Employment and Production Trend

Year	Production '000' yards		Number of looms	Employment (Man-Years)	Employment Ratio
	Lungi	Saree			
1984/85	508	6227	1943	3621	1.86
1985/86	448	5546	1742	3421	1.96
1986/87	292	3765	1464	1913	1.99
1987/88	120	1887	1207	2013	1.66

The above table shows declining trend in production, number of looms and employment over the period 1984-88 presenting a gloomy picture of the fly-shuttle loom units of the Shahjadpur area. The declining trend is more prominent than Zone I and Zone II. The index of lungi and saree production (1984/85=100) is 24 and 30 which represents 76 percent and 70 percent fall in production of lungi and saree respectively. The number of looms and employment represents 62 percent and 56 percent of 1984/85 respectively.

The major reason for decline in production and employment during 1987/88 is the flood of 1987. Most of the units suffered badly during the flood and many weavers had either to close down their looms or reduce the number of looms. Besides, shortage of capital hampered full operation of most of the looms. About 43 percent of looms are non-operational, the highest among all the zones. The weaving industry of Shahjadpur is on the verge of extinction.

ZONE - IV (Tangail)

Zone IV comprises 4 unions under Tangail Sadar Upazila of Tangail district namely, Karatia, Patrail, Gala and Sadar. Tangail district is famous for weaving industry. Pit loom, semi (chittaranjan) and power looms are found in this area. Patrail Union had the highest concentration of looms. Pit looms are operated primarily with family labourers, while in semi and power looms hired laborers (temporary and permanent) are employed. Saree is a major product of the looms. Tangail Saree is very popular throughout Bangladesh. Other products include lungi and napkin.

The weavers sell their products on wholesale basis in hats and bazars. Important hats for marketing of handloom products are Bajitpur hat, Karatia hat and Kalibari hat. Cycles, Rickshaws and Buses are generally used for transporting the products to markets.

Number of looms and employment is given in

Table 4.8

Table 4.8 : Number of Looms and Employment Status

Year	Handloom				Powerloom		Total Emplpy- ment
	Fly-shuttle		Semi		No.of looms	Empl ment	
	No.of looms	Employ ment	No.of looms	Employ ment			
1984/85	699	1017 (1.45)	45	85 (1.89)	12	23 (1.92)	1125
1985/86	733	1037 (1.42)	47	90 (1.92)	24	47 (1.96)	1174
1986/87	754	1053 (1.40)	47	88 (1.87)	30	58 (1.93)	1199
1987/88	743	935 (1.26)	47	89 (1.89)	30	60 (2.0)	1084

Figures in parentheses indicate persons employed per loom.

Except 1984/85 average number of fly-shuttle looms in this zone was 740, registering an increase of 5 percent during 1985/86 and a marginal increase of 3 percent during 1986/87. Employment over the period registered an increase of 36 man years over the period 1984-87.

Number of semi over the period remained almost at the level of 1984/85 while in case of powerloom there was an increase of 150 percent with consequent increase of employment to the extent of 37 man-years.

Table 4.9 : Production Trend of various Products.

Year	Saree	(in '000' yards)	
		Lungi	Napkin
1984/85	1304	680	47
1985/86	1369	913	57
1986/87	1364	964	47
1987/88	1315	846	47

An analysis of production trend shows significant growth in the production of lungi. Index of production (1984/85=100) registered an increase of 66 percent during 1984-88. Production of saree registered marginal increase during the same period. Performance in this zone is better than other. One major reason is that only 10 percent of pit looms are non-operational, the lowest among the zones. The non-operational semi and power looms is also insignificant. The operational status of looms find manifestation in the marketing of the products. The handloom owners of this zone faces no major problem in transportation of their products and the transportation cost is minimal. The sale turnover rate is in the range of 80-90 percent. Generally, the weavers sell their products weekly in the wholesale market. The cloth merchants buy products in a lot and supply of products is commensurate with demand. However, recurrent transport strikes and Hartal during the last few months of 1987/88

severely reduced the turnover rate and build up of inventories. Many of the units had to curtail production which fell below the level of 1986/87 with consequent loss of employment.

The production index of lungi (1984/85=100) is 134 for 1985/86, 142 for 1986/87 and 125 for 1987/88. This represents 34 percent, 42 percent and 25 percent increase in production over the base year. However, this increase in production is not reflected in increase in employment. Lungi is produced mainly by powerloom and powerlooms are located in Tangail Sadar.

ZONE - V

Zone V includes Kumarkhali and Sadar Upazilas of Kushtia district. Unions covered in the study are Sadki, Kumarkhali Sadar, Chapra and Baglat Unions of Kumarkhali Upazila and Mozampur and Harinarayanpur Unions of Kushtia Sadar Upazila. Kumarkhali Sadar Union has the largest concentration of looms. Besides fly-shuttle pit loom semi and power loom are found in this area. In all other areas, weaving is mainly carried out by fly-shuttle pit loom. Generally fly-shuttle pit loom produces lungi, whereas semi and power looms produce bedsheets. Fly-shuttle pit looms are operated by the owners with family members, while semi and powerlooms are operated by hired labourers of permanent nature.

Handloom weavers sell their products directly in the markets. The mode of transport is bus, train, country boat, bicycle van etc. Owners of semi and power-looms have their own shops where they sell on wholesale and retail basis.

Year-wise number of looms and employment scenario over the period is given in Table 4.10.

Table 4.10 : Number of Looms and Employment

Year	Handloom				Powerloom		Total Employment
	Fly-shuttle		Semi		No. of looms	Employment	
	No. of looms	Employment	No. of looms	Employment			
1984/85	611	1252 (2.04)	889	1776 (2.00)	82	157 (1.92)	3185
1985/86	693	1483 (2.14)	1251	2451 (1.99)	153	298 (1.95)	4232
1986/87	758	1566 (2.07)	1546	2930 (1.90)	168	350 (2.08)	4846
1987/88	797	1658 (2.08)	1616	3068 (1.90)	203	392 (1.93)	5118

Figures in the parentheses indicate persons employed per loom.

This zone represents gradual improvement both in power and handloom. Employment and number of looms in each year in all the three categories, fly-shuttle pit loom, semi and power, glean year by year. Employment in fly-shuttle looms registered an increase of 406 man-years, in semi 1,292 man-years and in power 235 man-years. This rise in absolute employment corresponds

roughly with proportional increase in number of looms in each year since the employment per unit loom shows minor variation as measured by standard deviation (in the range .036-.064) in fly-shuttle loom, power and semi. Annual production data of the zone is given in Table 4.11.

Table 4.11 : Production Trend of Various Products

Year	(in '000' yards)	
	Lungi	Bedsheet
1984/85	1510	7383
1985/86	1728	9935
1986/87	1832	16411
1987/88	1872	18719

The index of lungi production (1984/85=100) rose steadily to 114 in 1985/86, 121 in 1986/87 and to 124 estimated for 1987/88 representing an increase of 14 percent, 21 percent and 24 percent respectively. The index of Bedsheet production, however, shows sharp increase in 1986/87. The index in (1984/85=100) rose to 135 in 1985/86 to 254 estimated for 1987/88, this represents an increase by 35 percent, 123 percent and 154 percent respectively over the survey period.

Overview of the Findings

Table 4.12 presents the correlation matrix of the major variables of the study, namely, number of looms, employment and major production of the surveyed areas for the period 1984-88.

Table 4.12 : Correlation Matrix for the Relevant Variables

Variables	Zone I			Zone II			Zone III			Zone IV			Zone V		
	x ₁	x ₂	x ₃	x ₁	x ₂	x ₃	x ₁	x ₂	x ₃	x ₁	x ₂	x ₃	x ₁	x ₂	x ₃
x ₁	1.00			1.00			1.00			1.00			1.00		
x ₂	0.96	1.00		0.99	1.00		0.95	1.00		0.96	1.00		0.97	1.00	
x ₃	0.96	0.99	1.00	0.97	0.99	1.00	0.96	0.99	1.00	0.96	0.97	1.00	0.98	0.97	1.00

Notes : Variable x₁ represents number of looms

x₂ represents employment data

x₃ represents major production

Source: Data from the Sample Surveys.

The correlation coefficient matrix between the major variables represents values in the range 0.95 to 0.99. This lends support that increase in employment depends on the number of looms as well as on the volume of production. This is more apparent for zone IV and Zone V. There is no gainsay, however, for all other zones, exclusively for zone I, zone II and zone III, which also show high value of correlation coefficient between number of looms and employment and volume of production. The value of correlation coefficient between employment, number of looms and production supports the hypothesis that employment is a function of both the number of operational looms and volume of production. The volume of production, however, is a function of sale-turnover ratio, marketing facilities, credit supply, input distribution and overall economic situation.

The year-wise declining trend in the number of looms, employment and production in zone I, II and IV are attributed to various economic factors. The average loom units in these zones range between 5.46 and 2.79. This represents a higher figure than national average. One peculiarity of these zones is that most of the unit holders, whether he is a weaver or a non-weaver, employ wage labour on permanent basis. An important condition on employment is adequate supply of raw materials viz., yarn, dyeing materials and chemicals to the weavers who generally work on piece rate basis. Generally, they get wage of Tk. 40 per 9-12 yards of cloth. The owner of the units sells the products in market and wage is paid out of the proceeds. Owing to poor transportation network and bargaining strength, the products seldom fetch a reasonable price. Almost 60 per cent of products are sold in wholesale market to the middlemen at a price which seldom cover the operating expenses. According to terms and conditions with permanent workers, wages are to be paid in the evening of the day of work and raw materials for next day's looms operation are to be provided at the same time. Since price received very often does not cover the production cost, there is no alternative but to close the units. Moreover, recurrent hartals during 1987/88 caused serious dislocation in marketing of the products.

Another important reason is the high indebtedness of the weavers to the local mahajons forcing them to sell their products below the market price to the mahajons. Besides exorbitant rate of interest varying between 22 percent and 30 percent is charged leading to ultimate liquidation of the unit. Inadequate supply and high price of yarn and other inputs, lack of working capital are some of the factors responsible for gradual decline of fly-shuttle pit looms in zone III. Monopolization of market of dyeing materials, chemicals and yarn substantially raises the prices of basic inputs. This situation does not allow the weaver to run the units at a profitable level. The Service Centres set up by the Handloom Board in most cases, are of little help to the weavers. Marketing problems arise because of undeveloped transportation system. This is more pronounced in zone I and zone III. Consequently, number of looms and employment registered a declining trend.

The survey result for all the zones except zone V reinforces the idea that except semi and power looms, fly-shuttle pit loom cannot generate employment beyond the self employment status. On the other hand, substantial wage employment exists in semi and powerloom (Table 4.4). If employment trend in semi and powerloom in zones IV and V is analysed, one finds potential of employment expansion. In zone V, the semi units almost

doubled from 889 in 1984/85 to 1,616 in 1987/88 with employment expansion of 1,291 man-years. The number of powerlooms registered a sharp rise from 82 to 203 looms. The corresponding increase in employment is 121 man-years.

One interesting finding of this study is that number of powerlooms in one zone is very close to the national census figure of 1978. Bangladesh Handloom Census of 1978 registered 277 powerlooms, out of which 214 were located in Dhaka Division. Powerlooms in Rajshahi and Chittagong Division were 49 and 14 respectively. Khulna division had no powerloom. Finding of the present study on the other hand, indicate sharp increase in the number of powerlooms in zone V and modest increase in zone IV. The other three zones concentrates on fly-shuttle loom only and each of the zones shows declining trend in the number of looms as well as in employment.

Table 4.12a gives an aggregative view of employment generation zone-wise pre-and post-implementation of the Third Five Year Plan.

Table 4.12a : Employment generation Zone-wise and Year-wise.

Year	(in man-year)					Total
	Zone I	Zone II	Zone III	Zone IV	Zone V	
1984/85	1590	798	3621	1125	3185	10319
1985/86	1530	748	3421	1174	4232	11113 (7.7)
1986/87	1456	668	2913	1199	4846	11082 (3.6)
1987/88	1242	666	2013	1084	5118	10123

Figures in parentheses indicate growth rate.

This table transpires that aggregate employment in all zones registered an increase of 7.7 percent in 1985/86 with reference to the pre-Plan period of 1984/85. An annual average rate of 3.6 percent increase is discernible in 1986/87 in comparison to 1984/85. However, the overall increase in employment registered marginal decline in 1987/88 compared to 1984/85. This table shows except zone IV and V, all other zones lags behind the increase estimated/in employment of 2.6 percent during the Third Five Year Plan period. Nevertheless, barring 1986/87, the employment scenerio of zone IV and V yields an aggregate view which transcends the targeted employment growth of 2.8 percent over the Plan pøeriod

Productivity Analysis: Fly-shuttle Loom vs Semi-automatic Loom.

Productivity analysis shows that operation of fly-shuttle loom and keeping them at profitable or even at

break-even point is a difficult job. Since weaving is the main occupation of majority of weavers, profits from weaving constitute the major source of income. Profit margin for a weaver may not often even cover the real wage earned in another agricultural activity. This suggests decline in real income. Another factor for this loss lies in the concept of scarcity premia. The mismatch between BTMC unit yarn costs and BTMC ex-mill price very often work against the interest of weavers. Price of the product seldom fetch reasonable profit/return and the nature of small scale operation in these units also raises unit fixed cost of production. Table 4.13 shows weighted unit cost and prices of yarn (32 counts, 40 counts) produced in different textile mills.

Table 4.13 Unit Cost and Prices of Yarn

Products	Unit	(in Tk.)			
		1983/84		1984/85	
		Cost	Price	Cost	Price
Yarn (32 counts)	lb	36.53	36.59	41.26	42.00
Yarn (40 counts)	lb	43.51	42.68	48.63	59.50

Source: Planning Commission: Economic Review 1984-85 p. 81

The productivity analysis is carried out on the basis of the following assumptions:

- i) Four yards of cloth is produced with each lb of yarn.

- ii) Production of cloth in a fly shuttle loom is approximately 8 yards per day. A semi-automatic loom roughly produces 15 yards of cloth per day.
- iii) Sale price of per yard of cloth is Tk. 17.64.

Detailed cost estimate:

	<u>Fly-shuttle loom</u>	<u>Semi-automatic</u>
A) <u>Capital Expenses</u>		
i) Machine cost including accessories	1,500	6,500
B) <u>Operational Expenses (Monthly)</u>		
i) Raw materials purchase		
a) Yarn	3,000	5,640
b) Chemicals, dyeing materials (10 percent of cost of yarn)	300	565
ii) Marketing & distribution expenses	80	120
iii) Interest payment (monthly)	30	45
iv) Repair & maintenance	25	40
Total cost (B)	Tk. 3,435	6,410

The aggregate value of different variables i.e. monthly production, cost of production, sales value according to loom type estimate is given below:

	<u>Pitloom</u>	<u>Semi-automatic loom</u>
Monthly production	(8 yds x 25 days)= 200 yds.	(15 yds x 25 days) = 375 yds.
Cost of production	Tk. 3,435	6,410
Sale value	Tk. 3,914	7,340
Value added per weaver per month	Tk. 419	930
Value added per weaver per year	Tk. 5,748	11,160

The productivity is measured by value added per weaver per month and then converted into value added per year. Productivity is relatively low in the operation of fly-shuttle loom and this casts doubts on its employment generating capacity. The analysis shows that if the imputed cost of weaver is considered in the estimation of total cost, (a wage of Tk. 750 per month at the rate of Tk. 30 per day), the operation of fly-shuttle loom turns out to be unprofitable. If we accept the findings of ILO-ARTEP study on "Employment Expansion Through Rural Industrialization in Bangladesh" about the participation of female workers in reeling operation, it is found that average weekly working hours is roughly 27.2. This further reduces the value added per worker. On the other hand, operation of semi-automatic loom yields value added which is higher than the imputed cost of a labourer. Product augmentation yields a positive return over the imputed cost of labour in economic activities.

Thus an individual weaver is benefitted from a semi-automatic loom than that of a fly-shuttle pit loom. The operation of semi-automatic loom is more economical and profitable. Again if a comparison is made between power loom and semi-automatic loom both in terms of capital-output ratio and employment - investment ratio, semi-automatic loom appears to be more economical and profitable. For instance, one power loom needs Tk. 1.0 lakh, produces about 57 yds of cloth per day and employs only 1.90 persons. On the other hand, one semi-automatic loom costing Tk. 6,500/- produces 15 metres of cloth per day and employs as many as 2.00 persons. This is an important comparative advantage of semi-automatic loom^{from} the point of view of creating additional employment opportunities.

Marketing

Another variable of profit function is the marketability of products. Table 4.14 gives zone-wise information as marketing.

Table 4.14 : Information on Marketing

Media/channel of distribution	Zone-I	Zone-II	Zone-III	Zone-IV	Zone-V	Total
Cooperative	-	-	15 (05)	-	-	15 (1.5)
Wholeseller	112 (82)	127 (90)	71 (24)	211 (73)	177 (59)	698 (60.0)
Retailer	-	-	32 (11)	15 (05)	29 (10)	76 (6.5)
Direct sell in hat/bazar	25 (18)	14 (10)	177 (60)	63 (22)	94 (31)	373 (32.0)
Total	137 (100)	141 (100)	295 (100)	289 (100)	300 (100)	1162 (100)

Figures in the Parentheses indicate percentage.

Except zone III, most of the weavers sell their products in the wholesale market. This is primarily due to absence of cooperatives. Respondents in all zones (and also some units in Dhamrai Upazila) except zone III reported the absence of cooperatives either in marketing of the products or in the distribution of basic inputs such as yarn, chemicals and dyeing materials. 15 units (1.5 percent of the total sample units) in Shajadpur area reported the existence of cooperative but expressed doubt about the legitimacy of membership. We consulted the recent report on "Weavers' Service Needs Study" about the role of cooperative. The report holds that most of the survey unit are sceptical about the usefulness of the weavers' cooperatives and, therefore, did not advocate either for its expansion

or for collaboration. The absence of any marketing association deprives the weavers of a reasonable price of their product. Proximity of a reputed market sometimes influences the weavers marketing decision. In zone I and zone II, it is observed that most of the weavers, 82 percent and 90 percent respectively, sell their products in the wholesale market of Baburhat near Narsingdi. Only in zone III, 60 percent of weavers sell in the nearby hat and bazar. The wide dispersion of pit loom units in the zone and non-proximity of any reputed market compel weavers to make direct sale of the product.

Sources of Capital

Indebtedness of weavers is one of the major problems. Out of a total of 1,162 units 1,151 units supplied information about the source of capital. Table 4.15 gives information about source of capital.

Table 4.15 : Source of Capital

	Bank	Cooper- ative	Mahajons	Own sources	Total
Zone I	37	-	71	29	137
Zone II	50	15	33	28	126
Zone III	36	33	200	29	298
Zone IV	4	-	129	162	295
Zone V	46	-	84	159	289
Total	173 (15)	48 (4)	517 (45)	407 (35)	1151 (100)

Figure in parentheses indicate percentages.

It has been observed that institutional sources of credit currently meet about 20 percent of capital in the handloom sector. The role of cooperative supplying 4 percent is insignificant while dependence on mahajans is predominant at 45 percent. Financial institutions provide 15 percent of capital.

The economic condition of weavers in zone I, II and zone III is very insecure. Only 21 percent of weavers can meet the capital requirement through their own generated income. On the other hand, 40 percent of weavers in zone IV and V can meet capital requirement from own source.

The cost of credit from mahajans is high; ranging between 22 percent and 30 percent per annum. In some cases, even monthly interest rate is charged. On the other hand, the indebtedness of weavers to mahajans reduces the bargaining capacity of the weavers with the mahajans in marketing their products. Sometimes, mahajans take delivery of the products from the pit loom unit at a price much lower than the market price. This practice is more common in zone I. Poor transportation network is a major factor in product marketing.

Assessment of Training Needs

For an exhaustive treatment of the subject, we made an inquiry into the training aspect of the handloom operation. It is argued that improvement in looming

operation such as in the dyeing and processing of yarn, use of chemicals, conversion of pit loom into semi is instrumental in raising productivity. A sample of 50 weavers from each zone were interviewed. Table 4.16 gives the view of the respondents on training requirement in the various technical aspects of handloom operation such as loom operation implying conversion of fly-shuttle loom into semi, training on improved methods of dyeing and processing.

Table 4.16 : Training Need Assessment

Field	(in number)				
	Zone I	Zone II	Zone III	Zone IV	Zone V
Loom operation	22	20	25	30	29
Dying/Processing	9	17	15	17	15
No Need	19	13	10	3	6

Fifty percent of the respondents expressed willingness to receive training on improved loom operation through conversion of pitloom unit into semi. Thirty percent showed willingness to receive training on improved methods of dyeing and processing while 20 percent expressed unwillingness to receive training in any of the technical aspects. Weavers from most of the zones expressed willingness in the conversion of pitloom unit to semi unit. This propensity reflects profitability of semi unit in comparison to pitloom unit. It is important to note that output in semi units is about three times the output of the pitloom unit.

Chapter V

Identification of Problem Areas and Strategies Pursued by BHB

An incisive analysis of the problem areas in handloom sector may address issues such as supply of desired count of yarn and other basic inputs in adequate quantity, periodicity of supply, institutional arrangement in the supply of inputs, working capital requirement and a myriad of other issues such as rate of interest, taxation and input price. The analysis will also address the adequacy of the existing institutional arrangements, loopholes in the input distribution system and the attitude of the personnel in relieving the grievances of weavers. We took cognizance of this aspect and thus incorporated in the questionnaire related problems in handloom operation. Fifty weavers from each zone were interviewed, many weavers identified more than three problems. Table 5.1 gives an idea of the nature of problems weavers from each zone face in loom operation.

Table 5.1: Identification of Problem Areas

Problem Areas	Zone I	Zone II	Zone III	Zone IV	Zone V
Irregular supply of inputs	39	43	45	37	25
Shortage of working capital	27	40	41	29	30
High input price	29	23	20	35	27
Insufficient quantity of inputs	17	16	27	36	23
Non-availability of desired type/count of yarn	2	12	17	15	27
Higher rate of interest	18	19	25	10	7
Harrasment by service centres officials	7	5	5	13	4
Heavy taxation	2	4	-	4	1

The prominent among them is the shortage of working capital. In all zones, more than 60 percent of weavers reported paucity of working capital as the main inhibiting factor in loom operation. Irregular supply of inputs is another problem. Except zone V, 80 percent of the respondents stated that irregular supply of inputs is also a major problem. High input price, insufficient availability of inputs and high rate of interest are other factors. Less than 10 percent reported harrasment by service centre officials. Other problems include non-availability of desired count of yarn and heavy taxation.

We now briefly focus on two major strategies adopted by the Government of Bangladesh for development of handloom sector through Handloom Board. One area deals with the effectiveness of credit advanced by nationalized banks in the handloom sector. The other area is the efficacy of yarn distribution system. Government of Bangladesh adopted a scheme in December 1982 for rehabilitation of the handloom sector. The programme includes financing for reactivization of idle loom, repair and maintenance of old ones and provision of working capital for sick units. Bangladesh Krishi Bank, Sonali Bank and Janata Bank are providing credit in the programme through a directive from the Bangladesh Bank. Directorate of Textiles issued pass books to weavers on the basis of number of looms and typology of loom. Credit assessment was carried out on the basis of number of looms and typology

of looms in an unit. A maximum credit ceiling of Tk. 3,500 and Tk. 5,500 was fixed for a fly-shuttle pit loom and a semi-automatic loom respectively. The credit was distributed with a margin of 5-15%. The banks distributed credit on the basis of credit requirement as laid down in pass books. The supervision work was the joint responsibility of Bank, Handloom Board and field worker of BSCIC but in collection of loan, only banks were held responsible. A total of Tk. 140.13 crore has been disbursed during the period 1983-88. Bank-wise disbursement of credit and recovery up to June 1988 is given in Table 5.2.

Table 5.2: Disbursement and Recovery of Credit

Banks	(in crore)				
	Sonali	Janata	Agrani	BKB	Total
Distribution	25.00	43.13	52.00	20.00	140.13
Recovery	1.87	2.93	2.05	2.45	9.80
Write off	1.17	2.38	1.47	1.72	6.74
Outstanding	21.96	37.82	47.98	15.83	123.59

Source: Banking Department, Bangladesh Bank.

Recovery is less than 10 percent. Non-utilization of credit in handloom operation may be a reason for such poor recovery performance. It is alleged that this credit programme was launched without any prior study and members of a political pressure group under the banner of Tanti Dal were the major beneficiaries of the programme. The procedure of issuance of pass books was defective

and genuine weavers were deprived of credit. This irregularity in the disbursement of loan stood in the way of repayment and in spite of incentives in the form of waiver of interest, service charge and penalties, the weaver community in a group is asking for write off.

We now make a brief review of the yarn distribution policy carried through the Bangladesh Handloom Board. BHB launched the yarn distribution project through a two tier cooperative system. The first tier comprised primary weavers' cooperatives at the village level and the second tier known as industrial unions based at upazila level. The industrial union will be regarded as the wholesale unit of Bangladesh Textile Mills Corporation (BTMC) and primary cooperative will be considered as retailer. In implementation of the project, it was envisaged that necessary loans and working capital will be supplied by the commercial banks designated by and under a scheme of Bangladesh Bank. The performance of the project was not, however, satisfactory. Some of the major reasons of the failure were financial inability of BHB itself and disappointing role of the designated banks, inadequate supply and non-availability of desired counts and type of yarn. Besides, allotment of odd counts of yarn, inferior quality and the yarn pricing policy of BTMC appears to be highly defective. This resulted in the non-lifting of yarn to the extent of 65 percent. Introduction of tag dealership system in 1977

to streamline yarn distribution met with limited success. The existence of large number of fake dealers accounting for around 50 percent gave rise to black-marketing of yarn. Currently, yarn is being distributed through normal market channel. Thus the failure on the part of the BHB to ensure a smooth distribution of yarn the weavers are found to turn towards the mahajons who, in turn, charge a rate of interest ranging from Tk. 15 to Tk. 20 per week per bale of yarn. This, in other words, means an annual rate of interest varying from 225 percent to 260 percent.

Suggested Measures

(i) Vitalization of Weavers' Cooperatives

The experience of weavers' cooperative in India speaks of burgeoning growth in the handloom industry. Most states have set up an Apex Cooperative Marketing Union to take care of marketing of handloom products. The cooperatives also look after product standarization and follow uniform pricing policy of the product. Besides, State Handloom Development Corporations also assess the needs and problems of weavers outside the cooperative coverage. Thus in light of the Indian experience, vitalization of weavers' cooperatives in Bangladesh must be considered with utmost importance. Available information indicate that except one cooperative in Jessore area,

performance of cooperatives in other areas is not satisfactory. Thus reorganization/formation of weavers' cooperative under the patronage of Bangladesh Handloom Board is of considerable importance for handloom sector. The legitimacy of membership needs to be ensured. This is more important for channeling credit and inputs and undertaking marketing responsibility of handloom products.

(ii) Modernisation of Pit Loom Units for High Productivity and Profit Ability

Competition from semi and powerloom in marketing of product necessitates conversion of pit loom units into semi which has greater employment potential as well as output augmentation with less fatigue. Government may undertake a scheme for loom modernization in phases in collaboration with the Institute of Appropriate Technology of the Bangladesh University of Engineering and Technology.

The modernization programme in India at the behest of the Institute of Handloom Technology helped introduction of New Model Charkha (NMC) and Semi-automatic looms. As a result, productivity of spinners and weavers has gone up and the level of employment also has moved from 7-8 percent about 10 years ago to about 30 percent in 1983.

(iii) Rejuvenation of Demand for Handloom Products through Appropriate Policy

Inelastic nature of demand for handloom products poses dual problems for weavers.

- a) Import of second-hand readymade cloth and smuggling of handloom products from neighbouring countries depress the market with consequent fall in price.
- b) Except few products, most of the products from similar industrial establishments may be used as substitute of handloom products. Cross elasticity of demand for handloom products tends to be positive indicating the fall in the price of substitutes resulting in the fall of handloom products.

This situation calls for formulation of a rational policy for handloom products to ensure reasonable price of the price of the products. This can done by restricting import of cheaper substitutes such as second-hand cloth and synthetic fabrics.

(iv) Update information and statistics on handloom Sector.

Data and information on current state of the industry are not readily available. Information available on the handloom sector are mostly outdated and so they are not helpful for working out any worthwhile action

programmes. Information on the handloom sector can be had from BSCIC Cottage Industry Survey 1961 and 1980, Handloom census 1978, Rural Industries Study Project by BIDS, 1979, Census of Agriculture and Livestock 1983/84. Even the Bangladesh Handloom Board set up in 1978 for development of handloom industry in the country does not seem to have developed updated data information system in this sector. It is imperative to initiate work for undertaking Handloom Census on regular basis for effective policy formulation and planning.

(v) Legal and Administrative Support for Handloom Sector's Product Reservations

Product reservations in the handloom sector and strict adherence to this policy through appropriate government machinery may salvage sick handloom units from unhealthy competition. This will facilitate marketing of handloom products. The experience of India enacting a legislation entitled "The Handlooms (Reservation of Articles for Production), Act, 1985" is a case in point. In pursuance of this Act, 22 articles (cotton, blended, woollen and silk) were reserved for exclusive production by the handloom sector vide a notification in August 1986. For effective implementation of the Act, government set up three regional offices in Delhi, Puna and Coimbatore. A scheme for

providing central assistance to state governments for setting up enforcement machinery at the state level has also been prepared. This fulfilled a long standing demand of the handloom sector in India.

(vi) Institutional Credit Arrangement for Sick Handloom Units

According to this study, more than 80 percent of weavers depends on mahajons to meet working capital as well as capital requirement. Institutional support for financing loom operation is thus insignificant. So institutional financing of handloom sector is thus a pre-requisite for the revival of the handloom units especially the sick ones. The small and cottage industries sector need to be recognized as a priority sector and a separate institutional arrangement may be designed to provide on concessional terms adequate working capital and term loans for improvement of loom productivity.

(vii) Assessment of Working Capital Requirement for Flood affected Zone

This is badly needed. The severe economic loss of the weavers due to recent flood imposed a heavy burden on their already precarious economic condition specially in Zone III. Most of the weavers from this zone badly need working capital to start looming operation afresh. An exercise may be carried out by Bangladesh Handloom Board to assess the total working capital requirement for rehabilitation of the morbid handloom units of this Zone.



Concluding Observations

This study tries to assess employment generation in the handloom sector during the Third Five Year Plan period. Primary data were collected from some of the high concentration loom unit areas. The selection of high concentration areas may not bias the findings since a deteriorating situation over the period in these sample units also speaks of deteriorating condition in the low concentration area. A separate study for low concentration area may unfold the same observation.

The handloom sector, specially weaving carried out by pit loom (fly-shuttle pit loom, pit throw and fly-frame) indicates a decaying stage. Data collected from Bancha-rampur, Narsingdi and Shahjadpur area corroborate the findings. The only prosperous area as was observed in study is Kumarkhali, which because of product specificity could manage to tide over the odds. The study shows that operation of semi automatic loom is profitable, the value added per labour unit economically justify its operation.

Two major problems as faced by the weavers are identified in this study. These are shortage of working capital and inadequate supply of quality and desired type of yarn at regular intervals. Measures undertaken by the government through the Bangladesh Handloom Board

are outlined and few steps are suggested to ameliorate the existing maladies. During the Third Five Year Plan, Bangladesh Handloom Board implemented four development projects namely, Handloom Products and Equipment Development (CHPED), cloth processing centre, Handloom Service Centre and Training Programme and Improvement in Technology. The CHPED project was completed. Construction work of cloth processing centre and Handloom Services centre was nearing completion.

Handloom is by far the largest cottage industry in the country. But current state of affairs is indicative of its decaying stage. This is the third year of the Third Five Year Plan (1985-90) of Bangladesh. This study, therefore, be considered as mid-term review of the employment situation of the handloom sector. The generation of employment as evidenced in the employment and production trends of the zones I, II and III belies the expectation of attainment of Third Five Year Plan employment target. However, congenial policy environment may reverse the trend for the next two years of the Plan period and may contribute to the creation of gainful employment in the handloom sector.

Summary of Findings

This study attempts to explore the potential of handloom as well as powerloom sector in employment expansion against the target set in the Third Five Year Plan (1985-90) both in an aggregative and micro framework. Broad features of employment situation such as employment structure and working conditions, marketing and other ancilliary supporting activities have been presented in the aggregate framework. On the other hand, in the micro framework an in-depth analysis has been made of the employment and production trend over the period 1984-88 in the five study areas covering Brahmanbaria (Zone-I), Narsingdi (Zone-II), Serajgonj (Zone-III), Tangail (Zone-IV) and Kushtia (Zone-V).

The loom units of the study areas broadly consist of two types: (a) handloom units comprising both fly-shuttle pit loom and Chittaranjan (semi-automatic) looms and (b) decentralized powerlooms. Pit looms are mostly found in the first three zones, while pit loom, semi and power looms - all exist in zone-IV and V. Both operational and licensing status of semi and powerloom is better than that of pit loom.

Fly-shuttle looms are primarily run by family labourers, while semi and power looms are dominated by hired hands (temporary and permanent). Persons employed per operational loom exhibit declining trend in the

absorption of both family and hired labour. The downward trend is more pronounced in case of family labour mainly because of wide divergence between available capacity and actual production in the fly-shuttle looms. On the contrary, since semi and power looms are run on profitable basis, absorption of wage labourers maintains a reasonable level.

There are marked variations in the trends of operational looms, production and employment in the study areas. The first three zones which concentrate on pit looms show a declining trend in the number of looms, production and employment, but the decline is most prominent in zone-III (Serajgonj). Two other zones, zone IV and V show upward trend in respect of loom units, production and employment.

The high correlation between the major variables viz., number of looms, employment and major production supports the view that employment is a function of both the number of operational looms and volume of production. The volume of production, in turn, is a function of sale-turnover ratio, marketing facilities, credit supply, input distribution and economic situation. Findings of the study reinforce the idea that except semi and power looms, flyshuttle pit loom can not generate employment beyond self-employment status. On the other hand, wage employment exists in semi and powerlooms.

Productivity analysis undertaken in the study shows that the operation of fly-shuttle pit looms is unprofitable. Profit margin for a weaver is below the wage earned in other agricultural activities suggesting decline in weavers' real income. Another factor contributing to the loss is the mismatch between BTMC unit yarn cost and BTMC ex-Mill price working against the interest of weavers. On the other hand, although both semi and power looms are profitable, adoption of semi-automatic loom turns out to be more economical and profitable than powerloom in terms of capital-output ratio and employment-investment ratio.

One of the major variables of profit function is the marketability of products. Except Zone III, most of the weavers sell their products in the wholesale market primarily due to the absence of cooperatives. Another major problem relates to the high indebtedness of weavers to local mahajons resulting in weak bargaining capacity of the weavers in marketing their products. Weavers from most of the zones expressed their willingness in the conversion of pit loom into semi. This propensity of the weavers reflects the relative profitability of semi units. Respondents of the study identified some problem areas in the sector. Paucity of working capital and irregular supply of inputs appear to be major problems in loom operation. Other

problems include higher input price, insufficient supply of inputs, high rate of interest, harrassment by service centre officials. Finally, some recommendations have been made for improving the plights of weavers.

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QUESTIONNAIRE FOR THE STUDY ON "THE EMPLOYMENT ASPECT OF THIRD FIVE YEAR PLAN: THE CASE OF HANDLOOM INDUSTRY".

1) Name and address(es) of Owner(s):

<u>Name of owner</u>	<u>address</u>
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- i)
- ii)
- iii)

2. Identification/Ref. No. _____

3. Location of the loom : Village _____ Union _____
 Upazila _____
 District _____

4. Particulars of loom:

No. of Units/Looms	Loom Type			Total
	Handloom	Semi (Chitta- Ranjan)	Power	

- a) Licensed:
 - i) Operational
 - ii) Non-operational
- b) Un-licensed:
 - i) Operational
 - ii) Non-operational

 Total

5. Employment Structure:

Employee Category	Employment Type												
	Permanent			Casual (Daily basis)			Seasonal			other			Total
	M	F	T	M	F	T	M	F	T	M	F	T	

Supervisory/
 Officer
 Staff
Workers:
 Skilled
 Semi Skilled
 Un-Skilled
 Total

6. Employment Status:

Employment Status/ Relation	Employee Type										Total
	Permanent			Casual (Daily basis)			Seasonal			Other	
	M	F	T	M	F	T	M	F	T	M	

Owner himself

Family
Members

Hired

Other
Relatives7. Working Hours:

No. of Shifts	Shift Time	Output		Name of product
		Unit	Yard	
A	From _____ To _____			
B	From _____ To _____			
C	From _____ To _____			

8. Salary & Benefits: (Specify rate for items -
lungi, saree, bedsheet & towel)

	Permanent		Casual		Seasonal		Other	
	Employees		Employees		Employees		Employees	
	M	F	M	F	M	F	M	F

1. B. Pay (Specify
the employee)

2. Daily Rate

3. Hourly Rate

4. Piece Rate

5. Fringe benefit
(specify)

6. Incentives:

- Bonus
- Overtime
- Other (specify)

9. Production Capacity per 8 Hour Day

Machine/Loom Type	PRODUCTION CAPACITY PER 8 HOUR				Other U.Y.
	Lungi	Saree	Bedsheet	Towel	
	Unit Yard	Unit Yard	Unit Yard	Unit Yard	

Handloom

Semi
(Chittaranjan)

Powerloom

10. Marketing Informations:

Media/channel of distribution (Please Tick)	Location Distance	Mode of Trans- port	Fare (Taka)	Remarks
- Cooperative				
- Wholeseller				
- Retailer				
- Direct sell in Hat/Bazar				

11. List down major marketing problems:

- i) _____
- ii) _____
- iii) _____
- iv) _____

12. Investment Cost Per Loom:

	Handloom <u>Taka</u>	Semi <u>Taka</u>	Powerloom <u>Taka</u>
A) <u>Capital Expenses</u>			
i) Preliminary Expenses (Expenses prior to installation of the Machine)			
ii) Machine cost			
iii) Accessories			

B) Operational Expenses:

- i) Raw material purchase:
- a) Yarn
- b) Chemicals
- c) Dyeing materials
- d) Other materials

- ii) Salary and Wages
- iii) Marketing & Distribution Expenses
- iv) Interest payment
- v) Rental Expenses
- vi) Repair & Maintenance
- vii) Taxation
- viii) Other Expenses
(Please specify)

13. Sources of Capital:

	<u>Loan Taka</u>	<u>Rate of Interest</u>
i) Bank		
ii) Cooperative		
iii) Mohajon		
iv) Own Source:		
a) Family Income		
b) Income from Loom Investment		
c) Other (specify)		
v) Friends and Relatives		
vi) Other Sources, if any (specify)		

*14. Employment Trend:

Year	<u>No. of Looms</u>			<u>No. of Employees</u>			
	Handloom	Semi	Power	Permanent	Seasonal	Casual	Total
1984/85							
1985/86							
1986/87							
1987/88							

*15. Production Trend:

Year	<u>Production</u>					Total
	Lungi Unit Yard	Saree Unit Yard	Bedsheet Unit Yard	Towel Unit Yard		
1984-85						
1985-86						
1986-87						
1987-88						

16. Income Generation:

Time Dimension	(in average)				Total
	Unit/ Yard	PRODUCTION Cost	Unit/ Yard	SALE Cash Credit	
Per Day					
Per Week					
Per month					

17. List of Major problems (Please Tick)

Problem Areas	Tick	Proposed solution
1) Desired type/count of yarn not supplied.		_____
2) Harrassment by service centre Officials		_____
3) Insufficient quantity of input		_____
4) Irregular supply of input		_____
5) Higher rate of interest		_____
6) Costly Input		_____
7) Heavy Taxation		_____
8) Shortage of working capital		_____
9) Excessive formalities		_____

18. Please give a list of services received during the last Three Years.

19. Do you want to undertake training on

Loom operation _____

Dyeing Processing _____

Other events (specify) _____