AN EVALUATION OF THE INDUSTRIAL DEVELOPMENT OF THE GOVERNMENT OF BANGLADESH WITH REFERENCE TO LOCATION PLANNING OF TEXTILES INDUSTRY

BY

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T H E S I S

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A balanced growth of industries all over the regions of a country seems to be a prerequisite for development. But due to various economic and socio-political forces within and outside the country uniform development often cannot be achieved in most cases, although a continuous effort is put in to reach that end.

In Bangladesh, the spatial distrihution of industries, needless to say, is not uniform. Therefore apparently it seems that the government is trying to bring an uniform industrial development as far it is possible, in all regions of the country. But the policies and the plans of the government as they appear to be only in 'statement'. They are far from being implimented.

In this thesis attempt is made to show how the location points of industries in Bangladesh are scattered and how are those places selected for investment, particularly for the investment of cotton textile mills.

Our findings are that in the past there was virtually no framework in the Government level for the selection of location of industries. The present policy of industrial location in general is also very weak.

The present exercise reveals that it is the market for yarn in the handloom industries in Dacca region that largely influenced the concentration of cotton textile industries in and around this region. The work attaches importance on the problem of regional imhalance and provides a set of locational criteria for future investment in textile industries of Bangladesh.

CHAPTER- 1
INTRODUCTION

1.1 Location of Industry

The location of industry plays a vital role in the economy of a country. For a balanced growth of the economy in all regions of a country, uniform spatial distribution of industry is desirous. This is because it brings employment opportunities and thereby raise income level of the people of dispersed region. But different factors such as transportatinn, raw materials, market, power and other economic parameters do not always support uniform spatial distribution. Moreover, in the case of the private sector, the view of the industrialists also carry great significance in deciding the location.

The problems of industrial location can be analyzed from different views and angles. For a particular industrial unit, the dominant consideration is to secure the maximum effeciency in production as well as distribution. But to attain the above goals, it generates the social and economic evils. To reduce the production and distribution cost, the enter-prenures in most cases try to locate industry where maximum infrastructural facilities are available. Hence it causes concentration of industries in a particular area and deprives other areas from the benefits of industrilization. This ultimately results in economic disparity between regions. Because of the fact that some particular areas always possesses more potentialies for industrial location, it is found that major industrial centres grow along those potential areas. The process results in creating a small number of industrially developed regions, leaving the rest of the country industrially (and thereby economically) backward. The backward regions usually suffer from low rate of industrial development and hence, enjoy less economic prosperity.

In order to control the industrial development in particular centres, and distribute the location of induatriee uniformly over the whole national region with greater emphasis on depressed regions some short of deliberate industrial location policy is usually adopted. Industrial location policy is an important device to remove the regional disparity in the level of employment and income.

1.2. The Location of Industry in Bangladesh

The case of Bangladesh, even a casual observer can say, the spatial distribution of industry is not uniform. Though there are considerable scope for dispersal of industrial unit in different regions of the country, it is found to be concentrated mostly in the urban areas of Dacca, Chittagong and Khulna. Various factors helped/develop these three areas to as major industrial centres. These are mainly port facilities, power supply, administrative centres, and heritage of those places as small market and business centres. Most of the large and medium types industries are located in these three industrial centres. As a result problems of these centres are possibly a state of diseconomy of scale. Regional imbalance in the level of development is another result which will discuss at a later stage of this study. The recent trend of locating new industries is also not very different from the past, eventually to create more economic imbalance between and among regions.

The concentration of industries causes excessive demand for the existing supply of housing facilities, congestion in urban and sub-urban traosportation, extra claim on other social facilities (like hospital, school, shopping centres etc.) and on public utilities reducing the total efficiency of the urben system. The coucentration in short generates over-urbanisation.

Hence appropriate measures are required to decentralise the industrial centres in Bangladesh. Recently Government of the Peoples' Republic of Bangladesh has given emphasis on the dispersal of industrial location in different part of the country, particularly in the depressed regions.[1] Different

1. The First Five-year-plan (1973-78), Planning Commission, Govt. of the People's Republic of Bangladesh, Page -264.

rules regulation and incentives are in the way to practice. But there is hardly any frame of reference in practice, to regulate proper location of industries in appropiate areas. The decisions are more or less random,at best on common sense of non-expert in the field. In the past, the aspect of industrial locations were given consideration only in terms of West and East Wings of Pakistan during 1950's and 1960's. The considerations rendered East Pakistan least benefited and there was virtually no serious consideration on frame work for the location of industries within the regions of former East Pakistan (now Bangladesh).

The present government is apparently found to be keen in (i) removing the degree of economic imbalance among the various regions of the country (ii) bringing more economy of scale in system of production and (iii) an efficiency in the system of distribution through dispersal of investments at different locations particularly at the depressed regions. The present study is developed to that context.

1.3 Aim of the present study

The aim of the present study is to evaluate the development of the Industrial policies in Bangladesh starting from the British period to the present days and to find out the strength of those policies on the aspects location of industries. Next, to study the degree of concentration of existing industries in different regions of Bangladesh. In order to make the study more specific, only the location of textiles industries in Bengladesh in different period will be reviewed in this study under the framework of the industrial policies of each period.

1.4 Objectives of the Study

The objective of the study may be classified as follows :

(i) To review the prior and existing industrial policies of the government relating to location of industries. This will include a review of the existing spatial distribution of medium and large scale industries in Bangladesh as a prelude to the study.

(ii) To identify the factors responsible for the location of the existing textile industries and to find out the "efficiency" of their locations in context of development of the country. An analysis of the strength and weakness of the industrial development policies in respect to location will also be provided.

(iii) Finally, to suggest a set of criteria for the development of a location policy of the textile industries for the future development of Bangladesh.

1.5 The Scope of the Study

The study will include the distribution of medium and large scale industries in Bangladesh which have grown over the last century and been growing now under different industrial policies. The particular emphasis of the study is on the location aspects of the textile industries in Bangladesh. The regional economics of Bangladesh have been taken care of, in brief, as a background requirement of the study. The regional development, urbanisation and infrastructural growth of Bangladesh would also influence the study.

1.6 The Methodology of the study

To carryout the study information and data have been collected both from primary and secondary sources. The following methodological approach have been adopted for collecting information and presenting those data in our study in an academic style.

1.6.1 Literature Survey

For the first hand knowledge of industrial development policy and its location aspects, a study of literature related to our subject done in our country and abroad have been carried out. Different published literature (books and documents) from various organisations have been collected for the study.

1.6.2 Secondary Source

In order to fulfil the objectives of the study, the past and present industrial policies have been examined. These policies are both indirect and direct being initiated by Planning Commission, Income Tax Authority, Investment Corporations of Bangladesh, Bangladesh Shilpa Rin Sangstha (Bangladesh Industrial Credit Corporation), Bangladesh Shilpa Bank (Bangladesh Industrial Bank), different Sector Corporations and Department of Industries. Moreover, different census reports, publication of the different bulletins of Statistical Division on census of Manufacturing Industries and the Annual Reports of Bangladesh Textiles Mill Corporation have been consulted for the study.

1.6.3 Primary Sources

The data obtained from the secondary source were not sufficient for the study. Therefore, collection of data from primary source was required. The factors which influenced the location of existing textile industries have found out from a general study of secondary sources as well as direct investigation of 28 mills located at different points distributed all over the country. The investigation have been carried out (1) to identify the priorities on which present sites of industries had been chosen (ii) the influence of location policies selecting the site, (iii) the relative advantages and disadvantages for present location. The present location analysis are based on the following types of information gathered from primary sources :

Socio-political background of the location site
Economic activities of the location site
Development of the infrastructural facilities in the site

1.6.4 The sample of the study

The study includes only the cotton textiles mills of large and medium scale only. Among the large scale mills only the spinning and composite textile mills are taken under study. The number of spinning and composite textile mills in running condition in Bangladesh is 57, all of which are under BTMC and number of under-construction mills ars 4, which are also under BTMC.

Due of that 61 millés, we have taken 28 millds as our study samples. The sample of 28 mills have been selected by grouping the mills established in different period and taking about 45% of mills from each period. The researcher personally went to all the study-mills premises, interviewed (i) mill authorities, (ii) local elites and (iii) the members of the local civil administration.

1.7 Limitation of the Study

The problems of the regional development in detail have not been discussed. The literature related to industrial location in Bangladesh is almost nil. And foreign publications mostly dealing the problems of rich industrial countries background have little relevance to the problem under study. So the present researcher has developed the write-up from his own experience of investigation into the problem.

The availability of data for the particular study is not at all sufficient. More over, the accuracy of the available data is always questionable. The access to different government office for unpublished data and documents is extremely difficult and ordours.

The time limitation for the submission of the thesis report and other resources constraints were also kept in mind.

1.8 Contribution of the Study

The aspects of location of industries in Bangladesh is given less importance by the academicians of the country. This study is an attempt to analyze the existing locational pattern of industries in general and cotton Textile Mills in particular. The finding may be of some use to the policy makers as a guideline for the future industrial location policy textile industries in this country. It is hoped that the result of this study will help the future researchers to do more studies in this line.

CHAPTER - 2

INDUSTRIAL LOCATION POLICIES AND MEASURES

2.1 Different Periods of Industrial Development

During the Muslim Rule in Bengal (upto 1757 before the Battle of Plassey), there were some manufacturing industries, including the cotton textile, brass-metal manufacturing and gold and silver smithy. The Daccai-Muslin (a superfine quality cloth) was very famous. This industry was systematically destroyed by the direct attrack of the British rule in order to provide a market of their own textile product in the Colony. The Muslin industry developed in around Dacca city. The development of modern industry in the Indian sub-continent began from the early of the 19th century in the Indian sub-continent. For the study of industrial development policies in this region, particularly in Bangladesh in concrete framework, the development of the policies can be divided in three periods as follows :

1. British period (upto 1947)
2. Pakistan period (1947-1971)
3. Bangladesh period (1971-1980)

In each period the study will include the statement of the Industrial Location Policy and various measures influencing the location of industry.

2.2 British Period

The growth of manufacturing industries in Bengal during the British rule began early from the early 1800 A.D. For any industrial development a basic prerequisite is the agricultural surplus, supply of raw material from agricultural surplus, and mines. There was no known mineral resource in East Bengal (now Bangladesh), only raw material was jute. But the bulk of raw jute were exported to Britain. And the jute industries developed in Dundee in Britain, and no in Bangladesh. So, for ovious reason, no significant industrial development took place in Bangladesh during the first half of the British rule.

In the middle of the nineteenth century the industrial centres which developed in British India were Bombay, Karachi and Calcutta. Hence East Bengal remained basically a very backward and leest developed region. No positive step was taken by the British government to create any industrial growth point in then East Bengal. As no development plan was prepared by the British government, so the policy of regional development does not arise.

The location of industries in British period was basically concentrated in Calcutta, Bombay and Karachi. In Bengal as Calcutta was developed in power supply, railway connection and more urbanised area, and enjoyed good port facilities, it was the focal point for the industrial location by the private enterpreneures. No Government incentive were made to decentrilise the industrial development in Dacca or elsewhere in East Bengal.

In the early twentieth century, calcutta and other metropolitan cities of India made a remarkable progress in manufacturing industries. But these remarkable progress was concentrated mainly in a few centres. For the development of industries no concrete frame work was followed. In Bengal only Calcutta enjoys most of the establishments of the industries.

2.3 Pakistan Period (1947-71)

During the British rule East Bengal was an Induatrially very backward. In that period Calcutta, the most development city of Bengal had grown into a large industrial centre and East Bengal was the supplier of raw materials and labour forces. In 1947, the East Pakistan (East Bengal in British period and now Bangladesh) got independence from British and demarcatad as a Province of Pakistan. East Pakiatan bad very few industrias during the time of partition. Even in comparison to West Pakistan its industrial units were also small in number.

Beginning from the Partition in 1947, the Government of Pakistan took different policies and measures to develop the industry in different regions of country. The location aspects of industry in these policies are classified in the following:

2.3.1 Industrial Policy Statement 1948

On April 2, 1948, the First Industrial Policy of Pakistan Government was declared, with the title of "The Industrial Policy of the Government of Pakistan". There was no specific statement on industrial location, but it was pointed out in paragraph 6 under the "Role of Centre and Provinces in Industrial Planning and Development" as follows :

> Industrial development is so bound up with fiscal policy that the two must be closely integrated. Then again, the location of industry is, in these days, determined by requirements of balanced regional development and strategic considerations. The centre is in a better position to judge these matters than the provinces.[1]

2.3.2. The First Five Year Plan 1955-60

In 1955, the First-Five Year Plan of Pakistan was launched where the following statement on the Industrial location was joted down :

> Location of New Capacity : In earlier phase of Industrialisation, industries have tended to congregate near a few main towns, such as Karachi, Layalpur, Narayanganj, and Chittagong. This has been natural because of the facilities and economic

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1. Bulletin on Industrial Policy, Ministry of Industries, Government of Pakistan, 1948.

opportunities available at such policies Karachi, in particular, has figured prominantly due to the advantages of port, the special facilities of industrial estates, close proximity to the centres of administration, and the presence of a large business class that settled there on migration from India.

2.3.3 The Second Five-Year-Plan 1960-65

On the question of industrial location the relevant paragraph from the second plan is produced below :

> Location of industries : During the past few years, the establishment of industries in Karachi has been severely restricted, and expension has not been welcomed in certain districts of West Pakistan. The effort has been made to establish industries in area where little or no industry exists. The effect of these limitations has been to discourage industrilization those areas of the Country, notably the large industrial centres, where new investment will become fruitful at least in the short run. The limitations will need to be relaxed, and location of new capacity encouraged in all suitable areas. In this context it will be of advantage to provide the establishment of industrial estates in centres where

the transport system, water and power resources, and availability of raw material and potential markets offer suitable opportunities. Apart from the large centres, effort will be made notably through the small scale industry programme to encourage smaller centres of industries which mainly supply local materials. Close co-operation will be necessary between authorities responsible for industrial planning and those dealing with urban and regional physical planning, in order to promote the dispersal of industries in suitable location.

2.3.4 The Third Five-Year-Plan 1965-70

In June, 1965, Third Five Year Plan was published containing more rational and pragmatic analysis of disparity between East and West Pakistan on location of industry as follows;

> Location of Industry : Industrial Investment Policy as to kind and location of industry will be pragmatic and rational to the maximum extent consistent with the over-ridign plan objective of eliminating economic disparity betwen East and West Pakistan. As a general guide, investment opportunity which offers a maximum rate of return on invested capital will be selected over alternative investments of the same purpose, but indirect benefits of dispersing industries throughout the country will be fully taken into account. Clustering if industries around

a few industrial centres extents many additional costs inherent in rapid urbanisation on besides numerous social problems in the long run. Besides these general criteria, special considerations must determine the location of different kinds of industries. For such industries such as cement and steel, proximity to raw material is essential, while for others, factors such as availability of skilled labour or easy access to markets are more important. Export industries are more competitive if located near port towns, but this factors must be weighed against possible advantages from proximity to raw materials such as natural gas or powar supply. Subject to there considerations, industries will be sanctioned for locations where they will maximize contribution to economic growth on the bais of rational and pragmatic analysis subject to exceptional considerations of intra-regional disparities and long term development.

2.3.5 The Fourth-Five-Year Plan 1970-75

In fourth five Year-Plan the statment for the location of industries was stated as follows :

Location of industry : The financing institutions will encourage the establishment of new industries in East Pakistan to the extent feasible. The location for each project will he indicated in the sanction latter and no change will be permissible without the prior approval of the financing institutions and the provincial government. Preference will be given to industrial units proposed to be setup in industrial Estates created by the government for decentralisation of industries. Besides these general criteria, special considerations must determine the location of different kinds of industries. For some induatries such as cement and steel, proxim ty to raw materials is essential while other factors such as availability nf Mill labour and easy access of markets are more important. Export industries are better located near port towns but this factor must be weighed against possible advantages from proximity to raw material such as natural Case or Power supply. Subject to there considerations industries will be sanctioned for locations where they will maximize contribution to economic growth on the basis of rational and pragmatic analysis. But this Fourth Five-Year-Plan (1970-75) of Pakistan have not emplemented in Bangladesh due to the independence of Bangladesh in 1971.

2.3.6 Tax Holiday Scheme

Tax Holiday Scheme taken by the Pakistan government was introduced on April 1959, for growth of industry in the underdeveloped area. Tax holiday for new industrial venture was allowed total examption of income tax on profits earned during a given period of time. In second plan the duration of tax holiday was two eight year and was modified in Third-Plan where tbe allowed tax holidays ranging from two to six years.

The following geographical zones wbich during the second plan period were eligible for tax holidays ranging from two years to eight years, were allowed to years to six years in the Third Plan.

(a) Area eligible for a tax holiday of two years. The Tehsile of Nowshere, Mardan, Rawalpindi, Jhelum, Sailkoat, Guyranwala, Lahore, Layalpur, and Multans and the Talukas of Setkur, Hyderabad and Karachi.

(b) Area eligible for a tax holiday of four years :

(i) The cities of Dacca, Narayangang, Chittagong and Khulna and the areas within a radius of ten miles of minicipal limits of these cities.

(ii) The whole of West Pakistan excluding the areas eligible for the tax holiday for two years.

(c) Area eligible for a tax holiday of six years :

(i) The whole of East Pakistan excluding Dacca, Narayanganj, Chittagong, and Khulna and areas within a redius of ten miles of the municipal limits.

(ii) All areas of West Pakistan laying to the west of the Jhelum/Chanab/Paynad/Indusline but excluding the areas under above.[1]

2.3.7 Industrial Estates

The programme for setting large, medium and small scale industrial estates in various parts of East and West Pakistan can be regarded as one of the most important instrument for accelerating rational industrilization. The distribution of industrial plot with different infrastructural facilitiea helped in the development of the industry in the less developed areas. The Industrial Estate programme has direct effect in the location of industries. Due to this a large scale industrial estate was set up at Tejgaon (near Dacca) in East Pakiatan.

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[1] Third Five-Year Plan (1965-70), Planning Commission, Government of Pakistan.

2.3.8 Others Measures

The regional disparity in East and West Pakistan was very much significant, particularly in terms of industry. Different policies were taken, some of which were direct and some of which were indirect for the removal of the regional disparities. Those policies helped the dispersal of industrial location are as follows :

1. Ceiling of Private investment in the two provinces in the Industrial Investment Schedule.

2. Longer tax holiday in East Pakistan i.e. upto 6 years in all areas except Dacca and Narayanganj.

3. Development in the different sector such as transportation, power etc. which has direct effect on industrial location.

4. Setting of provincial organisation in Railway, Industriel development Corporation, WAPDA, Small Industries Corporation etc. which have different effect in the Industrial location.

2.4 Bangladesh Period

In 1971, Bangladesh became an independent state which was formerly a province of Pakistan for lest 25 years. The emergence of Bangladesh has radically changed the whole pattern of industrial ownership and investment policy. After the Liberation all units of industries abandoned by the

Pakistanis Government was nationalised. The new government setup different corporations for the different sectors of industry.

The different statements and measures for industrial location in Bangladesh period upto 1980 are given below :

2.4.1 First Five Year Plan 1973-78

New economic and social aspects were introduced in the first Five-Year Plan of Bangladesh. The Ownership pattern in the industrial structure was changed. The scope of private investment was unlimited in the Pakistan period, and that was interrepted by the ceiling imposed in First Plan of Bangladesh on the private investment upto 25 lacks taka.

In First Plan the Statement for the industrial location was stated in the "strategy for Increasing Industrial Output" as follows :

> Geographical Dispersal :
>
> In the interest of widely dispersing income and employment generating effects of investment, geographical dispersal of industrial units is a objective of industrial development. This will be realised through a policy of incentives and administrative directives to locate units in less developed areas.

2.4.2 The Two-Year-Plan (1978-80)

The nature of the two year plan was different from that of the First-Five-Year Plan, because in the industrial Sector, investment ceiling was strictly imposed on the private investment but in Two year Plan there was almost practically no ceiling restriction and except some particular types of industries all other type of industries were allowed for private investment.

In the aspect of location it states as follows :

Location of Industries: In order to promotes regional Development, Location of Industries will be dispersed in different regions through incentives and administrative directives except in care of industries where overriding technical and economic consideration do not favour such dispersal.

2.4.3 The Second Five Year Plan 1980-85

In the second Plan more stress were put for the dispersal of industrial units in the underdeveloped regions, and the statement for the industrial dispersal was as follows :

To spatially disperse industries for balance growth:

(a) Concious effort will be made and necessary incentives will be provided for the location of industrial units in new and less developed areas in order to promote balanced and harmonious development of different parts of the country particularly in the non-metropolitan area discouraging further concentration of industries in already developed areas as far as practicable.

(b) Rural and Cottage Industries will be promoted as a part of the rural developmeut programme used of the natural resources, agricultural produces and human skills.

(c) An important investment to encourage rural and small scale industries will be to develop growth centres in rural areas with infrastructural facilitiea.

2.4.4 Tax Holiday Scheme

The Tax Holiday scheme which was in practice during the Pakistan time are now also revived for the encourage of Industrial location in the under developed and less developed area. Tax Holiday is allowed for 5 years for a developed areas and 9 years for a less developed areas. The classification of the less developed and developed area was done as follows.[1]

(i) A developed area comprises the following :

(a) Area falling within the citiea of Dacca, Narayanganj, Chittagong and Khulna, and

(b) Area within the radius of ten miles from the municipal limites of the cities mentioned in (a) above.

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[1] A Guade to Investment in Bangladesh, Department of Industries, Government of Bangladesh, Dacca, 1980.

(ii) A less developed area comprides the rest of the country (excluding area mentioned in subparagraph (i) above).

The other measures of the tax holiday are as follows :

An industrial unit under taking tax holiday and setup in a developed area is required to re-invest 30% of its profits in the industrial undertaking from which such profit has been derived or to invest the same in the purchase of bound issued by the Government. The percentage of re-investment will be 15% in respect of an industrial undertaking set-up in a less developed areas.

2.4.5 Industrial Estates

The Government has taken different measures to develop decentrialise industrial growth by encouraging location of industries in different selected areas, where the developed infrastructural facilities are offered by the government. The system of Industrial Estates is to be distribute the industrial plot by the Government. BSCIC have 20 industrial Estates. Their total area is 841.99 acres consisting of 3386 plots. The divisionwise location of the Estates are as follows :

DACCA	CHITTAGONG	RAJSHAHI	KHULNA
1. Tongi	1. Sholoshahar	1. Rajshahi	1. Khulna
2. Mymensingh	2. Kalurghat	2. Rangpur	2. Jessore
	3. Fouzderhat	3. Dinajpur	3. Kushtia
	4. Comilla	4. Bogra	4. Swarupkati
	5. Feni	5. Pabna	5. Barisal
	6. Sylhet		
	7. Cox's Bazar		

Source : Annual Report of Bangladesh Small and Cottage Industries Corporation, 1979.

In addition to these different local Development Authorities and the Ministry of Works and Urban Development have given efforts for the Development of the Industrial units. These efforts are the distribution of the industrial land with requisite infrastructural facilities to the enterpreneurs in the following industrial areas :

DACCA

1. Postagola
2. Tongi
3. Tejgaon
4. Hajaribag (Only for Tanning Industry)
5. Mirpur (for small cottage industries)
6. Mohammadpur (for small cottage industries)

CHITTAGONG

1. Kalurghat
2. Fouzdarhat
3. Nasirabad

KHULNA

1. Khulna Industrial Area

The other steps for the location of industries by the government in the selected place are by means of establishing Export processing zone. The first step the setting up in going on the Chittagong with different facilities to the zone.

2.4.6 Fiscal Incentivee :

For the encouragement of the location of industries in the under developed areas different fiscal measures are taken by the government. To offer the fiscal inceptives the "Developed" and "Less developed" areas of the country have been re-organised as follows*

(i) Developed Area :

The metropolitan cities of Dacca, Chittagong and Khulna comprising Police Station of Kotwali, Sutrapur, Lalbagh, Dhanmondi, Ramna, Motijheel, Tejgaon, Demra, Cantomment Gulshan, Mirpur, Mohammadpur, Keranigonj, Joydevpur, Tongi, Narayanganj, Futullah, Siderhergonj, Gandaria, Savar, Narshingdhi and Kaliganj of Dacca district Kotawali, Doublemooring, Chittagong Port Panchlaish.

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* A guide to Investment in Bangladesh, Department of Industries Government of Bangladesh, Dacca, 1980.

Hethazari, Sitakund, Rangunia and Raozen of Chittagong District, Khulna, Daulatpur and Phultala of Khulna Districts and Abhoynagar of Jessore District.

(ii) Priority Development Area

This area consists of the whole of Rajshahi Division and the Districts of Barisal, Patuakhali and Chittagong Hill Tracts.

(iii) Development Area :

The Area cover the rest of the country.

The fiscal incentives in the above area are offered by the concensssionary rate of in port duty. The rate if inport duty on machinery and equipment for setting up new industries and for balancing, modernisation, replacement and expension of existing industries with sanction of the competent sanctions authorities has previous 20% and there is complete examption of sales tax. The custom duties have now been reducted subsequently. The present rate are*

(i)	for developed area	15%
(ii)	for Industrial Estates of BSCIC Located in the Beveloped area	5%
(iii)	For development area	5%
(iv)	For priority Development area	2½%

Also different facilities are given to the Priority Development and Development areas in the fiscal policies.

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* Import Policy, Ministry of Commerce, Government of Bangladesh 1980-81.

2.4.7 Other Measures :

a) Government Sponsored Plant

Different sectors of industries are kept under the reserved list, such that only the government can invest in these sectors. Hence in locating these plant government can influence the location of industries in the less developed areas.

Moreover, there are different sector corporations which have power to take initiative for the establishment of new indnstry. Hence these sector corporation can influence to the location of industries.

b) Regional Development Organisation

For the regional development government has formed different Regional Development Boards, giving the financial power to establish the industrial enterprises. These organisation are different for Divisional Development Boards and Haor Development Board.

CHAPTER - 3

DISTRIBUTION OF INDUSTRIES IN BANGLADESH

3.1 Factor influencing Industrial Location in Bangladesh

The spatial distribution of industries in Bangladesh is not uniform. The area favourable for industrial location generally have more concentration of industries. There are different factors responsible for the location of industries. These are: transportation network, availability of raw material, nearnass of market, port facilities and supply of cheap labour, power, banking services etc. In Bangladesh how much these factors are really responsible and to what extant their roles do influence in the location of Industries can be better be understood from the following discussion :

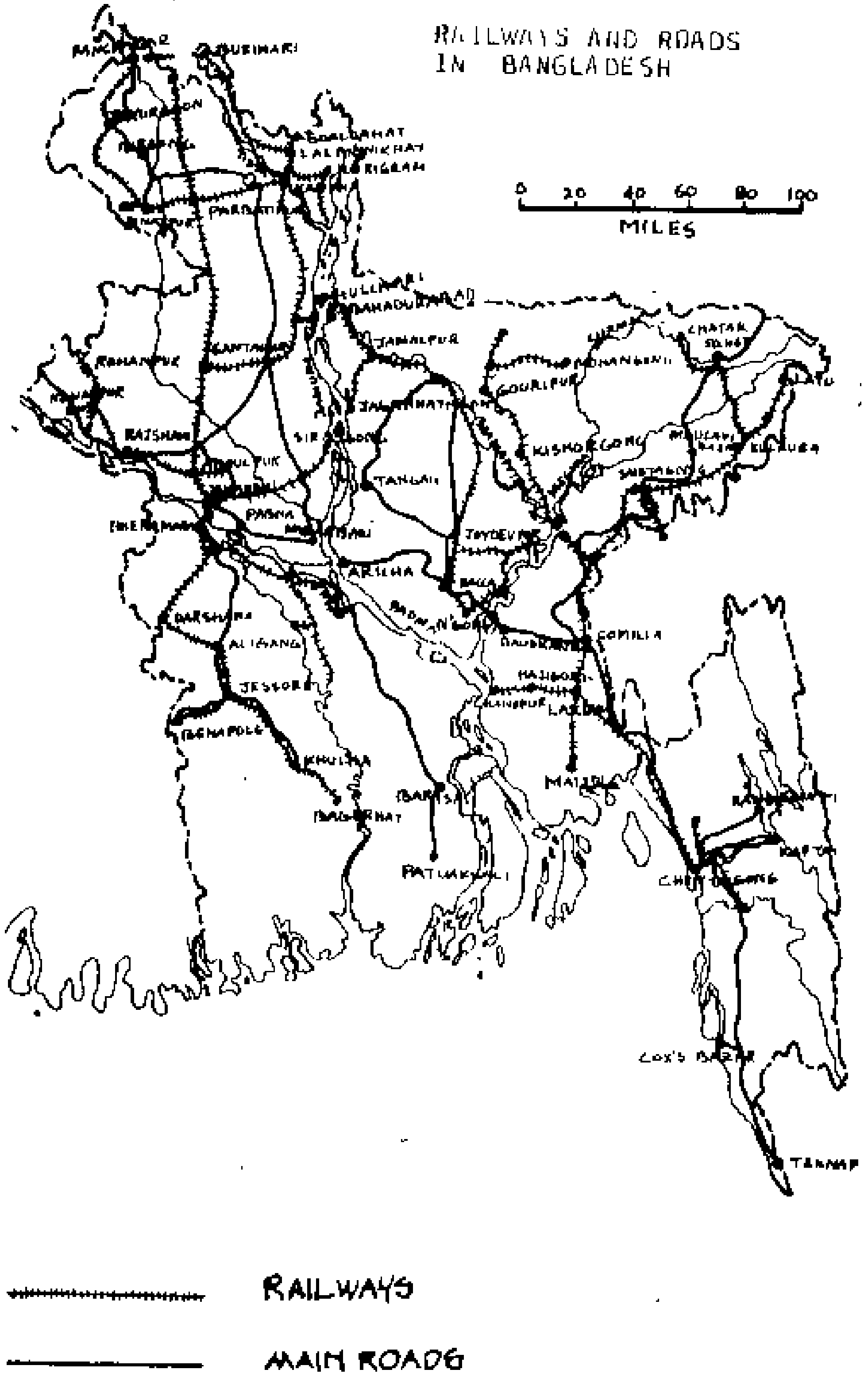
3.1.1 Transportation

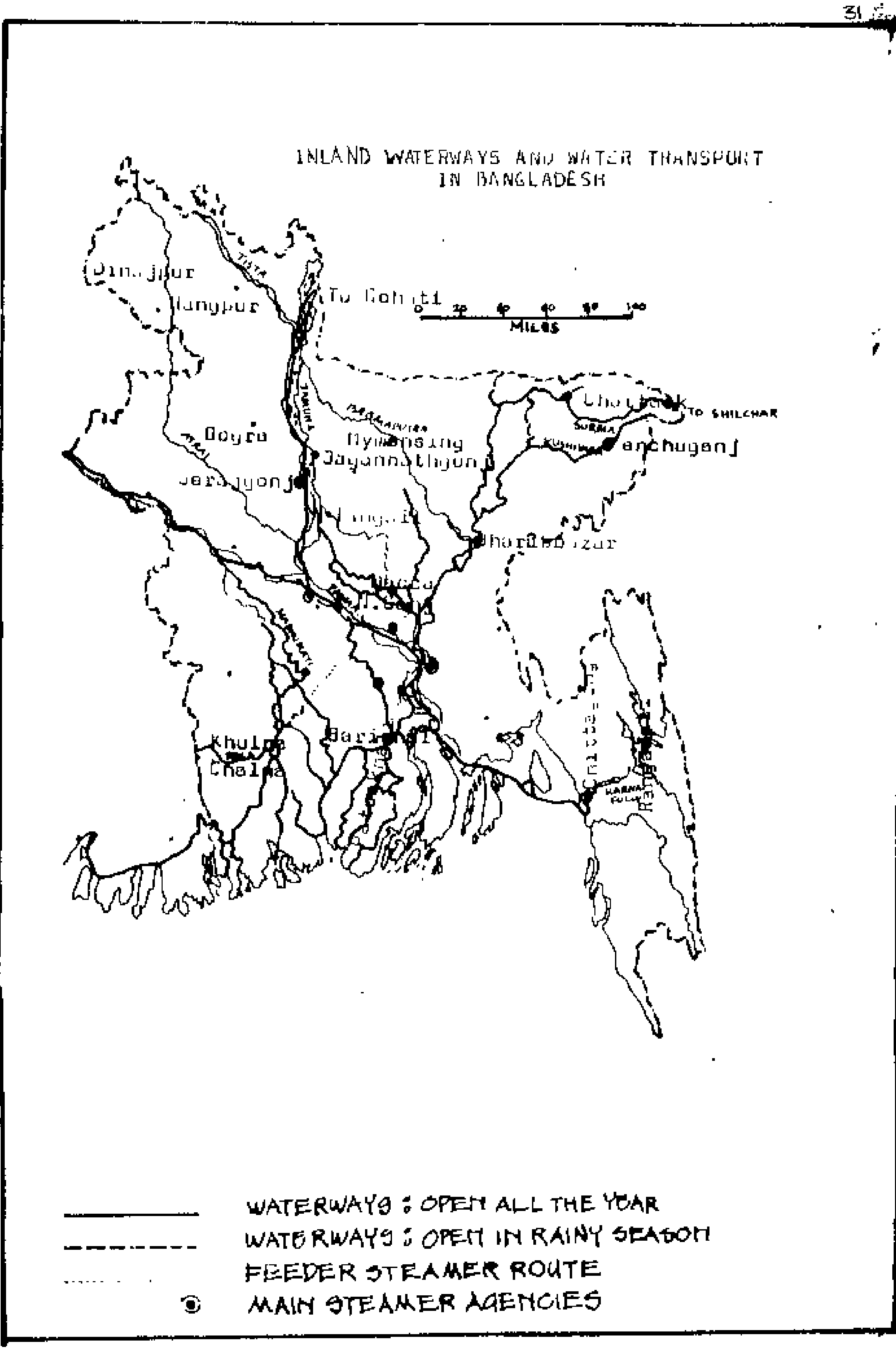
Bangladesh is a riverine country. At this road transport is obstructed by the major rivers, such as Padma, Jamuna,Meghna and other rivers. So connection of the country from one part to another requires a number of ferry, services which involves delay and more cost in the road transport. The Road mileage by type of Road in 1978 is as follows :

Table 3.1 Distribution of Different types of Roads in Bangladesh in the year 1978

High type	Low type	Total
2533	352 miles	2885 miles

Source : Statistical Year Book 1979


RAILWAYS AND ROADS
IN BANGLADESH
0 20 40 60 80 100
MILES
LALMONIRHAT
KURIGRAM
PARBATIPUR
ROHANPUR
RAJSHAHI
JAMALPUR
CHATAK
SYLHET
GOURIPUR
KISHORGONJ
TANGAIL
PABNA
JOYDEVPUR
ARICHA
DARSHANA
JESSORE
BENAPOLE
KHULNA
BAGERHAT
BARISAL
PATUAKHALI
COMILLA
MAIJDI
CHITTAGONG
COX'S BAZAR
RAILWAYS
MAIN ROADS


INLAND WATERWAYS AND WATER TRANSPORT
IN BANGLADESH
TISTA
To Gauhati
0 20 40 60 80 100
MILES
Rangpur
Bogra
JAMUNA
BRAHMAPUTRA
Mymensing
Jagannathganj
TO SHILCHAR
SURMA
KUSHIYARA
Khulna
Chalna
KARNAFULI
WATERWAYS : OPEN ALL THE YEAR
WATERWAYS : OPEN IN RAINY SEASON
FEEDER STEAMER ROUTE
MAIN STEAMER AGENCIES

The rail communication in Bangladesh also face the ferry problems and heavy goods mobilization is hampered. It also involve more cost.

The route mileage of Bangladesh Railway in 1976-77 is given below :

Table 3-2 : Length and Type of Railway in Bangladesh

Broad Gauge	Meter Gauge	Total
599 miles	1187 miles	1786 miles

Source : Statistical year book 1979

The water transport in Bangladesh gives major support in the movement of the industrial goods. The navigable waterways where mechanised fleet can ply in Bangladesh is as follows in 1974-75.

Table 3.3 Length and Typa of Waterways in Bangladesh

Perennial	Seasonal	Total
3246 miles	1648	4894

Source : Statistical year book 1979.

Transportation of raw materials and finished product is a great concern in industrial sector. As the raw material is bukly than the finished product hence transportation cost for raw material is more than that of the finished product.

In considering the textile industries in Bangladesh, the location point should be choose on the ground that least transport of raw material require. Moreover, transport cost vary on the mode of transportation. In water transport lest cost is involved than that of the road transport and railways. The northern zone of Bangladesh has less navigation facilities than other part of the country.

3.1.2. Raw Materials

Many Industrial units in Bangladesh draw major portion of raw materials domestically such as jute, sugar, food and allied, tobacco, paper pulp etc. from domestic sources. But textile, chemical, steel and similar type of industries draw raw material by imports. Hence the factor of availability of raw material as determinents of location depended on the type of industry. The raw material for textile industries is mainly the raw cotton, which is imported from the foreign countries. The district of Kushtia and Jessore have prerequisite soil condition for cultivation of raw cotton, but not any significant amount of cotton is produced there.

3.1.3 Market

The distribution facilities of the finished industrial goods is also a factor influences upon industrial location. The product of those industries which mostly consumed domestically are generally established close to domestic market and/or in a place which is well communicated with the local market. But export oriented industry are generally set up where port facilities are available. In case of textile industries, the finished product has its market all over the Bangladesh. In Bangladesh the textile products are mainly saree, lungi, shirting etc.

3.1.4 Port Facilities

The location of Industries based on imported material has more tendency to establish in the port regions like Chittagong and Khulna. Again the export oriented industries have also general tendency to establish in these region. The raw cotton for textiles industries are imported from foreign countries, but products of textiles mills are consumed domestically. Hence on basis of raw material supply the location of textiles mills are found in Chittagong on the other hand on basis of local market textile mills are located in Dacca and other districts.

3.1.5 Power

Power is the motive forces for the location of industry. The supply of power is Bangladesh primarily are electricity and gas. It is shown in a map the installation of the electricity generating plant with capacities and the production and consumption of natural gas in Bangladesh over the year at different places.

3.1.6 Labour

The supply of unskilled labour at the cheapest price by all count is abundant in all parts of the country. And the mobility of labourers in response to demand is also quite.

3.2 Classification of Industries in Bangladesh

Cottage, small, medium and large-scale industries are found in Bangladesh. The classification of industries like small medium and large are usually based on various criteria like capital invested, number of labour employed and volume of output producting etc.

Present study is concerned with the medium and large scale industries, but to distinguish those from cottage and small type is essential to define all types of industries. In distinguishing small and cottege industries from medium and large scale, we have to face some definitional problems, since no unique set of definition of these type of industry exist.

3.2.1 In Bangladesh there are different definitions of small industries given by three government agencies, for example the BSCIC, the Bureau of Statistica etc.

BSCIC defines small industries as a privately owned manufacturing unit which has hired labour, use hydro and thermal power, diesel oil or gas and whose fixed investment is valued at a maximum of Tk. 2.5 million.

The Bureau of Statistics defined small industries which are covered by the section 5(1) and 2(1) of factories Act of 1934 i.e. registered factories using 10 or more workers and not using power or using power and having between 10 and 20 workers. The department of industry defines small industry as a unit having fixed aspects upto Tk. 1.0 million excluding the cost of land.

3.2.2 Cottage industry may be separated from the small the small industries like (1) any industrial establishment with three or fewer workers or (ii) any establishment with 10 or fewer workers employment at most 2 hired labourers.

Small, Medium & large scale industries defined in 2nd Five Year Plan of Pakistan were as follows :

Small scale industries include those engaged in the production of handicrafts, consumer or producer goods.

(i) emplying manual labour without use of any motive power or (ii) using motive power but employing not more than 20 persons or using fixed assets valued at not more than Rs. 100,000.00.

Medium Scale Industries are those not covered by definition of small scale industries but with fixed assets of a value not exceeding Rs. 1 million.

Large scale industries are those using fixed assets of a value of more than Rs. 1 million.

3.2.3 These definitions classifying the different industries were valied upto the fourth-Five-Year Plan of Pakistan. But now in Bangladesh period the devaluation of money changed the definition industrial category.

In monetary value the classification of industry in Pakistan and now in Bangladesh is compared as follows :

Table 3.4 Comparison of Classification of Industries in Pakistan and Bangladesh

Industry Category	Pakiatan Period	Bangladesh Period
Small Scale	Fixed Asset upto Rs. 1 lakh	Fixed asset upto Tk. 25 laks
Medium scale	Fixed esset between Rs.1 lakh to 10 lac	Fixed asset between Tk. 25 lakh to 1 crore
Large Scale	Fixed Asset above Rs. 10 lakh	Fixed Asset Above Tk. 1 crore

Source : By comparing different Five-Year-Plan of Pakistan and Bangledesh.

The industriee classification in Bangladesh requires an intensive data. The most recent data available is the census of manufacturing Industries in 1972-73 which was published in 1978. Here we find number of industries including cottage, medium and large are 1926 and claesification was based on fixed assets. The valuation of the fixed asset was based on the monetary value of 1972-73 hence present definition of industries (like small, medium and large) do not give proper industrial structure of, we use the census report of 1972-73.

3.2.4 As the survey wes conducted in 1972 then we may differentiate the industrial structure with the definition of Pakistan period which was valid upto 1971. Hence we find that the number of small industries in Bangladesh are 1499 whose monetary value of fixed asset was below Tk. 1 lakh in 1972.

Similarily the number of medium scale industries whose valucs of fixed asset varies from Tk. 1 lac to Tk. 10 lac are 318. Again the number of large scale industries whose values of fixed asset Tk. 10 lakh (in 1972) are 169 in Bangladesh.

But in practice the number of industries in Bangladesh are more than that of stated earlier. The census report did not included a large number of industries as the factory authority did not submit their statistic to the census authority.

Another census of manufacturing Industries was conducted in 1975-76, but its report yet to published but only a summary statistics was published in statistical year Book of Bangladesh where only the number of industries shown with their main sectors. Hêre the number of industries reported in Bangladesh is 2660.

3.3 Special Distribution of Industries in Bangladesh

The measurement of the distribution of industries also face the procedurical disadvantages. There are several ways of the measuring the geographical distribution of industrial activity but none of these are entirely satisfactory. Measurement baeed on the number of the industrial unit may arise the question of small medium and large. Again in counting the unit of industries there arises several difficulties, because of the diversification of industries.

Again there are another approach to measure the distribution in industries on the basis of industrial workers in different areas or towns or districts. This approach is simpler and data may be obtained from the census report.

Different approaches are made to measures the distribution of industries in Bangladesh in the following :

3.3.1 Map

A map showing the different industrial sectors is sketched. The map shows not the exact quantitative measure of the industries, but symbolic locational diversition of industries in the different part of the country.

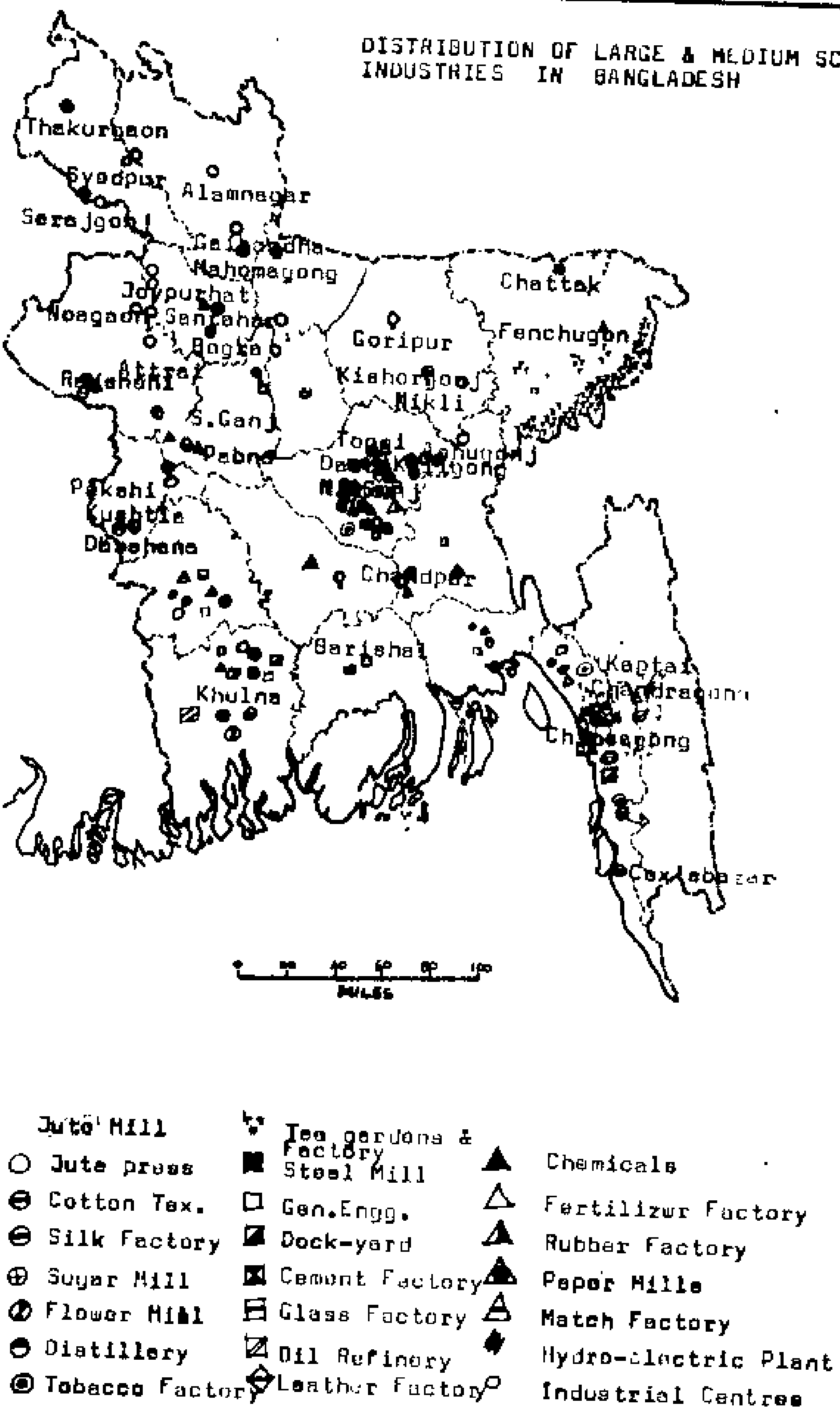
In the first glimpse of the map it shows that the concentration of industrial unit in the main three centre, Dacca, Chittegong and Khulna is significantly high, and many scattered industrial units springing up in the rest of the country.

From the map the following characteristics of the spatial distribution of industries can be formulated :

i. Significant desparties between and among different regions in respect of concentration of industry is evident.

ii. Industrial establishments are over-concentrated in Dacca, Chittagong and Khulna and the rest of the Country enjoys little or no significant industrial investment.

DISTRIBUTION OF LARGE & MEDIUM SCALE INDUSTRIES IN BANGLADESH



iii. There are industrial units in each districts, may be more or less, known as district industrial estate, located mostly at the outskirt of each district headquarter towns. But again aame and except in the four or five big district headquarter towns, industrial development in other estates is very limited.

iv. There is, of late, a mark is observed, trend towarda the dispersal of industrial units all over the country.

3.3.2 Production Worker Method

The method is to measure the industrial distribution by the number of industrial workers requires the data of workers of different areas. For the present study each districts is assumed to be the unit of areas. Districts are well-estahliahed administrative unit in Bangladesh. There are 20 diatricts in Bangladesh.

The method is a mathematical one. The calculation of the degree of the concentration of industries in each district in based on the portion of the industrial workers to its participation in the total civilian labour force. The ratio here called the concentration ratio. The ratie is calculated out by percentage ahare of a district in the total production worker by the percentage share of the district in the total industrial population.[1]

$$\text{Hence Concentration Ratio} = \frac{\text{\% of district in the total industiral population}}{\text{\% of district in the total civilian labour force}}$$

$$= \frac{\dfrac{\text{District Industrial Population}}{\text{Total Industrial Population}} \times 100}{\text{In the country}}$$

$$\frac{\text{Diatance Civilian labour force}}{\text{Total civilian labour force}} \times 100$$

1. Reference of the method : An Analysis of Industrial Location in Pakistan by Sartaz Aziz, Karachi, Pakistan.

TABLE 3.5

CONCENTRATION OF INDUSTRIES BY DISTRICT USING CENSUS DATA OF 1974

1. o.	Name of Districts (Col.1)	Total Population (Col.2)	Total civilian labour foce (C.L.F.) Col.3	Industrial and production worker (Co.4)	Percentage of dist. C.L.F.to Total C.L.F. (Col.5)	Percentage of dist. prod. workers to total prod. workers (Col.6)	Concentration Ratio: Col.6 / Col.5 (Col.7)
.	Chittagong	4,315,460	1,244,116	298,161	6.21	13.26	2.13
.	C.H.T.	508,199	221,123	16,791	1.10	0.74	0.67
.	Comilla	5,819,176	1,600,762	150,665	7.99	6.70	0.83
.	Noakhali	3,234,061	801,931	80,635	4.00	3.58	0.89
.	Sylhet	4,759,281	1,428,797	85,039	7.13	3.78	0.53
.	Dacca	7,611,807	2,237,790	633,410	11.18	28.18	2.52
.	Faridpur	4,059,511	1,106,925	68,389	5.53	3.04	0.55
.	Mymensingh	7,566,625	2,209,352	90,340	10.03	4.02	0.36
.	Tangail	2,077,924	546,497	50,067	2.73	2.22	0.81
0.	Bakergong	3,928,414	1,039,076	120,168	5.43	5.34	0.91
1.	Jessore	3,326,778	851,021	60,450	4.95	3.69	0.91
2.	Khulna	3,557,460	978,790	170,879	4.89	7.60	1.55
3.	Kushtia	1,883,635	497,998	55,902	2.38	2.48	0.95
4.	Patuakhali	1,498,987	407,281	28,264	2.03	1.26	0.62
5.	Bogra	2,231,003	609,277	27,353	3.04	1.21	0.40
6.	Dinajpur	2,570,572	776,214	42,121	3.87	1.87	0.48
7.	Pabna	2,814,645	757,350	124,793	4.45	5.55	0.99
8.	Rajshahi	4,268,417	1,155,369	73,223	5.33	3.26	0.56
9.	Rangpur	5,446,916	1,548,405	70,523	7.73	3.14	0.14
otal:-		71,479,071	20,017,862	2,247,173			

ote: Col.5 - Percentage of district civilian labour Force (C.L.F.) to total C.L.F.

Col.6 - Percentage of district production workers to total production workers.

Col.7 - Concentration Ration = $\frac{\text{Col.6}}{\text{Col.5}}$

By the above methods industrial concentration is measured using the data of the census of 1974. Here most three concentrated area are found Dacca, Chittagong and Khulna.

Table 3.6 Concentration Ratio of Three Development Industrial Area

District	Concentration Ratio
Dacca	2.52
Chittagong	2.13
Khulna	1.55

Here it is found that all other districts have concentration ratio below 1. Thus it exibits that all of the districts are for behind than the industrial development of Dacca, Chittagong and Khulna.

The above concentration ratio may be changed to some extent in a definite form, if the current data is used, because the census of 1974 does not reveal the present situation of industrial development. From 1974 to 1980 a reasonable amount of development in industrial sector has been occured in the less daveloped region.

Hence with few reservations, we can find a mathematical relationship among the districts in respedt to the industrial distribution in the whole country be concentration ratio. And a tend towards dispersion of industrial location is also marked.

3.3.3 By Industrial Unit, Fixed Cost and Production Methods:

The industrial distribution may be determine from the number of industries, fixed cost of the industrial units and their production volume. But none of the above three factors individually represents the industrial concentration in any region. Such as if we take the number of industry only then the question arise how asset of each industry involved and also the volume of the production of the industrial unit.

By using the data of the Census of Manufacturing Industries of 1972-73, we find that Dacca, Chittagong and Khulna leads as the major industrial regions.

Though the number of induatrial units in Pabna is more than that of Khulna, but in respect to the assets and volume of production the Khulna leads than Pabna. The causes of the leading of Pabna in the number of industrial unit is for the small and cottage industries. For the under view the Table 3.7 may be consulted.

Taking away three districts from rest of the country and calculating the percentages of production, it is found that Dacca, Chittagong and Khulna leads in the volume of productions in Bangladesh.

Table 3.7

Number of Industries with fixed asset in four leading Industrial centres of Bangladesh

Districts	No.of establishment	Fixed Assets (value in 000 Taka)	Value of products in (000 Taka)
Dacca	1104	6,55,506	15,05,590
Chittagong	287	1,90,197	6,34,524
Khulna	36	3,38,105	3,91,007
Sylhet	72	2,77,942	1,04,789

Source : Census of Manufacturing Industries in Bangladesh (1972-73)

Sylhet is basically the tea producing area, hence large number of the industrial units are tea estates.

3.3.4 As the three approaches made above and from the census of Manufacturing Industries (1972-73) and Population Census (1974) we may conclude in the spatial distribution of Industries as follows :

(a) The concentration of industries is the highest in Dacca region. The important industrial estatea in this region are: Tejgaon, Narayangonj, Tongi, Demra, Joydevpur, Narsingdhi and,Ghorashal.

(b) Chittagong is closely followed by Dacca. The industrial centre in Chittagong are Kalurghat, Halishar Industrial Area, Hathazari Industrial Area, Kumira, Sitakund-Barbakund, Nasirabad.

(c) The third concentrated industrial centre are Khulna. The industrial estatea in Khulna are localed at Khalispur, Boyra and Daulatpur.

(d) The rest of the diatricts of the country is laging far behind from the development point of view in general and industrial development in particular. Sylhet leads due to the tea industry only.

CHAPTER – 4

LOCATION OF TEXTILE INDUSTRIES IN BANGLADESH

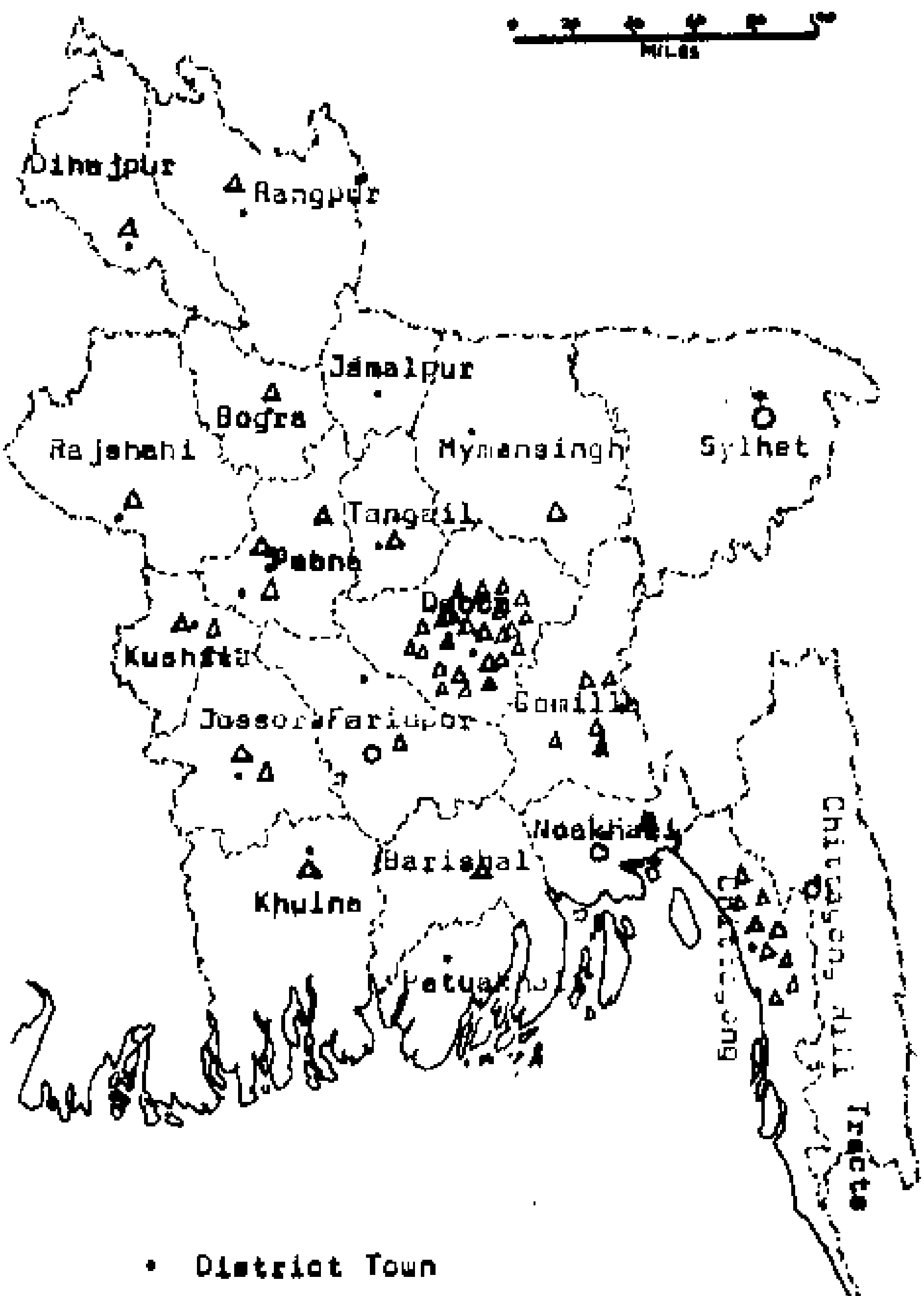
4.1. Growth of Lerge Scale Textile Industries in Bangladesh (Spinning and Composite)

The first Cotton Textile mill in this country was set up in the year 1908 at Narayanganj. The successive increase in establishing new mills started after 1930. Upto 1947 the number of total mills established in this country, was only 9. During the early Pakistan period, the growth of the establishment of mills was alao very slow. However, after 1960, the situation improved a bit. And upto 1971 (before the independence of Bangladesh), the total number raised to 44. In Bangladesh period the development in industries begins under the public sector. By 1980 the number of totel textile mills in Bangladesh becomes 57 in running condition which are under the administration of BTMC. There are also 4 textile mills under construction.

4.2 Locational Analysis of Mills set up in British Period

In British period 9 textile mills were set up, of which all were composite type, where both the spinning and weaving section comprised the complete functions of mills. Out of total 9 mills in British period 6 were in Dacca and other 3 were in Chittagong, Khulna and Kushtia. Hence from the beginning the growth the textile mills was concentrated in Dacca.

DISTRIBUTION OF COTTON TEXTILE MILLS
IN BANGLADESH



• District Town

Δ Running Cotton Textile Mills

O Cotton Textile Mills under-construction

TABLE 4.1

Number of Textile Mills Set Up in Districtwise in Bangladesh in the period 1908-1947

Location	No.of Mills
Dacca	6
Chittagong	1
Khulna	1
Kushtia	1
Total	9

TABLE 4.2

Location Aspects of Textile Mills Set up in 1908-1947

Name of Mills	Location	Commis-sioned	Nature	Owner at time natu-ralisation/ Commissioned
1. Adarsha Cotton	Dacca (N.Ganj)	1944	Compo-site	Enemy property*
2. Chittagong	Dacca (N.Ganj)	1936	"	"
3. Dacca Cotton	Dacca	1940	"	"
4. Dhakeswari-I.	Dacca	1933	"	"
5. Dhakeswari-II	Dacca	1935	"	"
6. Luxminarayan	Dacca	1932	"	"
7. Khulna Textile	Khulna (Sadar)	1932/55	"	Bangalee
8. National Cotton	Chittagong (Halis)	1939/47	"	"
9. Mohini Mills	Kushtia (Sadar)	1908/ 1929	"	Enemy property

*Enemy property means the property of non-muslim declared enemy property who left for India in 1965 and they were Bangalee.

The causes of the concentration in Dacca, particularly in Narayanganj are for the following conditions:

(i) The tradition of handloom industry in Narayanganj, surrounding which the mills have been established.

(ii) The facility of river transport which connect Narayanganj with rest of the country very well.

In the British period the river transport was the chief means of communication. Hence the finished goods were readily and cheaply transported from Narayanganj to the different markets of the country for consumption. In British period Narayanganj was the chief river port in East Bengal.

(iii) The decision of the owners of the mills was a influencing factors in locating the industries in Narayangonj. Because the cotton trade were directly under control of Hindu business men and the mill owners in Narayangonj were also Hindus. They were also directly related with the handloom industries in Narayanganj. So, ethinicity coupled with economic opportunity worked as one of the factors responsible for the location of industry, in this particular case, cotton textile industry in Dacca and Narayangonj regions.

The location of other three mills in other three districts reveals that :

(i) Their set up were chiefly influenced by the decision of the owners who were local enterpreneur of the respective areas.

(ii) In addition to local enterpreneurship, Chittagong and Khulna have enjoyed good port facilities. Imported raw cotton come through these port and distribution of finished product was relatively easier.

(iii) Infrastructural facilities like road, power etc. facilities were also significant.

(iv) During the British rule, Calcutta became the hub of Industrial development for this part of the sub-continent. And for obvious reason, the region falling with the influence of Calcutta Industrial belt, took some sporadic venture to establish industrial complex. The Mohini Textiles Mill of Kushtia is an example of this point.

Here we find that in British period no location policy was in practice to influence the location of the industries. The growth of textile industries was mainly on the owners choice. Hence the growth of textile industries did not follow regional priorities.

4.3 Location Analysis of Mills set up in Pakistan period

In Pakistan period the total set up of the textile industries was 33. These mills were established in different phase. The locational analysis of mills in Pakistan period are made in three phase such as (a) 1947-60 period (b) 1960-65 and (c) 1965-71. The phases are based on the different industrial policies followed in and different rate of growth of mills. Tha phase-wise location analysis will give us a more clear picture as to how the industrial policy has influenced the location of industries.

4.3.1 Analysis of Mills set up in 1947-60

In the first half of Pakistan period no specific policies in the disparsal of industries were in practice. The development textile industries shows that among 10 industries set up in 1947-60, 6 have been set up in Dacca,3 in Chittagong and 1 in Bogra.

TABLE 4.3

Number of Textile Mills Setup in Districtwise in Bangladesh in the period 1947-60

Location	No.of Mills
Dacca	6
Chittagong	3
Bogra	1
Total	10

The causes of the concentration of industries in Dacca are the following :

i. As Dacca was the capital of then East Pakistan, the tendency of location of industry in the heart of the seat of administration was of considerably important factor.

ii. Moreover the initial development of Cotton Textile Industry in British India was mainly in and around Dacca, hence new set up of industries was attracted by the previous establishment, simply through the rules localisation benefits.

iii. Communication, mainly river transport was also favourably well. The road communication was improving with the rest of the country. Railway line connected Dacca with most of the districts in former East Pakistan.

iv. Here we find that though 6 industries were set up in Dacca, they were distributed in different areas of Dacca districts, such as 2 in Tongi and 1 in Damra, 1 in Kadamtali, 1 in Kaligonj & other 1 in Narayanganj. It may be compare with the set up of British period all 6 in Dacca were at Narayanganj. Hence intra-regional dispersion is observed. In Chittagong

TABLE 4.4

Location Aspects of Textile Mills Set up in 1947-60

Name	Location	Commis-sioned	Nature	Owner at line of Nationalised /commissioned
1. Ahmed Bawany	Dacca (Demra)	1957	Composite	Non-Bengali
2. Asiatic Cotton	Chittagong	1959	"	Bengali
3. Bogra Cotton	Bogra (College Rd.)	1954/56	"	Bengali
4. Bangladesh Textile	Dacca (N.Ganj)	1959	"	Non-Bengalee
5. Chand Textile	Dacca (Kadamtali South)	1958	"	Bengalee
6. Chittagong Textile	Chittagong (Katwali)	1954/55	"	Bengalee
7. Muslim Cotton	Dacca (Kaligonj)	1954	"	Bengalee
8. Olympia Textile	Dacca (Tongi)	1954	"	Non-Bengalee
9. Pahartali Textile	Chittagong (Pahartali)	1954/63	"	Bangalee
10. Zerath Textile	Dacca (Tongi)	1954/56	"	Non-Bengalee

Total : 10

3 mills were established during 1947-1960, factors mostly responsible for their locations may be pointed out as follows:

(i) Chittagong was growing as the second centre of the textile industries in then East Pakistan from the initial stage, which is mainly due to the port facilities.

(ii) In the first decade regime of Pakistan, Chittagong was the mainly sea-port in then East Pakistan and the port facilities were developing in favour of industrilization which in effect, attracted new establishments.

(iii) Moreover, more infrastructural facilities such as power installation, road and railway transportation were developing in Chittagong at that period.

(iv) Chittagong was one of the big commercial centre, too in the East Pakistan and hence the industrial establishment followed a favourable spot for flourishing.

The other mill was located in Bogra was due mainly for the :

(i) Decision of the owner of the mill to locate industry there.

(ii) The communication of Bogra with Eastern part of the province (also the seat of the provincial capital city, Dacca) was not good. It had both advantages and disadvantages for the establishment of a cotton textile industries in this region. Disadvantages were to procure raw cotton from a distant market, and advantages was to enjoy a relatively protected local market for ordinary quality products of cotton textiles.

In analysing the growth of textile industries in Pakistan period (1947-60), we find that the dispersal of industry was ignorable. The new set up was mainly in Dacca and Chittagong.

4.3.2 Location Analysis of Mill set up in 2nd Plan Period (1960-65)

The remarkable period of development of textile industry in East Pakistan was 1960-65 which was also the second Five-Year Plan Period. During guidance the First Five-Year Plan and Second Five Year Plan, and naturally it was expected that the location pointa would, at least to some extend, be guided by plans.

The setting up of 22 industries in this period shows that out of 22, 10 mills were in Dacca, 4 in Chittagong 3 in Comilla, 2 in Pabna and one in each of the following districts, namaly Jessore, Noakhali and Tangail.

But again, if we sum-up, we find Dacca got maximum share of total location points. The higher rate of concentration of industries in Dacca again follows due to the fact that :

(i) Favourable infrastructural facilities in Dacca such as power supply, road transport and livable environment. Administrations and policy makers felt comfortable to develop new establishment here. Moreover the old establishment also attracted new for existing facilities and also on the ground of economy of scale.

TABLE 4.5
Number of Textiles Mills set up in Districtwise in Bangladesh in the period 1960-65

Location	No.of Mills
Dacca	10
Chittagong	4
Comilla	3
Pabna	2
Jessore	1
Noakhali	1
Tangail	1
Total	22

(ii) In Dacca we find more dispersal of industries within the District. 6 among nine have been setup in Tongi which shows that in this perind.

Table 4.6

Location Aspects of Textile Mills Setup in 1960-65

Name	Location	Commissioned	Nature	Owner at the time of Nationalisationed/ Commissioned
1. Alhaj Textile	Pabna (Ishurdhi)	1963	Composite	Bangalee
2. Amin Textile	Chittagong (Halishahar)	1961	Spinning	Non-Bangalee
3. Ashraf Text.	Dacca (Tongi)	1963	Spinning	Bangalee
4. Bengal Text.	Jessore (Noapara)	1962	Spinning	Non Bangale
5. Dost Textile	Noakhali (Feni) Kazirbag	1964	Spinning	Non-Bengali
6. Fine Cotton	Dacca (Tongi)	1961	Spinning	Non-Bengali
7. Gawasia Cotton	Dacca,(N.Gonj)	1962	Compsite	Bengalee
8. Halima Text.	Comilla	1962	"	"
9. Ibrahim Cott.	Chittagong (Hathazari Road)	1963	"	"
10. Jalil Textile	Chittagong (Fauzdar hat)	1963	"	"
11. Jaba Textile	Dacca (Narasingdi)	1965	Spinning	"
12. Kokil Textile	Comilla (B.Baria)	1965	"	Non-Bengali
13. Monoo Textile	Dacca (Tongi)	1961	"	"
14. Meghna Textile	Dacca (Tongi)	1963	Composite	"
15. Mainamati Text.	Comilla	1965	Spinning	Bengalee
16. Orient Text.	Dacca (Mirerbag)	1964	"	"
17. Quderia Text.	Dacca (Tongi)	1963	"	Non-Bengalee
18. R.R. Textile	Chittagong (Sitakund)	1965	"	"
19. Satrang Text.	Dacca (Tongi)	1965	"	"
20. Sharmin Text.	Dacca (N.Ganj)	1963	Composite	"
21. Seraygong Text.	Pabna (Serajgonj)	1965	Spinning	Bengalee
22. Tengail Text.	Tangail (Gorai)	1963	"	Non-Bengalee

Tongi became a large industrial centre in former East Pakistan and still it holds it primacy.

Moreover 2 mills in Narayanganj reveal that the old mills attracted to set up there two new mills. Narasingdhi was one of the famous centre of handloom induatry, around which the new one large scale Textile Industries was established.

The aecond centre of concentration of textile industries in Chittagong was added by 4 more new mills. These four mills were set up in Halisher, Hathazari Industrial Area, Fouzderhat and Sitakund in four separate industrial area, which developed in early sixties as organised industrial areas. It reveala that the intra-regional dispersal of industries within the different parta of Chittagong diatricts have started in the early sixties.

The set-up of 3 new industries in Comilla is note worthy, because in this period introduction of textile industries in this district occured first. The three industries were set up mainly near the highway where transport facilities were readily available.

Two mills were set up in Pabna during this pariod : one at Ishurdi and other at Serajgonj. The main criteria for setting up of textile industries at Isurdhi and Serajgonj was easy marketing facilities in the different districta of Rajshahi Division.

It may also be mentioned here that Pabna has a long tradition of hosiery industry which has for all practical purpose a close relation to the textile industry. Moreover, the competition in hosiery industry became keen and enterpreneers were looking for a new area. The textile was a suitable option. Setting up of 1 mills in Jessore is mainly for the developed infrastructural facilities, mainly road communication with different districts of North Bangladesh. Demand for textiles goods for local consumption also influenced the location of new set up. Moreover, in the early sixties new industrial set up wera growing in the Jessore district.

Setting up of one mills in each district of Noakhali and Tangail shows the intension of dispersing of textile industries in more two districts. The textile mills in Tangail mainly enjoys the road transport and the other factor that attract the location of industries. The mill in the Feni was set up by the side of Dacca-Chittagong highways providing chief transport facilities.

The establishment of 22 industries in the period of 1960-65 shows that the industrial policies in this period could not control the concentration of industries in Dacca and Chittagong. But it is noticable that though the rate of concentration was high in two cities there was some degree of dispersal of textile industries in the districts of Comilla, Pabna, Noakhali, Jessore, and Tangail. It is found that out of total industrial set ups in this period 45 per cent in Dacca, 18 percent in Chittagong and rest 14 per cent in Comilla and rest 23 per cent in five districts.

4.3.3 Location Analysis of Mills set up in 1965-71 (3rd Plan)

In this 6 years only 3 mills have been set up which indicates low rate of growth of textile industries in compare to the previous period of 1960-65 period in which 22 mills were set up in 5 years.

In the third phase 3 textiles mills were set up : 1 in Dacca, (Fatullah) which enjoys both the road and river transport. Again the oause of setting up of the mill was the availability of developed infrastructural facilities.

TABLE 4.7

Number of Textile Mills set up in Districtwise in Bangladesh in the period 1965-71

Location	No.nf Mills
Dacca	1
Comilla	1
Pabna	1
Total	3

TABLE 4.8

Location Aspects of Textile Mills Set up in 1965-71

Name	Location	Year Commis-sioned	Nature	Owner at line of Nationalised/ Commissioned
1. Chiesty	Comilla (Daulatpur)	1966	Spinning	Non-Bengali
2. Nowla Textile	Dacca (Fatulla)	1969	"	Bengalee
3. Calico Textile	Pabna	1968	"	Bengalee

4.4 Locational analysis of Mills set up in Bangladesh period (1972-80)

In Bangladesh during the period under study (1972-80) 11 textile mills have been set up. All the textile mills were commissioned in Bangladesh under the public sector. Hence the location of industries in different areas was primarily controlled by the decision of Government.

TABLE 4.9

Number of Textile Mills set up in Districtwise in Bangladesh in the period 1972-80

Location	No. of Mills
Dacca	3
Chittagong	1
Serajgonj	1
Rangpur	1
Dinajpur	1
Kushtia	1
Mymensingh	1
Rajshahi	1
Comilla	1
Total:	11

There have been three set up in Dacca District which also increased the concentration of the textile industries in Dacca. The decision of the set up of 2 industries was taken during Pakistan period. It is remarkable that 2 industries have been set up in new industrial belt of Savar which enjoys the highway facilities of Dacca- Aricha Road.

1 textile mills set up in Barisal was the decision of Government of Bangladesh in the light of balanced regional development.

The textile mills in Rajshahi and in Dinajpur were set up mainly in order to balance the regional development and also to meet the local demand for cloth.

The decision of setting up of one textile mill in Chittagong was taken earlier in Pakistan period, by the private sector. This is situated along the Dacca-Chittagong highway and also enjoys all the infrastructural facilities.

The decision of setting up of the Kishorgonj textile mill was taken in Pakistan period but Commissiooed after Independence. Thie decision was influenced by the owner's desire. This textile mills enjoys the road communication facilities with Mymensingh. Local market of textiles good have also influenced its establishment.

Also the decision setting up of the Kushtia textile mill was taken in Pakistan period which remarkably shows the indication dispersal of industries. This decision was mainly guided by the owners decision accompanied by the influencing of local market and road transport facilities.

The textiles mills set up in Bangladesh period shows relatively wider dispersion, though there are three new set ups in Dacca.

TABLE 4.10

Location Aspects of Textile Mills set up in 1972-80

Name	Location	Commis-sioned	Nature	Owner
1. Afsar Cotton Mill	Dacca (Savar)	1975	Spinning	BTMC
2. Barisal Textile	Barisal (Kawania)	1978	"	"
3. Darwani Textile	Rangpur (Nilphamari)	1980	"	"
4. Dinajpur Textile	Dinajpur (Sadarpur)	1979-80)	"	"
5. Eagle Star Taxtile	Chittagong (Khattali)	1972	"	"
6. Habibur Rahman	Comilla	1977	Composite	"
7. Kushtia Textile	Kushtia (Sadar)	1973	Spinning	"
8. Kohinoor Spinning Mill	Dacca (Savar)	1978	"	"
9. Kishoregonj Text.	Mymensing (Kishoregonj)	1978	"	"
10. Quaseem Cotton Mills	Dacca. (Nilnagar)	1978	"	"
11. Rajshahi Textile	Rajshahi (Sapura, Sadar)	1979	"	"

Total : 11

In the First Five-Year Plan (1973-78) investment ceiling imposed on the private investment for cotton textile and o industries. Moreover all the textile mill are taken under public sector. Hence the total flow of private investment which was continuing in Pakistan period hampered in Bangladesh period. After 1975 the private investment was encouraged, but all the cotton textile industries were under the public sector, namely, BTMC. Hence the location of textile industries in Bangladesh has represents the decision of the government. The distributional aspects of new location of 11 mills set up in 8 districts which shows a remarkable progress in the dispersion of industries.

4.5 Location Analysis of Mills under Construction

The mills under construction show the following locational aspects. We find that 4 mills are under construction are located in Chittagong, Chittagong Hill Tracts, Noakhali and Sylhet, one in each districts.

The new 4 mills which are going to be construction also indicate that these industries are widely dispersed in the diatricts like Chittagong Hill Tracts and Sylhet.

TABLE 4.11

Location Aspects of Textile Mills under Construction under BTMC

Name	Location	Nature	Net owner
1. Madaripur Textile	Faridpur (Madaripur)	-	BTMC
2. Noakhali Textile	Noakhali (Rakalia Raipur)	-	"
3. Rangamati Textile	Chittagong (Ghogra)	-	"
4. Sylhet Textile	Sylhet (Sadar)	-	"

The decision of setting up of there textile industries were taken by the government, and it reveals a reasonable degree of dispersal of textile industries.

CHAPTER - 5

EFFECTIVE OF LOCATION POLICIES AND CRITERIA FOR SET UP OF TEXTILE INDUSTRIES

5.1 Industrial Location Theories

The location of economic activities is a great concern to plannars and social scientist from the seventienth century but it took shape as location literature from the eighteenth century. Among those who made the theoretical approach in the 18th century of the location activities are Ricardo, Von Thunen and J.S. Mill. Von Thunen, basically an agricultarist, in 1926 put forward the theory that concentric zones of different uses of land to form about an urban centre.

Thereafter, the studies of location seem to be absent in the nineteath century. In 1902 Launhardt applied geomatric principles to the study of location of certain industries and which was basically developed by Halford Mackinder. Later came Welbers who in 1909 gave a more concreta shape to the location theory. The work of these men was dominated by the consideration of 'firm', the key unit of modern industrial unit.

Weher principle for location is known as the least cost approach. Firstly for the location of industries he states that transport cost will be the determining factor for the location point will be there. The Webarian model disregarded the institutional factor, such as government policy.

But Weberian model is criticised for its one sideness, and Edgar M. Hoover in 1948 modified theWeherian model and tried to eliminate its inherent weakness. Hoover has tried to divide the cost into transport and production, in selecting the location, Hoover gave more emphasis on the institutiohal factor such as local taxes, government policies etc. which have a considerable effect on the location decision. Later in 1933, Walter Christaller came with classical expression central place theory. Christaller demonstrate how, under specified conditions a nested hierarchy of central places would result, distributed in a haxagonal pattern of service areas.Christaller theory has accounted all economic activities but separate location analysis for industry has been omitted. This theory is basically market oriented and ignored the factors of production.

Later Ulman and Harris (1945) by a seminal study of the pattern of landuse distributed within cities, developing the concentric ring and sector hypothesis into their multiple nucler theory. Hoover (1948) also contributed (which discussed earlier) to the development of concept of the location of firm including location change, competition for locations and the influence of public policiea on location choice.

In 1954, Losch came with a new concept of location theory which is known as market area analysis. He analyzed that buyer are scattered in different areas and hence the demand for the finished product varies from place to place. Hence firm will seek their location where greatest demand will exist. In a sense this concept override the least-cost location approach of the Weber. But in this theory Losch has neglected the spatial cost variations, input of the industries etc.

Briton Harris, in 1960, made an study on the variation of the market demand. The main problem seen by Harris arisea essentially out of complexity of system of metropolitan interaction, which behavior decide the location factor.

Recently Isard and Greenhut, made location theory on the basis of the profit maximization concept. Overriding the least cost and market area they have developed that where profit will be moximum, the location point will be there. Hence it is applicable to where free competition of economy exist.

Jhon Glasson (1974) categorised that actusl locatioo decision varies from firm to firm. According to him the decision of industrial location, in practice depend on the following major factors :

1. Labour - quality and quantity
2. Transport and communication
3. Site and premises
4. Environmental factors in the wider aenae

But John Glasson did not consider some other important factors which also have significant effect on location decision, such as,

1. Services
2. Energy
3. Taxes
4. Chance

The development of location theory is still in progress. Among the classical inter-preter of location theories are Weber (1929), Hoover (1948), Losch (1954), Greenhut (1956), The classical theories mainly given importance on transport cost.

Apart from the classical theoreticians, critic have questioned whether enterpreneurs attempt to minimise the transport cost and showed that transport cost rarely occupy an important position in the cost structure of the modern industrial companies. Other critices have argued that economic approaches normally ignored the nature of industrial organisation and thereby failed to understand framework within which the location decision are made. Hence recently Tornquist (1962), Wood (1969), Taylor (1969), Pred (1969) all the locational analyst tried to give a more adequate approach to determining the factors of the industrial location which is known as the neo-classical location theory.

The most important of this new approach have been based on the argument that personal contacts and informations linkages are the major importance in understanding location dacisions. These linkage, it is argued, are growing in importance and are exerting an increasing influence upon the location of companies.

5.2. Relevance of Location Theories to Cotton Textile Industries in Bangladesh :

Now the question arises, how far these concept of classical and non-classical theories are applicable to the under-developed countries like Bangladesh. Because of all theories have been developed from the experience of the industrially developed western countries. During the development of these theories, the less-developed countries have been neglected, but their application might have a considerable effect.

Let us try to apply these theories in caee of Bangladesh, particularly for textile industries which location pattern have been analyzed in this study. The main factors for location of textile industry in Bangladesh is the transportation of raw material to mill and transportation of finished goods to the market. This transportation is mainly considered in the classical theories, particularly Weberian model of least cost approach. The cotton textile in Bangladesh has mainly two product one is yarn and other is finished cloth. The yarn is produced by the 31 spinning mills in Bangladesh, also the 26 composite mill each have the spinning section for yarn production. The cloth is produced by the weaving section of the 26 composite mills.

For spinning mills the raw material is the cotton which is mainly imported from foreign countries. Hence its require the transportation of raw material from Chittagong Port and Chalna port to the mill premiaes. Hence lowest transport coat will be required for the spinning mills if they are situated in Chittagong and Khulna. But we find that, out of 31 spinning mills 3 is in Chittagong and 1 is in Khulna. But all other mills are situated in other districts among which 12 in Dacca, 4 in Comilla, 2 in Jessore, it is to note here that these districts have no sea port facilities. Hence the qnestion arises, why 12 mills are in Dacca and 4 mills in Comilla. It is mainly for the market of the yarn in the handloom induatries in Dacca and Comilla. The least distribution cost of yarn to the handloom weavers has mainly influenced for the location of apinning textila mills in Dacca and Comilla mainly, hence the theory of market area analysis has more close relevance in set-up of the spinning mills in Bangladesh.

By a more close examination of the market of the yarn, we find that the cotton textile mills annually produced about 80,800,000 lbs of surplus yarn which has to be sold out to handloom industries. But the yarn consumed annually by

Handloom is about 249,000,000 lbs. The textile mills produced only the one third of the total yarn required by the handloom industries. Hence textile spinning mills have close relation with the handloom industries, Hence for establishing new spinning mills the area of handloom industries should get priority.

For yarn Dacca is the largest market about 28% of handlooms in Bangladesh are in Dacca (Appendix-XV). These handloom industry in Dacca consumes about 125,000,000 lbs of yarn which is 50% of the required yarn by the handloom industries in Bangladesh (Appendix-XIX). The next largest market for yarn is Comilla and Pabna, where in Comilla required for handloom 348,00,000 lbs of yarn and the approximately the same amount of yarn in the Pabna district. Comilla and Pabna has 19.69% and 13.70% respectively for handlooms of the total Bangladesh (Appendix XIX). For this reason of the traditional handloom industries the most of the spinning mills are in Dacca and Comilla.

But we find that Chittagong has 3 spinning mills which together with 6 composite mills produce about 160,00,000 lbs of yarn, but yarn consumed by handloom in Chittagong district is only 240,0000 lbs. Hence the rest surplus yarn have to be transported to Hill tracts, Dacca, Comilla and Pabna or other districts.

The textile mill in Dacca produce about 384,00,000 lbs of yarn, but the requirement for handlooms is about 125,000,000 lbs. Hence of the total requirement of the yarn for Handlooms in Dacca, the textile mills in Dacca only produced only 1/3 of yarn.

The yarn produced by textile mill of the district Dacca, Mymensingh, Tangail, Faridpur, Noakhali, Comilla, Pabna, Kushtia, Jessore, Khulna and Barisal do not meet the demand of their own districts (Appendix-XIX) handloom industries. But the mills of Chittagong, Rangpur, Dinajpur, Rajshahi, Bogra, have surplus yarn after consuming the handloom of other own districts. Hence yarn from these surplus district have to be carried out to Dacca, Mymensingh, Tangail, Faridpur, Noakhali, Comilla, Pabna, Khulna, Jessore, Kushtia and Barisal (Appendix XIX). Hence it is a fact, that yearn transport from Dinajpur and Rangpur to Dacca involved road transport which is not economical. Moreover, the transport of raw cotton to these mills in Rangpur and Dinajpur is costlier. Hence spinning mills in Rangpur and Dinajpur are not fecesible. But there is one in each place.

The other products of the composite mill is cloth. There are 26 composit mills in Bangladesh, out of which 14 are in Dacca, 6 are in Chittagong, 2 in Pabna, and Comilla, Khulna, Bogra and Khustia having 1 in each. The market of finished cloth is all over the Bangladesh. But the composite mill is mainly concentrated in Dacca and Chittagong. The transport of finished cloth to all over Bangladesh is mainly performed by the wholesellers to retail sellers. The quantity of cloth varies from seller to seller. They normally transport the cloth which is not so bulky by steamer, rail or road, Hence the transportation of cloth to local market do not involve high cost.

The cloth produced by the textile mills annually is approximately 8 crore yards, on the other hand, cloth produced by handloom is about 104 crore yard annually. Hence the handloom industries produce major portion (about 93%) cloth consumed by people of Bangladesh. But the per capita cloth locally made for Bangladesh is about 12 yards. Hence for more par capita cloth new composite textile mills and handloom industry is necessary in Bangladesh.

The other different factors which influence the location of industry may examine in Bangladesh in case of textile industry. Labour is one of the main industrial parameter. Both, quality and quantity of labour, decide industrial location. Bangladesh has abundant labour force. But experience in Dinajpur textile mills showed that the local people of Dinajpur are not interested to work in the mill, hence mainly the labour force are drawn from Noakhali, Dacca, Comilla, Chittagong, Khulna. It is found that the skill labour in the North Bengal (Rajshahi Division) is not available. The technicians, supervisors, managerial experts are not sufficiently available in Rajshahi Division.

Transport and communication system also influence the location of industry. The industrial enterpreneuer generally try to minimize the transport cost. Among the mode of transport the water transport is cheapest. In Rajshahi Division the water transport is very poor, hence the raw material and yarn of the mills in Rangpur, Dinajpur, Bogra required road or rail which involve more cost.

Energy is a main factor for industrial location in Bangladesh. Cheap and regular supply of power is essential for textile mills. The main energy in Bangladesh for industry is electricity and natural gas. The power used in textile industry is mainly the electricity in Bangladesh. Electric supply in Dacca and Chittagong Division is regular and sufficient. But there are only two power station which supply electricity to Rajshahi and Khulna Division. The textile industries mainly in Barisal,Dinajpur and Rangpur face the problem of power supply. There is instance that the textile mills of Patuakhali and Dinajpur run one shift due to power shortage though they have been designed for two shift. The availability of generated electricity in Bangladesh is not uniform which may be distinguished by the following data :

Variable	Total (Bangladesh)	Central	Eastern	Southern	Northern
Per capita availability Generated electricity in KWH	16.5	28.52	16.8	14.9	2.6

Source : Appendix XX.

Some other factors like site and premises, environmental factors, services, taxes, chance etc. play significance role in industrial location. For induatrial set up Bangladesh has divided into 'developed', development and 'priority developmnt' area.[1] Hence taxes rate on the imported mechinery varies 15% to 21% which generally influence in industrial location. Tax holiday imposed by Government has been effective.

Environmental factor is important, a man would like to work
or
in a textile mill in Dacca/Chittagong than Dinajpur or Barisal for better environment.

5.3. Structure of cotton Textile Industries in the economy of Bangladesh.

Bangladesh is industrially least developed countries in the world. Only 9% of GDP comes from the industrial sector. Though the GDP contribution from industrial sector is less, but 70% of the earning of the foreign exchange earnings comea industrial aector.[2]

Among the industrial sector the cotton textile industry occupies, second position in the economy of Bangladesh. It accounts for about one-fourth of the contribution of the manufacturing sector to the GDP and provides direct employment to about 10 lakh people.

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1. These classifications have been made by Planning Commission and Department of Industries, which have been discussed in Chapter-2.

2. Second Five Year Plan of Bangladesh, Chapter: Industries.

The textile industry in Bangladesh is mainly divided into three types, namely, (i) Large-Scale Textile Industries, (ii) Handloom industries and (iii) Hosiery and other specialised type of industries.

Out of 10 lakh people employed in textile industries, handloom industry alone employ 8.24 lakh peoples, the large scale textile mills employ 75,000 people and Hosiery with specialised textiles industries employ about 60,000 people.

At present there are 57 large-scale mills are on operation in Bangladesh. The number of loom these industries are about 9000 looms. According to recent census of the Handloom Board that there are about 4.37 lakh handlooms in Bangladesh which 75% are pit looms and 25% are semi-automatic looms. Besides these, there are about 2500 recognised industrial unit in hosiery and knilting, specialised textiles, garments, tape lace and braid and other group of textile industries.

The textile industries has a tremendous scope for expansion in Bangladesh which has a surplus and relatively cheap labour force and a large domestic market. It has also a large potential for earning foreign exchange through export of garments and specialised textiles to developed countries. Further, as a footloose industry the industrial units can he widely dispersed in rural areas of the country where the handlooms are already operating.

5.4 Criteria for set-up of New cotton Textile Industries.

Every industry has its own characteristics in choicing the location. Different factors like market, raw materials, labour, infrastructural facilities, energy, government policies of particular industries determine the location point.

On the basis of the different characteristics of the textile industry as studied in this thesis, the criteria for new setup can be summerised as follows :

(1) The market of yarn is limited, particularly in Dacca, Comilla and Pabna for handloom industry. Hence new spinning textile mill or composite textile mill with surplus spinning section can preferably be located in these districts.

(2) The other districts like Mymensingh, Tangail, Faridpur, Khulna, Jessore, Kushtia and Barisal have demand for yarn in the handloom industries. Because of textile mills situated in these districts cannot meet the requirement, new spinning mill and/or composite mill with surplua spinning section can be set up in these districts giving market consideration of yarn.

(3) The district of Pabna and Barisal have though market for yarn but other infrastructural facilities for textiles spinning mills like power, transport are poor. Hence setting up of new textile mills in these regions involves more fixed and operation cost.

(4) For finished cloth, wholeover Bangladesh is market. Presently about 70% composite mills are in Dacca and Chittagong which produce cloth. On the otherhand the 52% handloom industries are in Dacca, Comilla and Pabna. Hence, cloth are distributed from these 5 districts wholeover Bangladesh. As there is more requirement for cloth, new composite mill may be set up in the district where cheap and regular energy, good transportation, labour force, i.e. precondition for textile mills are available. These districts may be choose other than Dacca and Chittagong, because presently 70% weaving mills are there. But northern region of the country like Rangpur, Dinajpur, Rajshahi, Bogra has less infrastructural facilities for textile mill location, same is the case of Barisal, Patuakhali and Chittagong Hill Tracts.

In general it is found that it is not possible to disperse textile mill in all over Bangladesh, because of market and other infrastructural facilities. Some districts are potential for textile mill location and in other districts the location theory do not allow to locate industry there. Hence homogenous distribution of large-scale and medium scate cotton textile industries all over Bangladesh is not possible.

CHAPTER - 6
CONCLUSION

6.1 In this study attempts have been made to find out the process of industrial location in Bangladesh. The study gives a picture that the spatial distribution of industries are very much imbalance. There are only three industrially developed regions, namely Dacca, Chittagong and Khulna. The development of new enterprises are also being located along these developed areas. Only recently a few new industries are going to be set up in the less developed regions. The distribution of major industries in Bangladesh according to regionwise are as follows :

Variable	Total Bangladesh	Central	Eastern	Southern	Northern
% distribution of major industries in Public Sector 1980	100	44.5	34.0	14.0	6.8

Source : See Appendix - XX.

The study also gave a clear picture that there is no appropriate framework for the location of industries in Bangladesh. Though there are several 'statements' on location in different policies of the governments do exist but the strenght of those 'policy statements' in regard to implementation is very limited.

6.2 A concrete framework with location criteria should be developed by government agencies for all industrial sectors. In this study, only a set of criteria have been developed (Chapter-5) for cotton textile industries. The criteria are, in brief, as follows :

(1) New spinning mill or composite textile mill with surplus spinning section preferably be located in Dacca, Comilla and Pabna, as there are large market for yarn for handloom industriea are in these districts.

(2) The districts like Mymensingh, Tangail, Faridpur,Khulna, Jessore, Kushtia and Barisal have also market for new spinning mills, though the market is relatively smaller.

(3) Though the district of Pabna and Barisal have market for yarn but the limitation of infrastructural facilities make it less feasible to set up new spinning mills there.

(4) The market for cloth is all over Bangladesh, but nearly 70 per cent composite mills are located Dacca and Chittagong. From the dispersal point of view, new mills should be located in other districts provided efficient energy supply and transport facilities be ensured first.

(5) All the industrial sectors are inter-related, hence the set of criteria developed for textile industry cannot give a complete guideline. It should be considered in relation to establishments too.

The factor influencing the location of cotton textile industries in Bangladesh are mainly market, which is divided into two category (i) market for yarn and (ii) market for cloth. The market for yarn is limited in some limited districts but market for cloth is all over Bangladesh. The other factors for location of cotton textile industries like transportation and power and not available in all districts of Bangladesh. Recommendation for the improvement of those two factors have already been made.

6.3. For total industrial sector, as far analyzed the selection for location points of industries are mainly influenced the decision of the owner. This decision of the owner are mainly based on the market and infrastructural facilities. The owners of the new enterpreneurs select their location points basically centering the market. Apart from the market, the second influencing factors for industrial location is the infrastructural facilities.

6.4 For the total industrial sector in Bangladesh, it require an intensive study from which criteria for location point for each sector of industry should be developed. For decentralisation of industries in the industrially backward regions, it should be findout what type of industries are suitable for these regions. The establishment of industries in the less developed areas should be encouraged by infeluencing the decision of the owners in selecting the new points, developing the infrastructural facilities, through joint sponsorsnip of Government agencies with privete owners, by givihg financial incentives.

6.5 In conclusion it is to be noted that only the Government of Bangladesh is the most powerful authority to give effort to decentralize the industries, because almost all major industries are in public sector. This ie also an advantage on that part of the government if it wants to avail.

APPENDICES

APPENDIX - I

POPULATION FOR 1974 by DISTRICTS IN BANGLADESH

LOCALITY	POPULATION
Chittagong	4,315,460
Chittagong Hill Tracts	508,199
Comilla	5,819,176
Noakhali	3,234,061
Sylhet	4,759,281
Dacca	7,611,807
Faridpur	4,059,511
Mymensingh	7,566,825
Tangail	2,074,924
Bakurgonj	3,928,414
Jessore	3,326,778
Khulna	3,557,460
Patuakhali	1,498,987
Kushtia	1,883,635
Bogra	2,231,003
Dinajpur	2,570,572
Pabna	2,814,645
Rajshahi	4,268,417
Rangpur	5,446,916
BANGLADESH	71,479,071

Source: Bangladesh Population Census-1974

MAJOR OCCUPATION GROUPS OF ECONOMICALLY ACTIVE POPULATION (EMPLOYED) 10 YEARS OF AGE AND OVER BY DISTRICTS , 1974

Location	Total	Professional & Technical	Administrative Management	Clerical	Sales	Service	Agriculture	Production Transport
Bangladesh	20,019,942	375,092	30,841	208,495	934,307	385,151	15,837,883	2,247,173
Chittagong	1.244,584	30,993	3.630	25,525	112,014	47,556	726,695	298,161
Chittagong Hill Tracts	221,144	2, 667	230	1,889	5,652	3,734	190,181	16,791
Comilla	1,601,284	31,243	1,877	13,238	55,294	18,078	1,330,889	150,665
Noakhali	801,928	16,795	879	8,578	38,145	12,505	644,391	80,635
Sylhet	1,428,802	25,078	1,163	8,822	53,828	17,059	1,237,813	85,039
Dacca	2,238,052	57,685	13,636	57,470	212,489	101,074	1,162,288	633,410
Faridpur	1,106,949	15,735	755	6,544	42,195	11,206	962,125	68,389
Mymensingh	2,209,654	32,162	1,867	15,203	72,976	34,506	1,962,600	90,340
Tangail	546,502	8,848	154	3,586	13,217	6,698	463,932	50,667
Bakergong	1,039,071	23,372	679	8,554	58,201	13,329	814,768	120,168
Jessore	851,029	16,892	345	6,044	37,745	9,729	719,824	60,450
Khulna	978,943	21,061	1,691	13,680	68,576	24,831	678,225	170,879
Kushtia	497,764	9,952	414	6,794	23,408	9,297	391,997	55,902
Patuakhali	407,441	6,698	205	2,499	11,791	3,478	354,306	28,264
Bogra	609,335	11,075	423	3,743	13,887	10,521	542,333	27,353
Dinajpur	776,207	11,412	502	4,732	15,379	10,465	691,596	42,121
Pabna	757,362	12,803	686	5,029	37,100	10,682	566,269	124,793
Rajshahi	1,155,379	19,266	814	7,585	33,947	16,489	1,004,055	73,223
Rangpur	1,548,512	21,155	891	8,970	28,463	24,463	24,914	70,423

Source: Bangladesh Pupulation Census Report.

APPENDIX - III

MAJOR INDUSTRY DIVISION OF ECONOMICALLY ACTIVE PUPULATION(EMPLOYED)
10 YEARS OF AGE AND OVER FOR DISTRICTS, 1974

Location	Total	Agriculture	Mining	Manufac-facturing	Electri-city,Gas & Water	Constru-ction	Whole Sale Retail Trade	Transport stogage & communi-cation	Finan-cial Bu-siness Service	Social Service
Bangladesh	20,017,862	15,822,878	1,992	946,126	7,543	32,886	770,907	320,0115	55,567	2,060,018
Chittagong	1,224,116	727,555	615	81,502	915	2,204	90,567	64,206	11,696	264,856
Chittagong Hill Tracts	221,123	189,950	6	6,516	318	241	5,576	893	164	17,459
Comilla	1,600,762	1,331,171	545	67,297	,480	1,880	44,716	25,197	3,433	126,043
Noakhali	801,931	642,766	-	30,143	140	1,746	37,075	13,814	1,718	74,429
Sylhet	1,428,797	1,232,178	20	16,726	526	1,873	51,101	11,095	1,898	113,380
Dacca	2,237,790	1,156,966	280	288,506	1,765	9,193	179,432	73,221,	17,191	511,236
Faridpur	1,106,925	964,378	16	29,553	65	721	33,944	9,607	1,560	67,081
Mymensingh	2,209,352	1,962,679	68	29,766	344	2,379	64,345	18,671	3,579	127,521
Tangail	546,497	463,816	134	23,511	124	461	6,682	2,804	669	38,296
Bakergong	1,039,076	812,841	51	39,331	383	2,050	49,733	17,106	1,869	115,712
Jessore	851,021	719,635	29	26,419	179	776	26,167	7,329	854	89,533
Khulna	978,790	677,733	43	87,665	1,330	1,844	56,657	25,855	2,700	124,965
Kushtia	497,778	391,282	2	26,943	277	1,009	16,023	8,564	850	52,828
Patuakhali	407,281	354,331	18	7,841	115	229	8,111	3,512	626	31,493
Bogra	609,277	542,672	29	12,108	98	493	10,188	4,529	1,109	38,051
Dinajpur	776,214	691,734	22	25,867	107	499	13,515	4,395	1,329	38,746
Pabna	757,358	566,961	-	77,156	159	2,117	24,290	8,883	902	77,090
Rajshahi	1,115,369	1,002,062	41	31,393	145	2,310	27,660	7,054	1,870	82,834
Rangpur	1,548,405	1,392,188	3	27,883	73	861	24,125	13,477	1,450	88,345

APPENDIX -IV

SUMMARY STATISTICS OF CMI 1972-73 BY INDUSTRY MAJOR GROUP
BY INDUSTRY

Sl. No.	Name of Industry (Major Group)	No. of Estab-lish-ment	Fixed Assets at the end of year	Average Daily Employment All Emp-loyee	Average Daily Employment Produc-tion workers	Value of products in thousand Taka
1.	Food Manufacturing Except Average	226	248,028	18,177	12,848	335,122
2.	Beverage Industry	6	3,308	425	209	13,016
3.	Tobacco	23	48,162	5,261	4,269	405,259
4.	Textile Manufacturing	732	968,223	123,564	110,302	1390,950
5.	Foot wear ,wear apprl.	104	8,104	1632	1,300	288,42
6.	Wood Worm Manufacturing (no furnace)	4	471	139	103	2,186
7.	Furniture Manufacturing	29	1,958	558	453	7,486
8.	Paper & Paper Product	19	155,121	3,130	2,184	56,932
9.	Pringing & Publishing	82	11,741	2,192	1,705	23,631
10.	Leather Product except footwear	93	7,263	1,576	1,298	73,360
11.	Rubber Products except footwear	2	203	33	27	292
12.	Chem. & Chemical Products	321	255,668	11,597	8,276	328,876
13.	Non-Metalic Mineral Manufacturing	24	11,162	1,090	960	12,836
14.	Basic Metal Industry	135	16,638	4,567	3,831	84,799
15.	Machiniee except electrical	68	8,047	1,129	894	30,176
16.	Electric Machinery & Appliance	16	8,047	1,129	894	30,176
17.	Transport equipment manufacturing	19	31,151	1,289	890	20,344
18.	Misc. Mfs. Industry	66	34,964	1,995	1,219	195,684
19.	Total all Industry:	1986	1854,938	182,092	153,793	3090,898

Source: Census of Manufacturing industries in Bangladesh 1972-73

APPENDIX - V

SUMMARY OF STATISTICS OF CMI-1972-73 by INDUSTRY MAJOR GROUP AND BY EMPLOYMENT

1.No.	Labour	No. of Est.	Fixed Assets at the end of year	Average Daily Employment		Value of products in thousand Tk.
				All Employee	Production workers	
.	1 to 9 employees	308	11,716	2309	1756	39,436
.	10 to 19 employees	570	28,202	8366	6837	119,613
.	20 to 49 employees	685	109,808	20440	17024	279,767
.	50 to 99 employees	151	91228	10162	7926	266,624
.	100 to 249 employees	92	200,758	14128	11029	480,686
.	250 to 499 employees	30	177,374	287	184	250,888
.	500 to 999 employees	29	224,014	19513	15647	4123,23
.	1000 to 1999 employees	20	381,810	26311	22959	473,425
.	2000 to 4999 employees	17	396,375	44951	40371	507,993
0.	5000 and above all employees	4	233,653	24995	22068	101,341

Source: Census of Manufacturing Industries in Bangladesh 1972-73

APPENDIX - VI

SUMMARY STATISTICS OF CMI 1972-73 BY INDUSTRY MAJOR GROUP AND FIXED ASSETS

Sl. No.	Name of Industry	No. of	Fixed Assets at the end of year	Average Daily Employ: All Employee	Average Daily Employ: Production workers	Value of product in thousand (Taka)
1.	Upto 15,000 Taka	598	6814	8662	7403	107,629
2.	15,101 to 25,000 Tk.	324	6279	6624	5749	54,984
3.	25,001 to 50,000 Tk.	338	16603	7692	6493	97,590
4.	50,001 to 1,00,000 Tk.	239	20766	6241	5073	128,113
5.	100,001 to 25,00,000 Tk.	197	47216	7887	6261	148,589
6.	2,50,001 to 50,00,000 Tk.	78	37068	6100	4331	117,538
7.	500,001 to 750,0000 Tk.	27	23091	3231	2580	60426
8.	750,001 to 10,00,000 Tk.	16	14499	2741	2135	66,480
9.	10,00,001 to 15,00,000 Tk.	41	190788	9088	6800	221,218
10.	15,00,001 to 25,00,000 Tk.	26	57434	7581	6099	154,967
11.	25,00,001 to 50,00,000 Tk.	33	149634	11018	9066	372,942
12.	50,00,001 to 1,00,00,000 Tk.	27	216956	23804	20423	564,533
13.	1,00,00,001 and above Taka	42	1065794	81323	71230	972,242
	Total of all Industries	1986	1854938	182092	153793	3090,898

Source : Census of Manufacturing Industries in Bangladesh 1972-73

APPENDIX - VII

SUMMARY STATISTICS OF CMI 1972-73 BY INDUSTRY MAJOR DISTRICTS

Sl.No.	Name of Districts					
1.	Chittagong	287	190197	25484	21846	634524
2.	Chittagong Hill Tracts	3	133439	2995	2688	85475
3.	Comilla	70	25669	4964	4336	47784
4.	Noakhali	76	5115	1306	1049	21284
5.	Sylhet	72	277942	9980	7820	104289
6.	Dacca	1104	655506	77830	66149	1505590
7.	Faridpur	19	910	717	657	7067
8.	Mymensingh	31	50845	4732	3881	50751
9.	Tangail	35	6583	1488	1350	21126
10.	Barisal	12	1898	250	189	4767
11.	Jessore	5	6165	775	650	28576
12.	Khulna	36	338105	35365	30633	391007
13.	Kushtia	4	1928	346	212	9393
14.	Patuakhali	1	198	50	42	513
15.	Bogra	19	5336	1114	876	19448
16.	Dinajpur	24	13821	867	412	24715
17.	Pabna	165	66834	10958	9594	103323
18.	Rajshahi	11	31677	1518	750	15755
19.	Rangpur	11	42690	1192	600	14679
Total all Industries		1985	1854858	182031	153735	3090566

Source: Census of Manufacturing Industries in Bangladesh 1972-73

APPENDIX -VIII

NUMBER OF REPORTING FACTORIES BY MAJOR INDUSTRIAL GROUPS, 1954 to 1976-76

Name of Industry	1954	1955	1957	1959 -60	1962 -63	1963 -64	1964 -65	1965 -66	1966 -67	1967 -68	1968 -69	1969 -70	1970 -71	1971 -72	1972 -73	1973 -74	'74 '75	'75 '76
Food Manufacturing	115	130	132	171	323	330	312	327	337	321	302	253	216	183	226	200	338	409
Beverage	3	2	4	3	1	11	7	7	6	6	5	4	7	6	6	6	6	6
Tobacco	2	2	2	3	3	10	15	17	17	17	23	18	27	24	23	21	24	23
Textile	31	53	65	84	617	586	508	470	498	508	531	430	526	610	732	332	444	486
Footwear, others wearing	-	6	7	9	113	128	116	116	141	121	100	86	104	102	[illegible]	88	193	201
Wood cork and allied products	6	2	5	10	7	8	10	14	12	6	8	7	2	4	4	3	22	23
Furniture & Fixture	-	1	2	5	13	21	48	43	49	42	38	27	31	26	29	20	50	47
Paper & Paper products	1	6	7	7	17	20	27	27	21	24	23	18	16	19	19	16	36	37
Printing,Publishing & Allied Industries	28	30	49	72	79	86	104	112	118	117	108	92	106	85	82	82	132	129
Leather & Leather products	11	26	36	45	66	81	81	86	86	85	84	71	99	93	93	81	145	148
Chem. & Chem.Prod.	16	26	44	67	219	223	320	313	318	303	312	237	263	317	321	262	520	496
Rubber Products	3	3	4	2	10	3	2	3	3	3	3	2	1	1	2	1	3	3
Petr.& Coil Products	-	0	-	-	-	9	2	2	2	2	3	3	1	-	-	-	2	2
Non-Metalic Minerial Products	6	9	10	16	26	33	32	38	36	30	42	36	33	29	24	27	51	61
Basic Metal Industry	-	2	3	6	141	32	21	16	27	27	27	22	27	16	17	21	41	43
Metal Proc.Except M/o.	38	36	56	80	128	185	186	194	159	160	141	115	114	119	135	101	193	192
Machinery except Elect.	8	18	18	24	-	60	63	62	72	65	68	60	54	60	68	65	90	91
Elect.Machinery apparatus	-	2	4	5	6	18	22	24	29	28	25	18	16	11	16	21	29	31
Transport Equipment	15	17	14	19	25	36	41	50	13	44	35	24	19	11	19	19	37	33
Other Manufacturing Industries	68	65	66	79	139	120	120	111	104	94	76	57	66	55	66	61	96	99
Total:	343	428	528	707	1335	2010	2086	2072	2034	2003	1956	1580	1727	1771	1986	1427	2452	

APPENDIX IX

AVERAGE DAILY EMPLOYMENT(ALL EMPLOYEES) BY ALL INDUSTRIES AND TEXTILE INDUSTRIES, 1954-to 1975-76

Year	Number of employees (all types	
	Textile(Cotton & Jute)	All Industries
1954	28,824	56,047
1955	39,127	80,973
1957	58,496	101,196
1959-60	81,954	138,863
1962-63	105,324	180,806
1963-64	119,517	204,597
1964-65	109,876	197,835
1965-66	107,253	187,604
1966-67	145,006	229,232
1967-68	146,180	234,039
1968-69	171,951	264,414
1969-70	130,824	206,058
1970-71	189943	258,692
1971-72	145,815	194,986
1972-73	123m564	182,092
1973-74	225,189	307,407
1974-75	206,807	337,066
1975-76	226,359	373,933

Source : Statistical year Book 1979

APPENDIX - X

SUMMARY STATISTICS OF HANDLOOM FACTORIES IN BANGLADESH, 1976

Status of Establishment	No. of Establishments	No. of Rooms	Annual Yarn Consumption (00, bales)
Unregistered (Rural)	108,250	216,500	1,676
Uregistered (Urban)	3,275	9,825	55
Registered	2,748	54,960	300
Total:	114,273	281,285	2,031

Source: Statistical year Book 1979.

APPENDIX - XI

ESTIMATED NUMBER OF SMALL POWER LOOMS IN BANGLADESH 11976

Division	No. of Establishments	No. of Looms	Remarks
Dacca	45	618	Annual year Consumption for 25 recognised establi ments with 179 looms is 1221 bales of about 7 bale per loom. On this basis th annual year consumption of 827 power looms comes to about 5790 bales.
Chittagong	12	99	
Khulna	11	57	
Rajshahi	5	43	
Total:	73	827	

Source: Statistical year book 1979.

APPENDIX -XII

GROWTH OF COTTON TEXTILES INDUSTRY, 1960-61 to 1977-78

Year	No. of Reporting mills	Installed Capacity		Working at end		Spindle hours worked	Loom hours worked	Consumption of cotton	Yarn production	Production of surplus yearn	Production of cloth
		No. of Spindles	No. of looms	No. of spindles	No. of looms						
		(000')	(000')	(000')	(000')	(Million)	(Mil.)	(000'lbs)	(000'lbs)	(ooo'lbs)	(ooo'Yds)
1960-61	No available	364	3	361	3	-	-	59,056	47,543	40,102	69,438
1961-62	20	403	3	389	3	2671	15.7	66,197	53,886	41,417	67,128
1962-63	25	492	3	399	3	2629	14.9	65,303	54,209	42,202	55,130
1963-64	28	521	4	459	4	3021	15.1	77,150	63,769	51,998	48,282
1964-65	29	617	5	564	5	3548	15.2	84,659	63,880	52,863	48,773
1965-66	33	654	6	573	3	3581	12.0	90,299	73,001	62,935	40,021
1966-67	38	661	7	555	4	3759	14.9	96,574	74,345	56,970	55,016
1967-68	37	662	7	563	4	3718	16.3	93,900	77,471	61,350	52,026
1968-69	42	731	7	645	4	4420	20.7	111,883	95,688	77,344	60,852
1968-70	44	750	7	660	3	4652	20.6	135,274	105,185	87,185	59,149
1970-71	44	750	7	643	4	-	-	54,800	81,705	66,692	52,725
1971-72	44	836	7	530	4	-	-	-	45,641	-	23,397
1972-73	45	853	7	633	4	-	-	-	80,095	-	58,435
1973-74	48	871	7	675	5	-	-	104,576	91,347	71,519	79,378
1974-75	48	810	7	679	5	-	-	105,829	91,302	70,301	84,626
1975-76	49	818	7	673	5	6846	36.0	101,700	88,073	68,528	74,475
1976-77	49	839	6	765	4	5076	28.8	91,888	82,422	64,863	68,124

APPENDIX - XIII

GROWTH OF HANDLOOMS INDUSTRY IN BANGLADESH

YEAR	Number of Handlooms	Source and Type of Estimate
1941	85,478	Estimate prepared by Textile Commissioner of India
1946	134,346	As above
1951	183,251	Population census of Pakistan, 1951
1953	438,577	The Director of Civil Supplies, Govt. of East Bengal, Dacca. The Estimate prepared on the basis of registration for yarn distribution.
1953	345,079	The Director of Statistics and Commercial Intelligence, Government of East Bengal, Dacca.
1953	250,000	The Director of Industries, Government of East Bengal, Dacca and the Textile Commissioner, Government of Pakistan, Karachi.
1956	380,990	Handloom survey of 1956
1973	428,000	Handloom survey, Jaliya Samabaye Shilpa Samity.
1978	437,015	Bangladesh Handloom census, Ministry of Textiles, Government of Peoples Republic of Bangladesh, Dacca.

Source: Report on Bangladesh Handloom Censu-1978.

APPENDIX - XIV

DISTRICTWISE DISTRIBUTION OF LOOM CHARACTERISTICS OF HANDLOOM UNITS IN BANGLADESH IN 1978

Sl.No.	Name of District	No. of Units	Total No. of looms	No. of Operational Looms	No. of Non-operational Looms
1.	Dacca	52,549	120,463	85,867	34,596
2.	Mymensingh	4,178	8,674	2,858	5,816
3.	Tangail	15,421	37,406	21,051	16,355
4.	Faridpur	12,267	17,069	6,226	10,843
5.	Rajshahi	3,461	6,338	2,956	3,382
6.	Rangpur	1,812	3,533	797	2,736
7.	Dinajpur	1,727	2,825	1,228	1599
8.	Pabna	19,853	86,063	56,015	30,048
9.	Kushtia	10,599	20,080	11,084	8,389
10.	Bogra	4,690	6541	2,151	4,564
11.	Jessore	10,887	15,726	8,126	7,564
12.	Khulna	8,468	12,680	5,227	7,453
13.	Barisal	6,912	14,267	7,171	7,096
14.	Patuakhali	1,406	2,214	638	1,576
15.	Chittagong	5,532	11,007	3,010	7,991
16.	Comilla	300,34	59,968	40,627	19,241
17.	Sylhet	3,005	4,867	1826	3,041
18.	Noakhali	4,479	7,394	3,020	4,374
TOTAL		197,2800	437,015	259,921	177,094

Source : Report on Bangladesh Handloom census - 1978

APPENDIX- XV.

DISTRICTWISE PERCENTAGE DISTRIBUTION OF LOOM CHARACTERISTICS OF HANDLOOMS IN BANGLADESH IN 1978

Sl.No.	Name of District	No. of Units	No. of Looms	No. of Operational Looms	No. of non-operational looms
1.	Dacca	26.64	27.56	33.04	19.54
2.	Mymensingh	2.12	1.98	1.10	3.28
3.	Tangail	7.82	8.56	8.10	9.24
4.	Faridpur	6.22	3.91	2.40	6.12
5.	Rajshahi	1.75	1.45	1.14	1.91
6.	Rangpur	0.92	0.81	0.31	1.54
7.	Dinajpur	0.88	0.65	0.47	0.90
8.	Pabna	10.06	19.69	21.55	16.97
9.	Bogra	2.38	1.50	0.83	2.48
10.	Kushtia	5.37	4.59	4.26	5.08
11.	Jessore	5.52	3.60	3.14	4.27
12.	Khulna	4.29	2.90	2.01	4.21
13.	Barisal	3.50	3.26	2.76	4.01
14.	Patuakhali	0.71	0.51	0.25	0.89
15.	Chittagong	2.80	2.52	1.16	4.51
16.	Sylhet	1.52	1.11	0.70	1.72
17.	Comilla	15.22	13.70	15.63	10.86
18.	Noakhali	2.27	1.69	1.16	2.47
Percentage Total:		100.00	100.00	100.00	100.00
Total Number		197,280	437,015	259,921	177,094

Source: Report on Bangladesh Handloom census-1978.

APPENDIX - XVI

GROWTH OF HANDLOOMS IN CHITTAGONG HILL TRACKTS

Year	Number of Handloom	Source and type of estimate
1953	59,500	The Director of Civil Supply, Dacca.
1956	52,000	Handloom Survey of 1956
1978	251,084	Bangladesh Handloom census of 1978

Source: Report on Bangladesh Handloom Census-1978.

APPENDIX- XVII

DISTRICTWISE SUMMARY OF INPUT-OUTPUT CHARACTERISTICS

Sl. No.	Name of District	Bimonthly output (Yards)	Bimonthly yarn Purchase(lbs)	Monthly Yarn Requirement (lbs)
1.	Dacca	8,17,86,595	19,403,174	10,528,506
2.	Mymensingh	14,31,839	340,296	300,661
3.	Tangail	1,00,69,483	21,66,082	1,440,318
4.	Faridpur	38,91,658	7,33,808	431,782
5.	Rajshahi	2,153,589	2,36,018	127,696
6.	Rangpur	4,62,248	1,02,612	57,881
7.	Dinajpur	6,39,699	1,09,862	54,553
8.	Pabna	2,64,78,726	53,03,940	28,236,662
9.	Bogra	12,96,411	1,58,641	88,517
10.	Kushtia	51,31,132	11,18,224	6,04,678
11.	Jessore	45,58,657	7,41,375	4,11,561
12.	Khulna	40,18,824	5,69,879	3,36,659
13.	Barisal	49,30,450	8,91,434	5,38,133
14.	Patuakhali	2,23,198	3,75,93	23,541
15.	Chittagong	13,62,403	3,59,214	2,16,363
16.	Sylhet	5,47611	84,249	56,215
17.	Comilla	2,26,00,067	57,19,599	29,24,643
18.	Noakhali	20,69,356	3,58,435	2,35,457
Total:		17,36,52,046	38,34,435	21,200,926

Source : Report on Bangladesh Handloom Census 1978

APPENDIX - XVIII

DISTRICTWISE TEXTILE MILLS IN BANGLADESH UNDER BTMC IN RUNNING CONDITION IN 1980

Sl.No.	Name of District	No. of Spinning Mills	No. of Composite Mills	Total Mills
1.	Dacca	12	14	26
2.	Mymensingh	1	-	1
3.	Faridpur	1	-	1
4.	Tangail	1	-	1
5.	Jamalpur	-	-	-
6.	Chittagong	3	6	9
7.	Chittagong H. Tracts	-	-	-
8,	Noakhali	1	-	1
9.	Comilla	4	1	5
10.	Sylhet	-	-	-
11.	Rajshahi	1	-	1
12.	Panba	1	2	3
13.	Bogra	-	1	1
14.	Rangpur	1	-	1
15.	Dinajpur	1	-	1
16.	Khulna	-	1	1
17.	Jessore	2	-	2
18.	Kushtia	1	1	2
19.	Barisal	1	-	1
20.	Patuakhali	-	-	-
	Total:	31	26	57

Source: Bangladesh Textile Mills Corporation.

APPENDIX - XIX

DISTRICTWISE YARN PRODUCED BY BTMC AND REQUIRED CONSUMPTION BY HANDLOOM IN 1978

Sl.No.	Name of District	Surplus Yarn Produced by BTMC (000 lbs)	Yarn consumed by Handlooms (000 lbs)
1.	Dacca	384	1250
2.	Mymensingh	24	36
3.	Tangail	8	168
4.	Faridpur	8	36
5.	Chittagong	160	24
6.	Noakhali	8	24
7.	Comilla	48	348
8.	Sylhet	-	6
9.	Rajshahi	16	12
10.	Bogra	16	10
11.	Pabna	40	346
12.	Rangpur	16	7
13.	Dinajpur	16	6
14.	Khulna	8	36
13.	Jessore	16	48
14.	Kushtia	24	72
15.	Barisal	16	60
16.	Patuakhali	-	1
	Total:	80,800	249,000

Source: BTMC and Handloom Board.

APPENDIX - XX

SELECTED ECONOMIC CHARACTERISTICS BY REGION FOR BANGLADESH

Variable	Total	Central	Eastern	Southern	Northern
1. Non-agricultural labour force as percentage of civilian labour force[a]	22.8	26.9	25.0	23.3	14.7
2. % distribution of major industries in (247)* public Sector[b] 1980	100.0	44.5	34.0	14.0	6.8
3. % distribution of industries[b] by number of employees, 1980					
Number of employees					
500	100.0	35.00	48.75	13.75	2.50
500-999	100.0	42.31	32.69	13.46	11.54
1000-1499	100.0	50.00	20.59	17.65	11.76
1500-1999	100.0	50.00	17.86	17.85	14.29
2000-2499	100.0	40.00	33.33	20.00	6.67
2500	100.0	54.55	36.36	9.09	-
4. Per capita availability generated electricity in KWH[c]	16.5	28.52	16.8	14.9	2.6
5. Dependency ratio[d] (per 100)	105	103.2	101.5	109.1	111.1
6. % of population 15 yrs and above who have completed education beyond high school level[e]	1.95	2.40	1.74	1,70	1.60

a. Bureau of Statistics. Ministry of Planning. Government of the People's Republic of Bangladesh,1977. 1974 Bangladesh Population Census Report, National Volume, Dacca : Government Printing Press.

b. Annual Report of Public Enterprises.

c. Bangladesh Power Development Board.

d. Population 0-4 and 65+/population 15-64x100.

e. as in [a].

* The figure in parenthesis readers to total number of enterprises.

Source : Urbanisation in Bangladesh, By Rafiqul Huda Chdy. Centre for Urban Studies, Dacca University, Dacca (1980).

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