6.3 Strengthening of Support Measures for Existing industries

6.3.1Need for Support Measures

There are strong needs for support measures in the areas of raw material sourcing, marketing, manpower development, promotion of joint ventures with foreign capital, public finance/subsidy, R&D and technology transfer.

The existing industries in Chittagong District have many critical problems within them and face quite a few external constraints, which root in the industrial structure and socioeconomic system. Under such circumstances, the Survey by the Study Team reveals that they need support measures to be strengthened as follows (Figure 6.4 refers):

- The needs are stronger in such an order as raw material sourcing and marketing, manpower development, finance and information, R&D and technology transfer, regulation and procedures, and modernisation and locational incentives

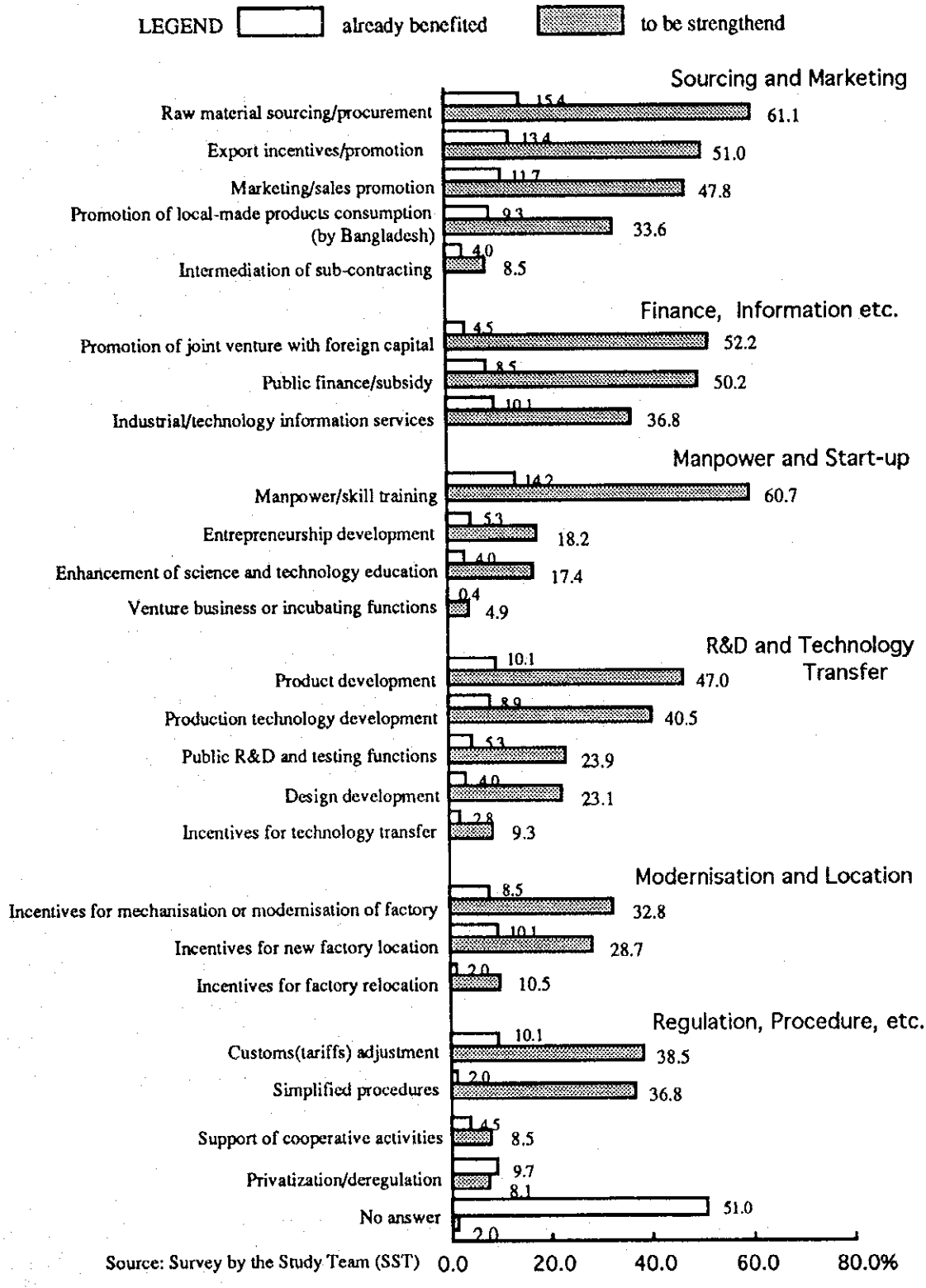
- In raw material sourcing and marketing, the need is the strongest in support for raw material sourcing accounting for 61.1% of the total respondents. It seems to be a fact that some industrial raw materials and resources including imported ones are controlled by the government, who asks various procedures and sanctions for sourcing them. The second is export incentives accounting for 51.0% of the total, maybe corresponding to the increase in enterprises, which envision to start export business. Aside from these, marketing/sales promotion and promotion of local-made products (by Bangladesh) account for 47.8% and 33.6% respectively, the latter of which is not so strong as expected

- In case of manpower development, the need is the strongest in training accounting for 60.7% of the total respondents and corresponding to a lack of suitable manpower. Needs for other measures than this are not so strong. Less than 20% of the respondents regard such measures to be strengthened as entrepreneurship development, enhancement of science and technology education, and venture business or incubator function

- In finance and information, around 50% of the respondents consider that support for joint ventures with foreign capital and public finance/subsidy should be strengthened, while 36.8% need support for industrial/technology information service

- As for R&D and technology transfer, the respondents want strongly support for product development and production technology development (47.0% and 40.5% of the total,

Figure 6.4 Needs for Support Measures by Existing Industries in CTGD (excluding EPZ enterprises, multi-answers)



Source: Survey by the Study Team (SST)

respectively). On the other hand, the public R&D and testing function accounts for only 23.9% of the total and also only 9.3% of the total want incentives for technology transfer to be strengthened, probably because they expect more from technology transfer by joint ventures with foreign capital

- In terms of regulation and procedures, support measures to be strengthened comprise mainly customs adjustment (38.5%) and simplified procedures (36.8%). It is natural that domestic market industries want tariff rates on imported products to be higher, whereas the rates on imported raw materials are asked to be lower by both, domestic market industries depending on imported raw materials and re-exporting industries. However, there will be no problem where re-exporting industries can avail themsevles of bonded business, i.e. duty free importation of their raw materials through bonded warehouse. Procedures on trade and various administrative regulation are so complicated that they are expected to be simplified not only for saving time/costs, but also for ensuring a timely business opportunity

- In terms of modernisation and locational incentives, the responded ratings are as follows: 32.8% for mechanisation or modernisation of factory, 28.7% for new factory location and 10.5% for factory relocation. These may mirror the substrategy of the respondents, of which 67 enterprises (27.1%) prioritise new factory location while 20 (8.1%) place priority on factory relocation. Some 76.5% of the respondents regards modernisation of production facilities as their basic strategy for business management, but there are not so many enterprises which want incentives for modernisation to be strengthened. This may imply that they prefer direct supports like public finance/subsidy to the incentives.

The above needs analysis is based on the number of responded rating on support measures to be strengthened, some of which are more strongly needed compared to percentage of the respondents benefited from existing measures as follows: promotion of joint venture with foreign capital, public finance/subsidy, venture business/incubating function, incentives for factory relocation and simplified procedures. The respondents may consider that these measures are less effective than other support measures, even if they are undertaken at present.

6.3.2 Current Policy Responses

The Survey by the Study Team reveals that around 15% of the total respondents in the Chittagong District have benefited from support measures. Support measures for industries in Bangladesh are undertaken by the Government Agencies shown in Figure 6.5. The outline is as follows:

- The agencies could be divided into two groups by administrative criteria, one headed by the Ministry of Industry (MOI) and another headed by the Prime Minister's Office (PMO)

- MOI and the Ministry of Textiles (MOT) are mandated directly for industries, while some industry-related support measures are undertaken by the following ministries: the Ministry of Jute (MOJ), the Ministry of Agriculture (MOA), the Ministry of Fishery (MOF), the Ministry of Finance (MOF), and the Ministry of Commerce, among others

- MOI is in principal the agency making overall industrial policy, but is mandated to administrate the manufacturing public corporations (MPCs), to promote management development, human resource development, quality control, standardisation, and to protect intellectual property rights common to both, public and private sector

- The Bangladesh Small and Cottage Industries Corporation (BSCIC) is organised under MOI and responsible exclusively for development of SCI

- The Board of Investment (BOI) and the Bangladesh Export Processing Zone Authority (BEPZA) are organised under PMO. BOI's mandate is exclusively for the development of the private sector, including foreign capital. BEPZA is a kind of autonomous body with the power over EPZ and a mandate for the development and administration of EPZ including investment promotion.

In the Government's budget 3% were alloted for industrial development. Figure 6.6 illustrates the revenue and expenditure of the Bangladesh government budget in 1991/92 based on revised estimates. It is notable that the budget has two components, one is the general budget and another is the development budget.

The development budget depends almost on foreign assistance (FA). The development expenditure amounted to 60.2 billion Taka (corresponding to 43.0% of the total expenditure with 140.2 billion Taka), of which 83.5% or 50.3 billion Taka was sourced by foreign assistance. Around 4.2 billion Taka or 3% of the total expenditure and 7% of the development expenditure is allotted for industrial development. This 3% share to the total is not so small compared to foreign countries, which are based on a free economy system. However, the composition of expenditure may be controversial.

The development expenditure of industry-related activities is alloted almost only for MPCs-related projects.

Figure 6.5 Main Supporting Agencies for Industry in Bangladesh

Ministry of Industries (MOI)

1) Industrial policy making for the public and private sector
2) Coordination for the implementation of policy through various committees consisting of relevant agencies and the private sector
3) Guide and supervise of industrial activities
4) Administration of the government- and semi-government owned corporations
5) Management development through the Bangladesh Management Development Centre (BMDC)
6) Quality control through the Bangladesh Standard and Testing Institute (BSTI) etc.
7) Human resource development, protection of intellectual property rights and design development

Bangladesh Small and Cottage Industries Corporation (BSCIC)

1) Sourcing and Marketing
- Recommendation of import entitlement for importation of raw materials
- Marketing assistance of products
- Market survey and market feasibility studies
- Preparation of feasibility studies and project profile
- Area potential, growth potential and subsectoral studies
- Promotion of sub-contracting linkage among small, medium and large industries
- Arrangement of fair and exhibition for SCI products

2) Finance, Information etc.
- Provision and arrangement of credit
- Supervision and monitoring of credit utilization
- Industrial information system service

3) Manpower and Start-up
- Manpower training and skill development
- Scouting and identification of entrepreneurs

4) Technology upgrading
- Product & process development and extension service
- Development and distribution of new and innovative designs and prototypes
- Adoption and transfer of new technology
- Quality control and improvement
- Productivity promotion and development

5) Modernisation, Investment Promotion and Location
- Preparation of Investment Schedules
- Pre- and post- investment counselling
- Recommendation for duty exemption and tax holiday
- Development of Industrial Estate
- Rehabilitation of sick industries
- Sanction for establishment of new industries and BMRE of existing enterprises

6) Regulation, Procedures etc.
- Registration of enterprises
- Recommendation for preparing regulated list of industries.

Prime Minister's Office

Board of Investment (BOI)

1) Implementation of the government policy on investments and provision of all kinds of facilities including investment promotion for the private sector
- preparation & implementation of investment schedule including identification of investment sectors
- Area scheduling for establishment of industries and determination of specific facilities
- Financing and providing assistance to new industries
- Preparation of policies relating to technology transfer and phase -wise local production and their implementation
- assistance for rehabilitation of sick industries

2) Approval and registration of industrial projects other than the industries under BSCIC, BEPZA, Ministry of Textile, Ministry of Jute and Ministry of Agriculture including allotment of land owned or controlled by the government or any local authority to other enterpriser than those registered by BEPZA and BSCIC
3) Adoption of necessary measure for creation of capital for investment in industries
4) Industrial data-bank service

Bangladesh Export Processing Zone Authority (BEPZA)

- Development of EPZ and public services to EPZ enterprises

OTHER MAIN AGENCIES

Ministry of Textiles
* Bangladeh Handloom Board (BHB)

Ministry of Jute

Ministry of Agriculture/Fisheries
* Bangladesh Sericulture Board

Ministry of Science & Technology

Ministry of Finance
- Economic relation, public financing, customs relation etc.

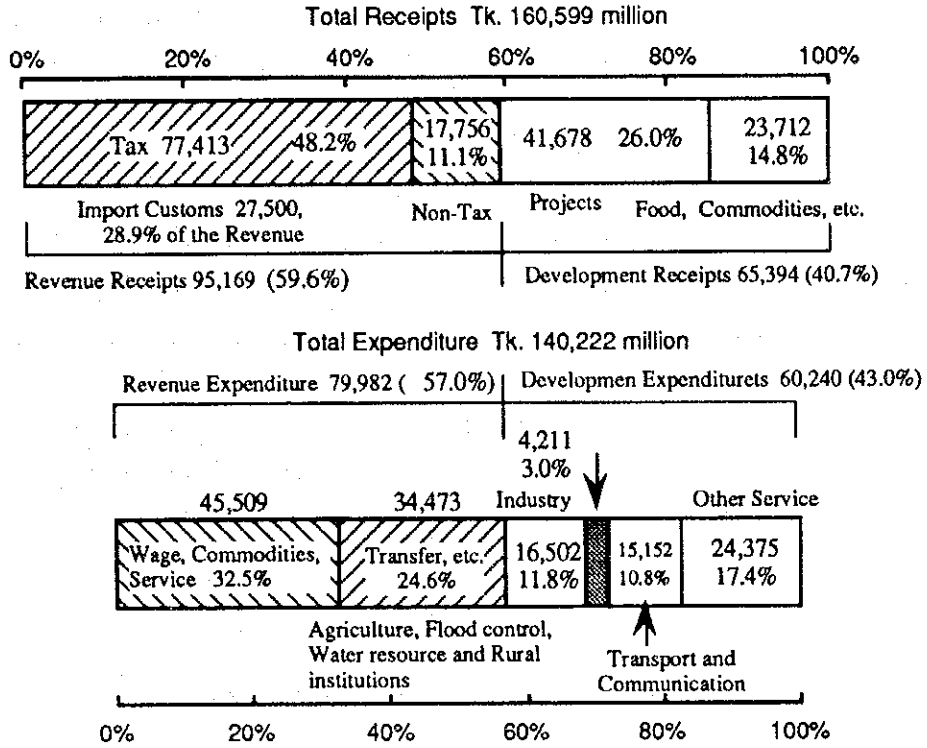
Ministry of Commerce
- export promotion, import rationalization etc.

* Export Promotion Buareau (EPB)

- National Productivity Organisations (NPO)
- Bangladesh Industrial Technical Assistance Centre (BITAC) etc.

- Small Industries: under Tk. 30 million of total fixed investment excluding the land price, etc. and including initial working capital)
- Cottage Industries: under Tk. 500,000 of total investment and self-employed)

Figure 6.6 Receipts and Expenditures of the Government of Bangladesh (revised estimate in 1991/92)



Source: Bangladesh Bureau of Statistics (BBS)

The 1994-96 Three Year Investment Programme budgeted a total of 54.1 billion Taka for industrial development, of which 70.8% is to be sourced by foreign assistance. Conclusively, the expenditure for the public sector constitutes around 80% of the total. It comprises about 2.0 billion Taka or 3.8% of the total for the balancing, modernisation, replacement and expansion (BMRE) of MPCs and about 40.6 billion Taka or 75.0% of the total for the new plant projects of MPCs. MPCs also can avail themselves of the budget allotted for manpower training (Table 6.1 and 6.2 refer).

Raw material sourcing and marketing are relatively well lined up. The Survey by the Study Team among the existing industries in Chittagong District reveals that among their needs to strengthen support measures for raw material sourcing and marketing, need for supporting raw material sourcing is the strongest accounting for 61.1% of the total respondents followed by export incentives (51.0%).

However, support measures have two different effects that is promotional or regulatory. It is an example that compulsory use of jute bags for rice packaging is promotional for the

manufacturers, but regulatory for the users. Such regulation is applied to some products of MPCs.

Raw material import is extensively regulated for the protection of local industries and foreign currency control. However, private enterprises can import without import license. Import ban and restriction covers a limited number of 93 items. Tariff adjustment has been progressed by the Bangladesh Government as follows:

- Reduction of maximum tariff rate: 50% has been realised in 1993/94. The average import duty rate can be estimated at 20.7% in 1991/92. Revenue of import duty amounted to 27.5 billion Taka against a total value of imports, 132.8 billion Taka

- In order to promote re-exporting, EPZs have been developed. The bonded warehouse scheme has been expanded and liberalised to industries other than garments, but the bonded term is in principle up to four months.

- Removal of "sponsoring"agencies' involvement in machinery import

- Relaxation of the value addition restriction for high value products.

In terms of marketing, support measures comprise promotion of subcontracting, marketing of specified products, and export promotion as shown in Table 8.1 (refer also to Figure 6.1).

The Bangladesh Small and Cottage Industries Corporation (BSCIC) promotes subcontracting. However, the data on subcontracting are not available, although sales through BSCIC's marketing assistance amounted to 571 million Taka in 1993/94. BSCIC supports also marketing study, feasibility study on SCI's products, arrangement of fair and exhibition for SCI's products, among others. With respect to marketing of specified products, the Bangladesh Handloom Board supports marketing handloom products and also provides services such as extension service for maximisation of capacity utilisation, provision of common facilities, design development, introduction of new looms for increasing productivity, and skills training.

The Export Promotion Bureau (EPB) provides supports or services such as quota allocation for garments export, issuance of General Systems of Preferences (GSP) Certificate, participation in international trade fair, arrangement of fair and exhibition, both at home and abroad, export training, cooperation with international agencies and export market development, among others. An Export Market Development Fund is to be established at EPB.

Table 6.1 Industrial Projects in 1994-96 Three Year Rolling Investment Plan (1)

Agency	Three Year Rolling Investment Programme (FY94 - 96) (in million Taka)	Cost	Cost per Project Aid	Remarks
				Percent Distribution
	GRAND TOTAL	54,135.5	70.8%	100.0
	• GENERAL	525.6	73.2%	1.0
	• MARKETING	180.5	73.7%	0.3
	• FINANCE	146.0	63.4%	0.3
	• MANPOWER DEVELOPMENT	1,210.3	60.0%	2.2
	• R&D, TECHNOLOGY TRANSFER	3,617.3	39.9%	6.7
	• MODERNISATION	2,049.1	71.3%	3.8
	• NEW PLANT PROJECTS	40,597.7	78.8%	75.0
	• INVEST PROMOTION	171.1	13.7%	0.3
	• COMMON SERVICE FACILITY	1,207.0	1.0%	2.2
	• INFRASTRUCTURE DEVELOPMENT	4,174.6	47.9%	7.7
	• PROCEDURE etc.	256.3	30.1%	0.5
				[Source of project aid]
	GENERAL : Total	525.6	73.2%	
MOI	° • Policy Implementation Analysis Group	55.6	90.5%	UNDP
MOI	° • Strategic Plan for Industrial Development	51.5	97.1%	UNDP
PD & TMR	* • Modernisation and Strengthening of Patents and Design	3.2	100.0%	UNDP
PB	° • Technical Assistance for GOB Privatisation Programme	100.4	98.7%	IDA
BSCIC	◊ • Special Development and Production Programme	287.5	54.9%	USAID
BSCIC	◊ • Development of SCI in Dohogram Angarpota Region	2.0		
BOI	° • Assistance to BOI	25.4	94.9%	UNDP
	MARKETING : Total	180.5	73.7%	
BSCIC	◊ • Promotion of Marketing and Subcontracting Linkage of SCI	27.5		
BHB	◊ • Marketing Handloom Products	20.0		
EPB	* • Export Development and Promotion	124.8	100.0%	UNDP
EPB	* • Export Monitoring Unit Strenghening of MIS System	8.2	100.0%	USAID
	FINANCE : Total	146.0	63.4%	
BB	° • Credit Programme for Small Entrepreneur	92.5	100.0%	NORAD
BSCIC	◊ • Window for Self Employment and other Viable Community Employment Generation Activities	53.5		
	MANPOWER DEVELOPMENT : Total	1,210.3	60.0%	
BSCIC	° • Self Employment for destituted Women in bangladesh	150.0	98.7%	Netherlands
BSCIC	◊ • Small & Cottage Industries Training Institutes (Phase II)	94.8	2.6%	
BMDC	° • Management Training Programme in International Business	22.6	76.5%	UNDP
DOT	◊ • Reorganisation of 27 Weaving schools	30.0		
BHB	◊ • Expansion of Training Programme and Improvement Technology	80.0		
MOJ	° • Technical Assistance and Training for Workers and Managers in Retained Mills	196.6	59.4%	IDA
MOJ	° • Retraining Programme for Affected Workers of Jute Mills	188.6	55.6%	IDA
MOT	° • Textile Strategic Management Unit (Phase II)	9.3	100.0%	Ford Fundation
NPO	* • Technical Assistance to the National Productivity Organisation	38.2	93.5%	
BCIC	* • Training Institute of Chemical Industries	400.2	72.9%	Netherlands
	R&D, TECHNOLOGY TRANSFER : Total	3,617.3	39.9%	
MOI	° • Thecnical Assistance to BSTI, Dhaka	130.8	87.1%	Japan
MOI	◊ • Estab. and Strengthening of Bangladesh Standard and Testing Institute (BSTI), Dhaka	55.9	53.7%	UNDP
MOI	◊ • Establishment of Branch Office of BSTI, Khulna	19.8		
MOI	◊ • Establishment of Branch Office of BSTI, Chittagong	34.7		
BITAC	° • BITAC Khulna	58.4		
BSCIC	° • Technical Assistance for Handicrft & Small Industries	415.0	9.6%	UNDP
BSCIC	◊ • Control of Iodine Deficiency Disorder Through Universal Iodination Salt	257.5	96.1%	UNICEF

Source: Three Year Rolling Investment Programme (FY1994-96)
Note: ◊ Investment, °Technical assistance, * Self financed

In addition to development of EPZ, export incentives in Bangladesh are stronger as follows:

- Concessionary duty on imported machinery and parts for setting up export-oriented industries and duty free importation for 100% export industries
- Simplified and concise duty drawback system, and exemption from the value added tax
- 100% tax exemption for 100% export industries, exemption of earnings from handicrafts and cottage industries, and proportional 30% to 100% tax rebate on export earning for all other industries
- Bank loan up to 90% of the value on the letter of credit (L/C), and concessionary allocation of foreign exchange
- Additional facilities and benefits to both, users and suppliers of indigenous raw materials for exporting goods production, and
- Granting the same position to indirect exporters as direct exporters, and special treatment to specified export industries with cash incentives, venture capital and other facilities.

The above mentioned "specified export industries" are prospective industries producing products such as toys, luggage and fashion articles, electronic goods, diamond cutting and polishing, jewellery, stationery goods, silk cloth, gift items, cut and artificial flower, orchid, vegetable processing and engineering consultancy services. These labour or intelligence-intensive industries are expected to be export earners next to garments in Bangladesh.

Finance, information and so on are a resource constraint and a big bottleneck. According to the Survey by the Study Team, around 50% of the respondents consider that support for joint ventures with foreign capital and public finance/subsidy should be strengthened.

Promotional measures to attract foreign investments in Bangladesh are well accommodated, as mentioned in other chapters examining joint venture with foreign capital. Meanwhile, Belgium is to establish an investment promotion fund (92.5 million Taka) for joint ventures. The Bangladesh Government and the manufacturing public corporations (MPCs) are active in inducing foreign investments with a view of improving their management. Karnaphuli Fertilizer Co., Ltd. (KAFCO) in the Chittagong District is the first financing project of the Export-Import Bank of Japan. The project is a multi-national joint venture, in which the Bangladesh Government through the Bangladesh Chemical Industries Corporation (BCIC),

Table 6.2 Industrial Projects in 1994-95 Three Year Rolling investment Plan (2)

Agency	Three Year Rolling Investment Programme (FY94 - 96) (in million Taka)	Cost	Cost per Project Aid	[Source of project aid]
	R&D, TECHNOLOGY TRANSFER : continued			
MOT	◊ • National Institute of Textile Training Research and Design Centre	166.5	83.4%	Japan
MOST	° • Feasibility Study for Establishment of National Oceanographic Research Institute	3.7	100.0%	World Bank
MOST	° • Feasibility Study for Establishment of Biotechnology Research Institute	3.7	100.0%	World Bank
MOST	° • Investigation of Concurrence of Aflatoxin/Mycotoxin in Food Grain	22.7	82.8%	ODA
MOST	° • Study on Strategy Information for Software Industry	4.3	100.0%	UNDP
MOST	° • Development of Infrastructure for IT Application	38.3	100.0%	UNDP
MOST	◊ • Newclear Medicine Centres	196.7		
MOST	◊ • R &D Project of Bangladesh Atomic Energy Commission	80.0		
MOST	◊ • Pilot Plant Study for Research Development Ptoject of BCSIR	40.0		
MOST	◊ • Development and Modernisation of BANSDOC	6.4		
MOST	◊ • Technology Planning and Evaluation Unit	25.0		
MOST	◊ • Development of Projects innovated by Young Scientists	16.0		
MOST	◊ • Development of BCSIR laboratory of Medical and Aromatic Plants, Chittagong	16.0		
MOST	◊ • Training and Exhibition on Development of Cooking Stove in Different Districts	9.8		
MOST	◊ • International Centre of Science, Technology and Environment (ICSTE) for densely Populated Regions	100.0	80.0%	Third World Academy of Science
MOST	◊ • Newclear Safty and Protection Laboratories, Chittagong, Khulna & Rajshahi	165.5		
MOST	◊ • Strengthening and Development of National Museum of Science and Technology	220.0	4.5%	UNDP
MOST	◊ • Atomic Energy Institute (Phase II)	170.2		
MOST	◊ • Fuel Saving Projects	5.9		
MOST	◊ • Development of Information Technology	100.0	40.0%	
MOST	◊ • Low Cost Computer Training at Local Level	90.0	33.3%	
MOST	◊ • Computer Training at the Secondary School Level	90.0	33.3%	
MOST	◊ • Research and Development Projects of MOST	399.2	14.8%	
MOST	◊ • Strengthening the Capability of the Bangladesh Computer Councils	99.6		
MOST	* • Construction of Secretariate Building of BAEC	20.0		
BCIC	° • Appraisal Study for Low Grade Jute/Jute Cutting Based Pulp and Paper Mills Projects	8.6	93.0%	JICA
BCIC	° • Study on Production of Newsprint from Biogas & Wasted Paper	8.3	92.8%	UNIDO, WB
BSEC	° • Technical Assistance to Diesel Plant	18.8	100.0%	
BSEC	° • Technical Assistance to Diesel Engine	520.0	100.0%	
	MODERNISATION : Total	2,049.1	71.3%	
BCIC	◊ • BMRE of Chhatak Cement Factory (PHASE II)	1,265.7	66.9%	ADB, DANIDA, France
BCIC	* • BMRE of TSP Complex	59.9	83.3%	
BCIC	* • BMRE of Usmania Glass Sheet Factory	374.2	94.7%	Belgium
BJMC	◊ • BMR of Gulfra Habib	14.3		
BSFIC	◊ • BMRE of Crew's & Co. Sugar Mills	335.0	62.7%	
	NEW PLANT PROJECTS : Total	40,597.7	78.8%	
BCIC	◊ • Deve't of Chittagong Chemical Complex (CIN Unit)	867.7	72.5%	OECF
BCIC	* • Kamaphuli Fertilzer Complex	13,545.0	90.2%	
BCIC	* • Shahjalal Fertiliser Factory	8,838.5	80.0%	OECF, Saudi, Arabia, IDB
BSEC	* • High Voltage Cables and Conductors Manufacturing Plant	234.3	73.8%	
BSFIC	° • Foreign Investment	37.1	95.4%	UNDP, UNIDO

Source: Three Year Rolling Investment Programme (FY1994-96)
Note: ◊ Investment, °Technical assistance, * Self financed

the Overseas Economic Cooperation Fund (OECF), and other governmental agencies and private companies in Japan, Europe including North and East have invested. In addition, KAFCO is unique in terms of BOO (Built-Own-Operate) and will be a model case of investments from now on. BOI also promotes foreign investments and joint ventures, and undertakes financing to target the development of private enterprises.

With respect to public finance/subsidy, BSCIC undertakes direct financing and arrangement of credit finance for SCIs. This financing includes a "Hire Purchase Programme" and the credit finance arranged by BSCIC in the Chittagong Division numbered 1,648 in 1993/94.

There are three (3) development finance institutions (DFIs) specific to industrial credit in Bangladesh. They are the Bangladesh Shilpa Bank (BSB), the Bangladesh Shilpa Rin Sangstha (BSRS), and the Bank of Small Industries and Commerce Bangladesh Ltd. (BASIC). BSB and BSRS disbursed 815 million Taka and 433 million Taka in 1990/91. These FDIs' resources are mostly depending on foreign assistance and their lending disbursements are significantly small. As such, resource constraint is a big bottleneck.

Information services are provided by BSCIC and BOI, and data banks are to be established not only by BSCIC and BOI but also by the above DFIs, the Bangladesh Bureau of Statistics and so on.

Manpower development is well accomodated in structure. According to the Survey by the Study Team, need for manpower training is strong, accounting for 60.7% of the total respondents. This may be attributed to the critical problem, i.e. lack of manpower. In Bangladesh, manpower or skills training is undertaken by the Bangladesh Management Development Centre (BMDC has its branch in Chittagong.), The National Productivity Organisation (NPO), BSCIC, and Ministry of Textiles, among others. In addition, some MPCs like the Bangladesh Chemical Industries Corporation (BCIC) have their own training facilities (Table 6.1 refers).

NPO undertakes publicity of productivity awareness, training, consultancy services, arrangement of seminar/workshop, various survey and study, and assistance in the implementation of the programmes of the Asian Productivity Organization (APO).

BSCIC has undertaken manpower training, skills development and scouting of entrepreneurs, among others. In addition, BSCIC established the Small and Cottage Industries Training Institutes. Entrepreneurship development held in the Chittagong Division had 1,444 participants and women entrepreneurship development programmes were implemented at six (6) Thanas.and in five (5) Districts in 1993/94. This women development is notable since this is a

Table 6.3 Industrial Projects in 1994-95 Three Year Rolling investment Plan (3)

Agency	Three Year Rolling Investment Programme (FY94 - 96) (in million Taka)	Cost	Cost per Project Aid	[Source of project aid]
	NEW PLANT PROJECTS : continued			
BSFIC	* • Pabna Sugar Mills	687.2	59.7%	Pakistan
BTMC	* • Expansion of Sandarban Textile Mills Nilkamal Unit	170.0		
BOGMC	◊ • Madhapara Hard Rock Mining Project	6,874.4	76.0%	North Korea
BOGMC	◊ • Joypuhat Limestone Mine & Cement Project	9,080.0	66.4%	
BSCIC	◊ • Development of Salt Industries in Khulna Satkhira Region	13.5		
BSEC	* • Progressive Manufacture of Buses, Trucks, etc.	250.0	70.0%	
	INVEST PROMOTION : Total	171.1	13.7%	
BOI	° • Belgium-Bangladesh Joint Investment Promotion Fund	23.5	100.0%	
BSCIC	◊ • Investment Programme for Development of SCI	147.6		
	COMMON SERVICE FACILITY : Total	1,207.0	1.0%	
BHB	◊ • Services and Facilities Centres	194.4	6.1%	
BHB	◊ • Banarashi Palli	155.1		
BHB	◊ • Expansion of Service & Facilities Centres	310.0		
BSB	◊ • Extension of Sericulture, Estab. of Cocoon Prd. Cetre, etc.	547.5		
	INFRASTRUCTURE DEVELOPMENT : Total	4,174.6	47.9%	
BSCIC	◊ • Infrastructure Development for Small & Cottage Industries	456.6		
BSCIC	◊ • District Based Industrial Estates (12 Estates)	324.0		
BSCIC	◊ • Experimental Industrial Estate at Thana Level	40.0		
BSCIC	◊ • Industrial Estates and Research Centre for Jamdani	48.0		
BSCIC	◊ • Tannery Industrial Estate	2,190.0	89.0%	
BSCIC	◊ • Semi-Intensive Shrimp Estate	50.0	100.0%	
BSCIC	◊ • Industrial Estate for Sericulture (Rajshahi)	57.6		
BEPZA	◊ • Dhaka EPZ	729.2		
BEPZA	◊ • Chittagong EPZ	279.2		
	PROCEDURE, etc. : Total	256.3	30.1%	
PD & TMR	* • Modernisation of Trade Mark Registry	2.7	100.0%	UNDP, WIPO
TC	° • Institutional Development of Tariff Commission-2	76.8	96.9%	IDA
DPP	◊ • BMR of Government Press (Phase II)	176.8		

Source: Three Year Rolling Investment Programme (FY1994-96)
Note: ◊ Investment, °Technical assistance, * Self financed

sort of start-up project through financing combined with training and it activates women's socialised activities.

In addition, there are branches of the Bangladesh Industrial Technical Assistance Centre (BITAC) and the Techical Training Centre (TTC) located in Chittagong District. The BITAC-Chittagong has undertaken manpower training on metal and machinery industries, while the TTC has undertaken training on automechanics as well as machinery, electrical equipment and drafting.

In the area of R&D and technology transfer, the 1994-96 Three Year Rolling Investment Programme allotted around 3.62 billion Taka to the projects classified into R&D and technology transfer. This amount is the second largest following investments for infrastructure, aside from the new plant projects of the manufacturing public corporations (MPCs) (Table 6.1 to 6.2 refer).

Such emphasis or priority is based on the recognition that R&D and technology transfer are imperative for the development of industries. The Survey by the Study Team reveals that lack of R&D staff is one of the most critical internal problems of the existing industries in the Chittagong District and that public support for product and production technology development is strongly needed by them.

The Bangladesh Standard and Testing Institute (BSTI), the headquarters of which is located in Dhaka, was established by the Ministry of Industry (MOI) . BSTI's branch office is located in the Chittagong District and also in Khulna. Standardisation makes socialised extension of production technology possible, brings about such merits to the users as compatibility of products, and have an effect for export expansion or technology upgrading. BSTI is also disseminating metric system of weights and measures throughout the country..

The Bangladesh Industrial Technical Assistance Centre (BITAC) undertakes upgrading of the skills of the industrial personnel in technical and managerial field, gives advice and consultancy on problems relating to productivity and technology, provides cooperation with international organisations, and provides relevant information services principally for the private sector. In addition, BITAC implements the following:

- Assist in the design and manufacture of jigs, fixtures gauges, moulds, dies, tools, and prototype for industries

- Develop product processes and tools to help industries in improving the quality, increasing production, reducing cost and utilising indigenous raw materials and to increase the scope of indigenous manufacture

- Conduct productivity studies.

The Bangladesh Small and Cottage Industries Corporation (BSCIC) undertakes product & process development and extension service, development and distribution of new and innovative designs and prototypes, transfer of new technology, and quality control and improvement, among others. Design development and distribution programmes numbered 489 in 1993/94 in the Chittagong Division. BSCIC implements research and development programmes for edible salt refiners through training and promotes the setting-up of a Salt Research Centre at Cox's Bazar. BSCIC already succeeded in increasing productivity of shrimp production to about three fold (2,000 kg. per acre) against ordinary method and plans to set up four (4) shrimp cultivation industrial estates at Cox's Bazar.

Furthermore, the National Institute of Textile Training Research and Design Centre will be established under cooperation with Japan. The Ministry of Science and Technology (MOST) is undertaking many projects as shown in Table 6.2. They focus on basic R&D. MOST carried out studies on electronics, processing industry and small scale engineering and undertakes development of science and technology information services through the Bangladesh National Science and Technical Documentation Centre (BANSDOC). MOST also promotes the establishment of the National Museum of Science and Technology (NMST), the National Oceanographic Research Institute (NOPI), the Biotechnology Research Institute, and the International Centre of Science, Technology and Environment (ICSTE), among others.

The Bangladesh Council for Scientific and Industrial Research (BCSIR) have the divisions including Chittagong laboratory and undertakes the following:

- Organisational structure: food science, ceramics, pilot plant, process development centre
- Development of solar and fuel energy, development and distribution of cooking stove
- Development of processes and patents, and pilot study for commercial application
- R&D on herbal medicine, food processing, fuel, glass, leather, and
- Development of medical and aromatic plants at Chittagong laboratory.

Jute is called the golden fibre of Bangladesh. Development of extensive and efficient use of jute has been energetically strengthened, since demand as conventional textile is already limited. Utilisation of low grade jute and jute cutting-based pulp and paper mills are studied by BCIC. In addition, the Bangladesh Jute Research Institute has recently undertaken development of "Geotextile" used for reinforcement of earth structure.

Modernisation of production facilities is the basic strategy for survival of the existing industries in the Chittagong District. However, as shown in Table 6.1 to 6.2, the public sector is attached too much importance. The public support measures are oriented sharply to BMRE of the manufacturing public corporations (MPCs), for which the new plant projects are allocated 75% of the total budget in the 1994-96 Three Year Rolling Investment Programme.

On the other hand, investments for balancing, modernisation, replacement and expansion (BMRE) and BMR are granted incentives that is a 7.5% advalorem import duty rate is allowable on 100% value of imported capital machinery and 10% value of imported spare parts.

Investment incentives in Bangladesh are cascaded along different development stages of areas to promote industrial dispersal. The areas in the Chittagong District are defined as follows:

- Developed areas: Thanas in the Chittagong city area (Kotwali, Double Mooring, Chittagong Port, Panchlaish, Pahartali, Chandagon, Hathazari), Raozan, Rangunia, Mirsharai and Sitakunda

- Under developed areas: areas other than developed areas
  Under developed areas are divided into two sub-areas, namely less and least developed. The least developed area is called "tribal area." Area-wise incentives are as follows:

- Investment incentives or tax holiday are applicable to all investment projects

- The period for tax holiday is calculated from the commencement of commercial production and cascaded along different development stages of area, five years for developed areas, seven years for less developed, nine years for least developed and twelve years for special economic zones. In lieu of tax holiday, accelerated depreciation is available, at 80% in the year commercial production starts, 20% in the following year but 100% depreciation is allowable to investments in less developed areas

- Low duty rates on machinery imported by 70% export-oriented industries. Industries exporting a minimum of 70% of the total annual production in developed areas may submit a Bank Guarantee (BG) to the Customs Authority for 33.33% (66.66% possible in under developed areas) of the total import duty payable at the rate of 7.5% advalorem. This BG will be returned after installation of machinery and fulfillment of the export condition. In this case, effective rate of import duty payable is 5% (2.5% possible in under developed areas) advalorem.

Investment promotion is undertaken by BOI, BSCIC and BEPZA. BOI is in charge of investment promotion for the private sector other than under BSCIC, BEPZA and other government agencies, and BOI has undertaken activities as follows: approval and registration of industrial projects with incentives; preparation & implementation of investment schedule including identification of investment sectors; financing and providing assistance to new industries; and adoption of necessary measure for creation of capital for investment in industries, among others. BSCIC specialises in the development of small and cottage industries and has undertaken preparation of investment schedules, pre- and post-investment counselling, and recommendation for duty exemption and tax holiday, among others. BEPZA develops and administer EPZ, undertakes investment promotion and provides public services to

EPZ enterprises. Investment promotion of BEPZA is exclusively undertaken by the headquarters located at Dhaka.

The Bangladesh Handloom Board and Bangladesh Sericulture Board will develop or expand common service facilities like the Services and Facilities Centres, according the 1994-96 Three Year Rolling Investment Programme. With respect to other infrastructure, BSCIC has developed industrial estates (IEs) for small and cottage industries in general, shrimp cultivation and leather tannery, among others. BEPZA is expanding EPZs developed both, in Chittagong and Dhaka.

6.3.3 Proposed Support Measures

The current support measures for industries or industrial development in the Chittagong District and Bangladesh have been reviewed above and they are well accommodated in terms of items. However, there are many issues including those on their application to be addressed for encouraging and developing the existing industries efficiently. This section will propose support measures to be strengthened, while clarifying relevant issues.

Aside from statistical classification, the existing industries in the Chittagong District could be categorised into four types as shown in Figure 6.7. Those categories are re-exporting, localised export, import-processing, and localised domestic market industries. These business patterns sometimes affect the effects of support measures. In addition, which business pattern is prioritised could be related to phasing (short, medium and long). For example, development of re-exporting industries may have the first importance in the short term. These four categories of business pattern are used for the following study.

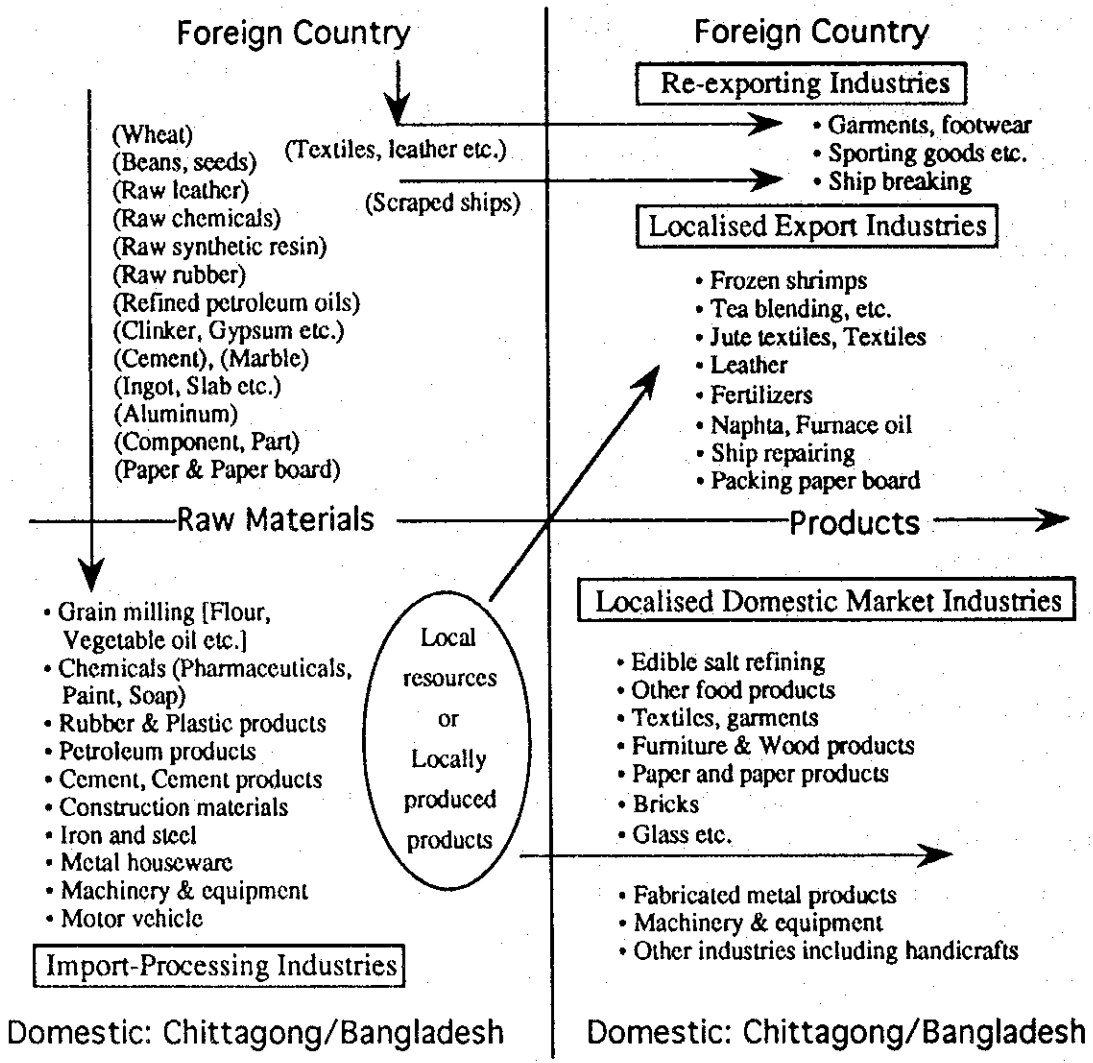
The phasing is as follows:

- Short term — the years 1996-2000
- Medium term — the years 2001-2010, and
- Long term — the year 2011-2020

It is important that support measures are not only strengthened individually, but also integrated conducive to more effectiveness as a whole. To this end, integrated projects/programmes will be proposed through mobilising different support measures organically and systematically.

Support measures for industries in Bangladesh has attached too much importance to the public sector, that is the manufacturing public corporations (MPCs). This tendency has not yet significantly changed in the 1994-96 Three Year Rolling Investment Programme, in which

Figure 6.7 Categories/Business Patterns of Existing Industries in Chittagong District



investments to MPCs account for about 80% of the total budget as seen previously. The World Bank reported that 78.5% of industrial investments in Bangladesh (1990/91) originated from the private sector. Such inequity deeply discourage private enterprises and therefore the emphasis is to be placed on their development in planning support measures.

It is not so important, what type of industry is prospective, but which enterprise. Enterprises with excellent management resources or capability can enter into new business beyond the range of the existing business and also can have power to cope with changes in business circumstance.

Bangladehi independence in 1971 brought about the critical problem that is the absence of businessmen. However, recently "the first generation of businessmen" has grown in the Chittagong District. If support measures are prepared so as to give incentives for such enterprises, accelerated development of the existing industries will be more viable.

In addition, it could be effective in view of the further development of the Chittagong District to enhance the performance of the core enterprises leading the growth of the District as a whole. The growth of local core enterprises will be a nucleus for the growth of other enterprises through deepening and expanding mutual linkages.

Emphasis should be placed on the development of small and cottage industries (SCIs). The existing industries in the Chittagong District comprise mostly SCIs, which have many internal problems and which are more sensitive to external constraints. Thus, the establishment of a system supporting SCIs is very important not only for SCIs, but also for the development of the Chittagong District as a whole. If "Chittagong's Dream" will be established in such a way that businessmen of the first generation increase additionally and concomitantly, the second generation emerges through the support measures for development of SCIs, it is expected that investor's mind now strongly oriented to the commerce and service sector will change and then investments in industries will be activated. On the other hand, integrating SCIs into a cluster with a position of production centre is also effective, since management capability of SCIs is in general small.

Mobilisation of the private sector's vitality is crucial to develop industries successfully. Emphasising particularly the development of private enterprises, it should be considered that support measures have to incorporate the needs of industrial associations representing the interests of their business society, and that some measures, if necessary, will have to be turned over to them utilising their experience and capability. The Chittagong Chamber of Commerce and Industry (CCCI) has extended activities such as suggestions and recommendations on industrial policy measures. In addition to these roles, CCCI should have a position to participate in the implementation of support measures for industrial development.

The internal problems and external constraints of the existing industries are mostly interactive and some of them are caused by the socioeconomic background or factors in Bangladesh. The problem structure is illustrated and summarised in Figure 6.8. Four fundamental problems form a circular structure. They are specifically the limited domestic market, high cost/low productivity, small profits/small reserved funds and small investments. These fundamental problems could not be resolved directly in the short term and it is therefore needed to continuously and seriously mobolise support measures to solve problems or mitigate constraints connected with these fundamental problems.

However, not all the socioeconomic background or factors causing the fundamental problems could be addressed solely by industrial policy measures.

It is suggested to address the following issues and strenghen support measures as outlined below (Table 6.4 refers).

1) Raw Material Sourcing and Marketing

a) Extensive Use of Bonded Warehouse (in the short term)

Duty free importation through bonded warehouse is effective for keeping re-exporting and import-processing industries competitive. However, the term for supply of bonded inputs to be financed other than through back to back L/Cs is short or up to four months. Therefore the following merits from bond business can not be fully mobilised. In order to address this, the bonded term should be expanded, for example, more than one year under the contidion that the user's self-control can be ensured.

The merits derived from duty free during bonded term are:

- Reduction in the expense for interest corresponding to value of duties to be imposed and for insurance fees and others
- Import duties payable by the buyer of bonded goods and smoothed transaction through possible pre-inspection of goods
- The supply-demand control by bonded business refers to supply of goods just meeting the timing, flexible responses to change in price and foreign exchange rate
- Reduction in office expenses by bonded business
- Merits from processing and transforming imported goods into other than banned or restricted items during bonded term.

In addition, the duty drawback system for other than EPZs and boned business in Bangladesh is so complicated and so time-consuming that its use should be reduced through increased phasing of the bonded warehouse centring on port areas such as Chittagong. This may be conducive to reduction in the administrative costs. The bonded business should be extensively used permitting a self-controlled system and bonded transportation without stationed customs officer. These will contribute much to the improvement of the business environment in the Chittagong District.

Figure 6.8 Problem Structure concerned with Existing Industries in Chittagong District

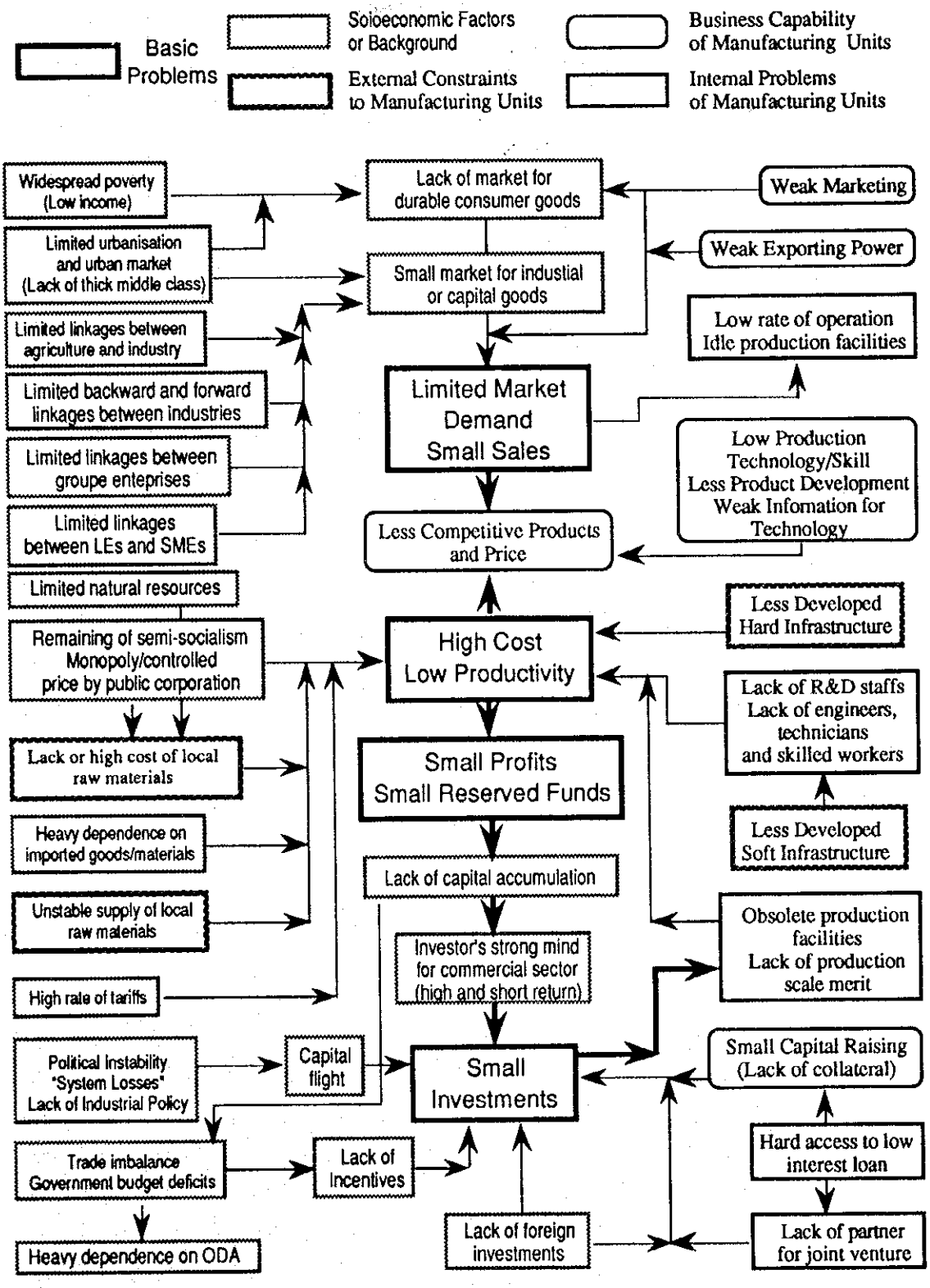


Table 6.4 Proposed Support Measures for Existing Industries in CTGD

	Phase 1 1996-2000	Phase 2 2001-2010	Phase 3 2011-2020
1. Raw material sourcing and marketing			
1.1 Extensive use of bonded warehouse	□	→	→
1.2 Effective use of foreign agencies for import promotion	□	→	→
1.3 Permission to market EPZ products into domestic market	□	→	→
1.4 Strengthening of wholesalers' functions		□	→
1.5 Strengthening of Export Promotion Bureau		□	→
2. Finance, information etc.			
2.1 Strengthening of financing support functions of industrial associations	□	→	→
2.2 Extensive use of JETRO overseas investment cooperation scheme (JOIN)	□	→	→
2.3 Special incentives for localised domestic market industries	□	→	→
2.4 Establishment of Chittagong Investment Corporation		□	→
2.5 Development of information network system		□	□
3. Manpower development			
3.1 Strengthening of manpower training and relevant incentives	□	→	→
3.2 Training by the Bangladesh Standard and Testing Institute (BSTI), Chittagong	□	→	→
3.3 Strengthening of manpower development functions of CCCI and other industrial associations	□	→	→
4. R&D and technology transfer			
4.1 Extention of technical advisory programme	□	→	→
4.2 Institution building for expansion of technology exchange among enterprises		□	→
4.3 Linkage with public R&D institutes		□	→
5. Modernisation, strengthened incentives and development of industrial estates			
5.1 Strengthening of capital raising capacity to modernise production facilities	□	□	→
5.2 Creation of incentives for pollution control		□	→
5.3 Development of industrial Estates	□	□	→
6. Integrated projects/programmes			
6.1 Cluster development of small and cottage industries (SCIs) as a production centre	□	□	→
6.2 Special modernisation programme for specific industries		□	→
6.3 Establishment of Chittagong Merchandise Mart (CMM)		□	□

b) Effective Use of Foreign Agencies for Import Promotion (in the short term)

There are countries with special measures to promote imports by other than customs-related means. Japan is a case. The Japan External Trade Organization (JETRO) established the Business Support Center (BSC) and the Import Square (IS) to support strongly imports from foreign countries. BSCs are located in Tokyo, Osaka, Kobe and Nagoya and they provide free use of office space during a certain term and other business services for foreign businessmen. IS in major cities provides free use of antenna shop to develop the Japanese market for foreign made products for one year. Exporters in the Chittagong District are expected to expand

exports through the effective use of facilities accommodated for import promotion in foreign countries.

c) Permission to Market EPZ Products into Domestic Market (in the short term)

EPZ enterprises are obliged to export 100% of their products mainly as some sort of compensation for privileges granted to them. It is perhaps no problem legally to sell their products in the Bangladeshi market, if they pay import duties on raw materials used for the products. However, this is not permitted probably to avoid disorder in the domestic market. Bangladesh is, in line with other Asian countries, expected to permit portions of EPZ products to be imported into the local market. The portions may be established reasonably at 30% if permitted, since export-oriented industries are defined as those exporting 70% or more of their products.

d) Strengthening of Wholesalers' Functions (in the medium term)

There is a close relationship between manufacturing and wholesaling in the Chittagong District. According to the Survey by the Study Team, there are many manufactures carrying on business through wholesalers. Some 74.9% of 247 respondents sell through wholesalers, while 53.0% selling more than 80% of their products through them. Some 68.8% of the respondents source through wholesalers while 53.5% sourcing more than 80% of their raw materials through them. A crucial issue to be addressed by the manufacturing enterprises in Chittagong District is to strengthen their competitiveness and sustain their growth in response to the globalisation of business activities, which is more extensive after the commencement of the World Trade Organisation (WTO). To this end, functions of wholesalers are expected to be strengthened along the following directions:

- To strengthen their marketing comprehensively: structuring strategies for global logistics through either transforming themselves into a general trading company from a specialised company or otherwise strengthening of the wholesale section along the above direction in a group of enterprises carrying on business energetically in the Chittagong District

- To strengthen their capital raising and financing functions through the expansion of financing for small and cottage industries (SCIs) through partnership or linkage with foreign trading companies, among others

- To promote their transformation to information-intensive wholesalers with strong marketability while targeted toward upgrading SCIs' technology
- To strengthen their intermediation functions for joint venture with foreign capital
- To supply raw materials at low prices by bulk-buying.

e) Strengthening of Export Promotion Bureau (EPB: in the medium term)

The key point for the further expansion of export is to diversify in terms of item and market, since Bangladeshi exports are mostly shouldered by a few items like garments and jute textiles. To this end, the function of the Export Promotion Bureau (EPB) should be strengthened as follows:

- To identify the market needs through establishing branch offices for export promotion in major foreign countries
- To excavate prospective export products and to strongly support their commercialisation by Bangladeshi industries including small and cottage industries, and
- To organise export-oriented industries and exporters for the further extension of export promotional activities.

The World Trade Organisation (WTO) has already started working and it will not be needed at the latest after 2005 for the EPB to allocate quota for garments export and to issue General Systems of Preferences (GSP) Certificates. In line with the removal of such functions, the EPB is expected to be a stronger agency for export promotion as mentioned above.

2) Finance and Information

Resource constraint on finance is a big bottleneck in Bangladesh as seen previously and therefore the following measures are expected to be established for the development of existing industries:

a) Strengthening of Financing Support Functions of Industrial Associations (in the short term)

The credit guarantee scheme is already introduced in Bangladesh, but there is no unsecured loan or loan without collateral. On the other hand, it is an issue that small and cottage industries in most cases have no collateral and therefore face difficulties in obtaining loans. To address this, the Chittagong Chamber of Commerce and Industry and other industrial associations are expected to serve an integrated lending programme of credit guarantee and unsecured loan.

b) Extensive Use of JETRO Overseas Investment Cooperation Scheme (JOIN: in the short term)

Existing industries need strongly support for joint ventures with foreign capital, according to the Survey by the Study Team. Even if they are large enterprises like the manufacturing public corporations (MPCs), they find it difficult to establish foreign joint ventures with foreign partners. Partnerships are already formed between local private enterprises and foreign enterprises in the Chittagong District, but they are limited to technology or selling. Capital raising through joint ventures is mostly harder among small and medium enterprises.

The Japan External Trade Organization (JETRO), which has its branch office in Dhaka, has undertaken 154 units of JOIN operations over the period FY1986 to 1993. This JOIN scheme supports Japanese small and medium enterprises, which want to invest alone or jointly in twelve (12) developing countries. In Bangladesh, a Japanese rope maker supported by JOIN already started operations. It is expected that the existing industries in the Chittagong District use extensively the JOIN scheme to find successfully their partners for joint ventures.

c) Special Incentives for Localised Domestic Market Industries (in the short term)

The Bangladeshi Government abolished the system of preferential credit (SPC) for agriculture, jute, non-traditional exports, small industries and public corporations. This system was in operation with directed credit and subsidised refinancing based on quarterly disbursement targets for priority credits fixed by the central bank.

On the other hand, localised domestic market industries (based on local-made raw materials) have fewer incentives compared to re-exporting and import-processing industries. To address this situation, the same incentives as the SPC including loans at low interest rates are expected to be reintroduced for localised domestic industries in the private sector.

d) Establishment of Chittagong Investment Corporation (in the medium term)

This is envisioned to bring up prospective manufacturers to local core enterprises leading the growth of the Chittagong District, invested by the third sector corporation to be established jointly by the public and private sector.

The Investment Corporation of Bangladesh was established by the Government in 1976. It underwrites public issue of shares, and provides bridge financing, debenture finance, mutual funds and investor's scheme. The Government established additionally other facilities like the Industrial Promotion and Development Company of Bangladesh Ltd. However, they are sharply oriented to the manufacturing public corporations (MPCs) and private enterprises have less access to them.

The Chittagong Investment Corporation (CIC) will be initiated by the private sector like the Chittagong Camber of Commerce and Industry and it will be established jointly in cooperation with the public sector including the Bangladeshi Government and foreign assistance agencies. The main role will be to invest in prospective manufacturers with potentials to become local core enterprises and to dispose their purchased shares after the objectives of investment are fulfilled.

e) Development of Information Network System (in the medium and long term)

The importance of information on industry, technology and business is well recognised in Bangladesh, and information services are provided by BOI, BSCIC, BBS and other special agencies. The data are, however, at a low coverage and to a large extent not reliable, partly because the data collection has not been organised appropriately.

In addition to strengthening of BOI, BSCIC and BBS, it is also imperative that the private sector cooperates in addressing this situation. The Chittagong Chamber of Commerce and Industry should strengthen the function for collecting and providing business information. In the long term, it is expected to establish an information network system wherein information service organisations will be mutually able to avail themselves of their data on-line.

The Survey by the Study Team among the existing industries in the Chittagong District reveals that 14.6% of the total respondents regard hard access to advanced market information as an external constraint, while 28.3% require information on advanced technology, specifically:

information on product development 15.8%; on production equipment or system 15.0% and on materials 12.6%.

3) MANPOWER DEVELOPMENT

Selected organisations for manpower development located in the Chittagong District have undertaken training mainly on metal, machinery and electrical equipment as shown in Table 6.5.

a) Strengthening of Manpower Training and Relevant Incentives (in the short term)

Manpower training like skills training is undertaken by many organisations including BSCIC. The training is expected to be matched more exactly with needs of private enterprises and staffed with better trainers. On the other hand, skills could be more efficiently acquired through on the job training in some cases where it is considered to give subsidy for wages or special deduction from income for a fixed period of time. In such a case, to restrict job hopping of benefited workers under certain conditions seems to be reasonable.

In addition to entrepreneurship and skills development, leader training is expected to be programmed, targeting increase in productivity, since skills transfer and upgrading of quality control could be disseminated more effectively throughout the enterprise or factory, if trained leaders are among the workers.

b) Training by the Bangladesh Standard and Testing Institute (BSTI), Chittagong (in the short term)

The BSTI, the headquarters of which is located in Dhaka, has its branch office in Chittagong District, where there is a sizable number of enterprises including domestic market industries which will expand export or envision to start export business. There are products, of which standardised production is one of the prerequisite for export. Such products are furniture, plastic products, metal processing, machined processing, stationery and toys. In this context, BSTI is expected to undertake training targeting to transfer the points on upgrading of production technology while enhancing awareness of industrial standards.

c) Strengthening of Manpower Development Functions of CCCI and Other Industrial Associations (in the short term)

In not a few cases training on business or management is successfully undertaken by industrial association. The Chittagong Chamber of Commerce and Industry and other industrial associations will undertake training on entrepreneurship, management, tax matters, procedures/documentation on merchandise trade, and awareness of pollution control. Such training will be subsidised by the Bangladeshi Government.

4) R&D and Technology Transfer

Lack of R&D staff is one of the most critical internal problems in the existing industries in the Chittagong District, and support measures for the development of products and production technology are needed strongly. Institutionally, it is stipulated that the manufacturing public corporations (MPCs) will spend at least 1.1% of their annual gross profits on R&D activities. MPCs as well as private enterprises are also given appropriate tax rebate/exemption on the amounts spent on R&D. Unfortunately, this system is not always well in operation due to the lack of R&D staff and deficits among MPCs. In order to address this situation, the following measures are to be established:

a) Extention of Technical Advisory Programme (in the short term)

The Bangladesh Small and Cottage Industries Corporation (BSCIC) undertakes counselling on technology for SCIs, while the Bangladesh Industrial Technical Assistance Centre (BITAC) is supporting production technology development. Additionally, the technical advisory programme should be extended while mobilising foreign experts. To this end, appropriate agencies like BSCIS will be staffed with better advisors, and foreign assistance schemes like Silver Volunteer of Japan will be extensively used.

This programme will accommodate not only short time advice, but also periodical or traveling advice and a long time advice for the radical improvement of the production process. There is a tendency in Bangladesh that private enterprises have not been advised properly, but controlled under supervision including Factory Inspector. This situation should also be improved.

b) Institution Building for Expansion of Technology Exchange among Enterprises (in the medium term)

According to the Survey by the Study Team, the number of existing industries in the Chittagong District which conduct technology development corresponds to 32.4% of the total 247 respondents. Such activities are undertaken mostly by themselves and on a limited scale jointly with foreign enterprises. Only 7.3% transferred technology from outside, mostly from foreign enterprises.

Table6.5 Selected Organisations for Manpower Training, R&D and Testing in Chittagong District

BITAC/CTG: Bangladesh Industrial and Tecnical Assistance Centre, Chittagong
TTC/CTG: Technical Training Centre, Chittagong
BMDC/CTG: Bangladesh Management Development Centre, Chittagong
BCSIR/CTG: Bangladesh Council for Scientific and Industrial Research, Chittagong
BSTI/CTG: Bangladeh Standard and Testing Institute, Chittagong

	Manpoer Training			R & D	Testing
	BITAC /CTG	TTC /CTG	BMDC /CTG	BCSIR /CTG	BSTI /CTG
1. Year Established	1972	1962	1980	1965	1966
2. Number of Staff: Total	172	91	14	182	9
Training staff	147	53	3	108	4
3. Budget in 1994-95 (Taka)	22.6 Mil	3.2 Mil.	1.2 Mil.	15.2 Mil.	0.55 Mil.
4. Building Floor (m2)	3,974	7,577	508	9,814	199 (Rented)
5. Facilities or Equipment					
Auditorium/Class room	○	○	○		
Library		○	○		
Workshops	○	○			
Others		○	○		
6. Number of Trainees/Students	120/year (capacity)	350/year (capacity)			
7. Courses/Areas					
Training:					
Mechanical	○	○			
Industrial spares	○				
Fabrication of machines & system	○				
Engineering	○				
Electrical	○	○			
Electro-plating	○				
Heat-treatment	○				
Foundry	○				
Drafting		○			
Welding		○			
Automechanics		○			
Industrial Sewing		□ (under consideration)			
Others	○	○			
Management			○ (10 courses)		
Consultancy	○				○
Inspection & supervision					
Research for indigenous medical plants				○	

Source: Interview Survey by the Study Team

In short, it is not very often in the Chittagong District that technology is exchanged among individual enterprises or among the groupes of enterprises. Technology exchange among enterprises is effective to develop technology smoothly and it should be strongly pursued to build up institutions for technology exchange or joint R&D like research associations or cooperatives. To this end, a coordinating function for institution building is expected to be taken up by industrial associations and public agencies such as BSCIC, the Bangladesh Standard and Testing Institute (BSTI)-Chittagong branch and the Bangladesh Council for Scientific and Industrial Research (BCSIR)-Chittagong laboratory, among others.

c) Linkage with Public R&D Institutes (in the medium term)

In the Chittagong District, there are the above mentioned public R&D institutes located and also educational facilities such as the Chittagong University (3,330 students studying science, medicine and so on and the Chittagong Polytechnic (1,200 students studying machinery, power electronics, civil engineering, electrical macinery and so on). However, there is mostly no exchange between such organisations and private enterprises. These resources therefore will be extensively mobilised by private enterprises. To this end, it is expected that the public R&D institutes will extend their activities over consigned or joint R&D with private enterprises. In addition, the facilities for testing and research that public agencies such as BITAC-Chittagong branch and BCSIR-Chittagong own will be opened to private enterprises to support effectively their R&D activities.

These technical exchanges are expected to enhance the efficiency of R&D activities through filling the gap between the public and private sector, both of which at the same time will have the common information resulting to stimuli for their R&D staff. Thereby the R&D activities will be further vitalised.

5) Modernisation, Strengthened Incentives and Development of Industrial Estates

Modernisation of production facilities is the crucial issue of the existing industries in the Chittagong District. Nevertheless, support measures for the modernisation are not yet accommodated well. Thus, the following measures should be incorporated:

a) Strengthening of Capital Raising Capacity to Modernise Production Facilities (in the short and medium term)

As seen previously, investments in balancing, modernisation, replacement and expansion (BMRE) or BMR is granted incentives that is 7.5% advalorem import duty rate is allowable on 100% value of imported capital machinery and 10% value of imported spare parts. However, weak capital raising capability per se is a constraint on investments of existing industries including "sick industries," and the system of preferential credit (SPC) for specified subsectors has already been abolished.

It is one idea for capital sourcing in the modernisation of private enterprises that the Government pays a compensation to scrap their obsolete production facilities. This is exactly imperative for radical restructuring , but relatively unrealistic due to the small Government budget.

Another idea is to grant incentives combined with factory relocation of existing industries. This could be applied to the case where they establish their factory for the modernisation at a different site by selling the existing site. If tax on net income generated from land sold is exempted or reduced, funds for the relocation will increase proportionally. In view of land use and town planning in the Chittagong District, this idea is more suitable for relocation from an area, where factories are more densely agglomerated. Also, land is not sold but leased in existing industrial areas and BSCIC industrial estates wherein what is to be sold under this idea is not land ownership but lease holding right. Trade of the lease holding right is possible, but the value of the property is smaller than in ownership. Thus, instituionalisation to sell the land of industrial estate is expected so that industries can enhance their capital raising capability.

This idea is worth being considered, even though not applicable in a case, where the modernisation is carried out at the existing site without factory relocation.

b) Creation of Incentives for Pollution Control (in the medium term)

There are many existing industries with pollution problems in the Chittagong District, but not so many as to prioritise pollution control mainly due to resource constraints. In order to address this situation, investments in pollution control should be granted incentives such as duty free importation of treatment facilities and other strong incentives. Specifically, it will be efficient to carry out pollution control as a component of the modernisation programme or only the installation of production facilities friendly to the environment. These ideas are expected to be established with strong incentives like conditional subsidy, while targeting to improve the image of Bangladesh

c) Development of Industrial Estates (in the short and medium term)

There are sizable existing industries in the Chittagong District which want to acquire an additional site because of their limited factory site area. Among the total 247 respondents to the Survey by the Study Team, 136 or 55.0% of the total want to additionally procure land for expansion of their factory or relocation (88, 35.6%). They place the following priorities on the sites:

- By area: around existing site 59 respondents, on the North Bank of the karnaphuli 8, on the South Bank of karnafphuli 32.

- By type of site: general industrial area or estate 21 respondents, BSCIC industrial estate 17 existing industrial area 16, EPZ 12, others 10.

(Note: Both, by area and by type of site, the number of respondents who want to procure additionalland does not add up to the total 136, since this question accepted multi-answers, but some respondentsanswered either the area or the type of site.)

Even though it is necessary for the existing industries to consolidate feasibility of their investment plan, the need for industrial estates is strong on the whole. It is expected therefore that new industrial estates will be developed taking into consideration the future direction of the development of the Chittagong District.

6) Integrated Projects/Programmes

For the development of the existing industries, aside from support measures examined so far, it could be efficient to combine support measures and thereby create a synergistic and integrated effect. Specifically, there are ideas such as:

a) Cluster Development of Small and Cottage Industries (SCIs) as a Production Centre (in the short and medium term)

This aims at the formation of a production centre in the Chittagong District with Bangladeshi specific products and high productivity by structuring integrated division of works into a cluster through SCIs' specialisation. Prospective industries as a candidate for this centre are:

- Food processing/agri-industries including tea blending, frozen shrimps, edible salt refining, edible oil,
- Garments (apparel), dyeing, handloom, furniture/wood processing, leather goods, handicrafts like ceramics or pottery, plastic products,
- Metal and machined processing estate including tools, rickshaw, bicycle,
- Electrical/electronic products,
- Toys, precious metal/stone processing.

These industries are not necessarily clustered physically within an industrial estate, but are expected to establish cooperatives as a receiver of public support measures and thereby to jointly carry out bulk buying of raw materials, marketing, selling, capital raising, technology development, manpower training, relevant office/documentation works and so on. At the same time, it is efficient to accommodate common service facilities, such as some of storing/production process, pollution control, employee welfare-related and so on.

These centres will be efficiently formed by combining them with tourism development, partly because there are many famous tourism spots or resources including Cox's Bazar in and around

the Chittagong District. The products suitable for tourist's souvenirs are prospective. Souvenirs are also the products with high productivity, mainly because tourist shoulder transportation cost of products and sometimes they buy souvenirs carrying quite a price tag.

It could be also expected to mobilise NGOs active in Bangladesh for the successful development of SCIs production centre and rural areas. The NGOs will participate and cooperate in the centre formation by extensive use of their know-how or information relevant to raw material sourcing, marketing and so on.

Further, skills could be integrated into technology in the process of the centre formation. Skills are personal, but technology is extensively social or organised and therefore imperative for an efficient division of work. One way towards this end is to incorporate common information of the expert system (ES), which computerises accumulated personal information of skilled workers and makes skills transfer easy by analysing, digitalising and visualising the data. ES will enhance the absorption of skills and will contribute not only to bringing up the successors but also to the development of technology in the centre as a whole.

b) Special Modernisation Programme for Specific Industries (in the medium term)

This is a programme to mobilise strong support measures for industries for which both, modernisation of production facilities and relocation of factory are imperative to survive. Specifically, they will establish cooperatives assigned to build up the modernisation plan, and then the public sector will carry out development of the relocation site, provide a loan at low interest rate, provide compensation for scraped facilities in place of large scale production, and will grant reduction in taxes on income to be generated from site conversion for relocation. At the moment, this programme may be suitable for edible salt refineries in the Chittagong District, mainly because their small scale production system is without scale merit. Such a programme may extend to other industries with the same conditions as those of edible salt refineries.

This programme is also effective against "sick industries," provided that more than one enterprise establish a group or cooperatives and they have room for improving themselves.

c) Establishment of Chittagong Merchandise Mart (CMM) (in the medium and long term)

The Chittagong District is the transshipment hub and processing trade centre in Bangladesh facilitated by its good geographical location and port condition. It is predicted that economic exchange or transaction with SAARC countries (India, Pakistan, Sri Lanka, Nepal, Bhutan and

Maldives, Bangladesh) and Myanmar will extensively increase. Even though Bangladesh is not so abundant in natural resources for industrial use, the key opening door toward the development of the District is the processing trade that is re-export of raw materials imported from the surrounding countries . As such, Chittagong City is positioned as "Commercial Capital" in Bangladesh and will have the World Trade Centre along with Dhaka.

Transshipment hub and processing trade is a crosspoint between industry and commerce or wholesaling, for both of which the development of a CMM, wherein everything could be procured, will be very promising. To this end, it is also necessary to formally ensure "free trade" framed with a "Free Port of Chittagong", including airport and banking imperative for the Port, and to actively accommodate attractive towns and an environment with much amenity.

Meanwhile, a formal merchandise centre should be established within the CSEZ although some coordination with the planned WTC will be needed. This establishment will be one step toward a Cittagong that is to be the merchandise centre in South Asia or South East Asia and a "Free Port of Chittagong."

6. 4 Recommendations on Support Measures for Existing Industries

A sizable amount of foreign assistance funds has been budgeted and invested in industrial development since Bangladeshi independence in 1971, especially since the transformation process into a free economy system has been started. It is unfortunately pointed out that this has had little positive effects on the development so far. The current industrial policy measures per se are well accommodated in terms of items, probably because Bangladesh has mobilised fully the merits as a late starter in industrialisation. The investment incentives are also stronger than those in other developing countries. As such, the arrangement of measures or tools is not so disappointing but competitive. Nevertheless, it is a widly held perception that the support measures are less effective, mainly due to problems in their application. Subsequently, the fundamental issue is how to establish and operate a system with accountability.

The funds to develop industries in Bangladesh are heavily dependent on foreign assistance. Aside from this, industrial policy measures may be more effective through expanding self-source of the revenue as much as possible. One way toward to this end could be to strengthen the competitiveness of local industries by allocating a portion of customs revenue generated from importation of the same products as those produced by them. This is one way to develop localised domestic market industries in the Chittagong District and it is expected to be incorporated as fast as possible. If the import duty rate will be reduced when the industries

become competitive, then this idea may find an international consensus. Meanwhile, this is expected to be handled not on the general but a special account.

Another way could be to ensure other self-source than customs. The Bangladeshi Government already introduced a trade neutral value added tax (VAT). VAT becomes a principal source together with customs constituting 21.9% of the total revenue, while 33.5% for customs in the 199192 revised estimate. In addition to VAT, revenue from corporation income tax should be raised by reducing or abolishing incentives contained in the tax holidays. This aims to increase not incentive but the self-source and allocate it to implementation of infrastructure development and other support measures by reducing the current income tax rates (40-45%, 50% for banking) at the level promotive to tax payment. In this case, allocation of the increased tax revenue will be an issue between the Central Government and local authorities. Meanwhile, there may be sizable entrepreneurs who prioritise improvement of business environment offsetting tax payment. A reliable relationship between the public and private sector is, however, the engine for the development and growth.

However, there are also some problems in the private sector. Too much expectancy for a short return causes often random diversification of business. It is not easy to involve in and carry on a manufacturing business under the circumstance that there are minds sharply oriented to investments in commerce or the service sector. Nevertheless, Bangladesh is entitled to expect the emergence of enterprises producing a world-top product through specialising in specific areas, cultivating deeply technology and products and thereby establishing their uniqueness. This needs a strong and long consistency but is expected to be realised.

CHAPTER 7:
THE INVESTMENT DEMAND SURVEYS

CHAPTER 7 THE INVESTMENT DEMAND SURVEYS

7.1 Objectives and Scope of Surveys

7.1.1 Objectives of Surveys

Five investment demand surveys in Bangladesh, Japan, South Korea, Singapore and Thailand were carried out as part of the Study team's work.

The overall objective of the surveys was to collect and analyse, at first hand from investors, data relevant to the Study on Industrial Development of the Chittagong Region, to use this data as back up to the Study's findings and to establish, in a preliminary way, the immediate prospects for investment in Bangladesh, both from internal and external sources.

7.1.2 Methods of Survey

The surveys were undertaken by way of a questionnaire, which was mailed to the selected companies. In addition, a number of companies were contacted directly for an interview survey. The purpose of the latter survey was to clarify and add to the findings of the mail survey and give the overall survey more credibility by ensuring that no major misunderstandings get into the interpretation of the survey findings.

The following Table 7.1 illustrates the extent of the surveys.

Table 7.1 : Extent of the Investment Demand Surveys

Country	Number of Companies Contacted
BANGLADESH	200
JAPAN	1,000
SINGAPORE	500
SOUTH KOREA	500
THAILAND	500

SOURCE : JICA Study Team.

7.1.3 Selection of Target Companies

The two hundred companies in the case of Bangladesh were more or less selected by being the top companies in the country, both indigenous and foreign. In the overseas countries, the companies were selected using as a guide the following set of criteria :

- Companies that have already invested or are selling abroad
- Companies that are in a development mode, that is are seeking investment opportunities
- Companies that are profitable
- Companies that are in sectors compatible with the current development needs of Bangladesh.

7.2 The Outlooks of Target Countries

7.2.1 The Outlooks of Bangladesh

- Carrying out the survey heightened the awareness of the Study in the business community in Bangladesh

- Useful information was obtained in identifying the major operating constraints in the present business environment in Bangladesh

- It helped to prioritise the important infrastructure facilities and services that need improvement (e.g. water, sewerage, electricity, telecommunications, transport, industrial estates etc.)

- It obtained indications of companies future plans to expand in Bangladesh.

7.2.2 The Outlook of Japan, S. Korea, Singapore and Thailand

- It introduced Bangladesh as a possible investment location to a sizeable number of companies

- It obtained basic operating data from companies and established if they have or intend to invest abroad, either in Bangladesh or elsewhere

- It ranked the factors of prime importance to them in selecting a country for investment

- It ranked in order of importance to them the infrastructure facilities that must be present in the host country

- It gave a broad indication on how these companies viewed Bangladesh as an investment location.

7.3 The Survey's Major Findings in Bangladesh

7.3.1 The Survey's Major Findings in Bangladesh

The outcome of the survey in Bangladesh was that 207 companies took part from across all business sectors.

A summary of the major findings in the survey is as follows:

- There exists a good investment demand potential in Bangladesh provided the appropriate infrastructure, government policy, political and economic environments are created and sustained

- A total of 134 companies had expansion plans of which 25 were foreign companies, 69 were joint ventures companies and 40 were indigenous companies

- Most (39.61%) of industries having future investment plans report either expansion of their present capacities and/or rehabilitations/modernisation of their existing production facilities

- The main target markets were seen as the USA, Europe, Japan, Canada and Hong Kong

- The five major services sought by the respondents were :

  a) Easy access to finance
  b) Market information and research
  c) Training facilities
  d) Venture capital
  e) Recruiting assistance

- The majority (71.5%) of those surveyed felt that any new EPZ and/or industrial estate should be given the status of a "free zone"

- The five major facilities desired to be located within an new EPZ and/or an industrial estate were :

  a) A customs clearance house
  b) A commercial centre
  c) Security guards and facilities
  d) A Government representative office
  e) A post and telecommunication centre.

7.3.2 The Consideration of Bangladeshi Survey

The following courses of action were recommended:

- Incorporate the services and facilities desired by the majority of respondents into the design criteria for any new EPZ and/or industrial estate in the Chittagong Region

- Prepare basic and detailed engineering plans and design, including an appropriate infrastructure for the proposed EPZ at Chittagong, taking into consideration the identified present barriers/ constraints and desired services facilities highlighted in the survey

- As an integral component of the findings, an institutional and service reform program should be undertaken to increase the efficiencies of the implementing, operating and managing service agencies in the industrial sector, like the Board of Investment (BOI), The Bangladesh Export Processing Zone Authority (BEPZA) and other relevant institutions by minimising the bureaucratic, procedural and operative barriers/constraints as identified through the survey.

7.4 The Survey's Major Findings in Japan

1,102 companies were contacted for the investment demand survey in Japan and 72 of them responded. The direct response rate of the survey was 6.5%. The survey details are provided for in an Annex 3 attached to this volume.

7.4.1 The Survey's Major Findings in Japan

The major findings in this survey can be summarised as follows :

- The most attractive locations for Japanese foreign investment at present is East and South East Asia.

- The prime factors that are taken into consideration in selecting a country for investment is to exploit opportunities in local markets and the availability of low cost inputs.

- The important infrastructure facilities identified as being most significant in a host country was electricity supply and telecommunications.

- The important services identified were consistent government attitude to foreign investment.

- In connection with factory sites and buildings the most important consideration was the provision for the sale of factory sites.

- The services required on an industrial estate or an EPZ were security, warehousing and banking.

- The overall impression of Japanese investors of Bangladesh as an investment location was that there is little known about the country.

7.4.2 Telephone Survey

Because of the poor response rate to the questionnaire in the main survey it was decided to supplement its findings with a telephone survey. Accordingly 257 companies were contacted directly by telephone and very useful information was collected particularly in the area of how Japanese companies view Bangladesh as a potential investment location and also their views on overseas investment generally.

The following were the main findings of the telephone survey :

- Overall, Japanese companies are not considering investment overseas at the moment, but rather they are trying to consolidate their businesses in Japan, because of the difficult economic conditions at home

- Japanese business people are more familiar with investment opportunities in East and South East Asia and in their opinion, the countries at present offering the best investment prospects are China and Vietnam

- Companies that were spoken to that have investments in East and South East Asia and are considering further overseas investments considered that availability of cheap labour was a very important consideration in making investment decisions. They generally considered that these conditions were to be found in East and South East Asia

- Although Japanese companies do not consider Bangladesh at present for investment purposes there was a view expressed that the world economy is changing fast and in this situation it was considered that Bangladesh's importance as an investment location would improve

- Bangladesh's international image is very poor. One tends to think of Bangladesh as a country that is engulfed in a poverty trap and is subject to constant flooding and hurricanes. The implication of this for Bangladesh as an investment location was not encouraging

- The rest days in Islamic countries is Thursday and Friday and there was some concern expressed that business contact with the country could be curtailed, because Japanese rest days were Saturday and Sunday. This leaves only three common business days in the week

- It was generally accepted that low labour costs could be an attraction in Bangladesh, but this had to be weighted against low productivity and high transportation costs to get the finished product to their market

- Because of its distant location from Japan and telecommunication problems, it could be difficult to place orders with the local company and so any business that might be set up by Japanese investors should be as far as possible long run production facilities.

7.4.3 The Consideration of Japanese Survey

The survey's findings could be summarised as follows :

- Although less than 100 questionnaires were returned, much more additional information and insight was obtained directly from the many Japanese companies that were contacted by telephone. The main location for private sector Japanese investment at present is in East and South East Asia. This development shows a move away for investment purposes from countries and continents further afield

- This shift in the Japanese foreign investment pattern reflects the widely held view that the Asian Continent is now at the threshold of an economic renaissance fuelled by a maximisation of benefits and opportunities of a rapidly changing international economic environment. The Continent now produces 25% of global exports, consumes 22% of the world's imports and commands 33% of international services

- A recent Asian Development Bank (ADB) projection said that the overall growth in the Asian developing countries is expected to surpass 7% in 1994 , four times as high as Africa and double the rates of Latin America and The Middle East. Even the hitherto stagnant South Asia grew by 5.2% in 1993 and is expected to post even higher growth in the years ahead, due to an open market orientation, deregulation and economic liberalisation. Compared to South Asia growth rates in OECD countries during 1993 was 3.1%, in Latin America it was only 1.6% and in Sub-Saharan Africa 2.1%

- According to Japan's Ministry of International Trade and Industry (MITI), in about 25 years i.e. by the year 2020 the combined Gross National Product (GNP) of East Asia (including China) alone will be bigger than that of the whole of Europe and twice that of the United States

- Bangladesh's nearest neighbour India could, if its economy continues to develop and is properly managed, become the third largest economic power behind Japan and China in the first half of the next century which must have enormous spin- off effects for Bangladesh

- At this stage Bangladesh, as a new emerging economy, could not be expected to be high on the investment agenda of Japanese companies. But in time with the shift in the balance of global economic power, referred to above, and the improvement in the investment environment within Bangladesh, encouraging signs, which are already beginning to emerge, this will change and the country should be able to attract its fair share of Japanese and other foreign investment.

7.5 The Survey's Major Findings in South Korea, Singapore and Thailand

7.5.1 The Survey's Major Findings in Three Countries

Table 7.2 summarises the response rate to the surveys and the major findings in the surveys were as follows :

Table 7.2 : Response Rate

PARAMETER	SOUTH KOREA	SINGAPORE	THAILAND
No. of Companies	501	501	520
Respondents	54	195	75
% of contacted	10.8 %	38.9 %	14.4 %

SOURCE : JICA Study Team.

- The prime factors identified as most important in selecting a country for investment were the economic climate in the host country; access to a large domestic market and political stability
- The most important infrastructure facilities in a host country was, by far, electricity supply
- The most important services were the quality of the workforce; the provision of venture capital facilities and market information and research
- In connection with the provision of factory sites and buildings the most important consideration was the sale of factory sites
- The services required on an Industrial Estate or an EPZ were :

  a) A banking centre
  b) A customs clearance house, and
  c) A recreational centre.

7.5.2 The Consideration of Three Countries' Survey

The survey's findings could be summarised as follows :

- Having reviewed the data carefully, it is our opinion that of the three countries surveyed, South Korea offers the best environment for attracting foreign investors. The number of Korean companies that already invest or have invested abroad is higher than that of Singapore or Thailand and based on the responses gathered, it appears that their planned size of employment creation, factory size and investment would be more substantial

- The response rate from Thailand was not so high and there does not appear to be much interest in foreign investment among Thai companies. We would suggest focusing resources on other countries that have more extensive plans for foreign investment

- Fewer Singapore companies are currently investing abroad or plan to than companies in Thailand and Korea. As most company offices in Singapore are branch offices that do not take investment decisions, efforts could better be concentrated elsewhere in areas with several or decision making offices

- In attempting to attract foreign investors, the following steps should be taken. First, a thorough evaluation of all the facilities and resources listed in this survey should be undertaken. In addition, any tax savings or financial incentives that could be offered should be put in place. After determining that all facilities and services are of the highest quality possible and easily accessible for foreign investors, a marketing campaign should be carried out. Companies in the above mentioned countries and other countries need to be informed of opportunities available and any advantageous circumstances that would make Bangladesh a prime investment choice. As a number of companies surveyed did not have any opinion and did not know of Bangladesh, this appears crucial for foreign investment to grow.

7.6 Brief Summary of Recommendations

Although many issues and constraints to development were raised by the respondents in the Bangladeshi survey, nevertheless there was an overall positive outlook to further investment in the economy by the respondents. This situation should be followed up by the promotional agencies.

The lack of awareness of Bangladesh as an investment location in foreign markets was apparent from the overseas surveys and confirms the urgent need for promotional strategies to be developed and implemented as soon as possible.

CHAPTER 8:
DEVELOPMENT STRATEGY AND SCENARIO

CHAPTER 8 DEVELOPMENT STRATEGY AND SCENARIO

8.1 National Development Strategy

8.1.1 Industrialisation Pattern and Strategic Options

There is common belief among Bangladeshi policy makers and other development experts that a rapid industrialisation process will boost overall GDP growth performance and help alleviate the country's rising unemployment problem. This approach poses two fundamental questions, namely :

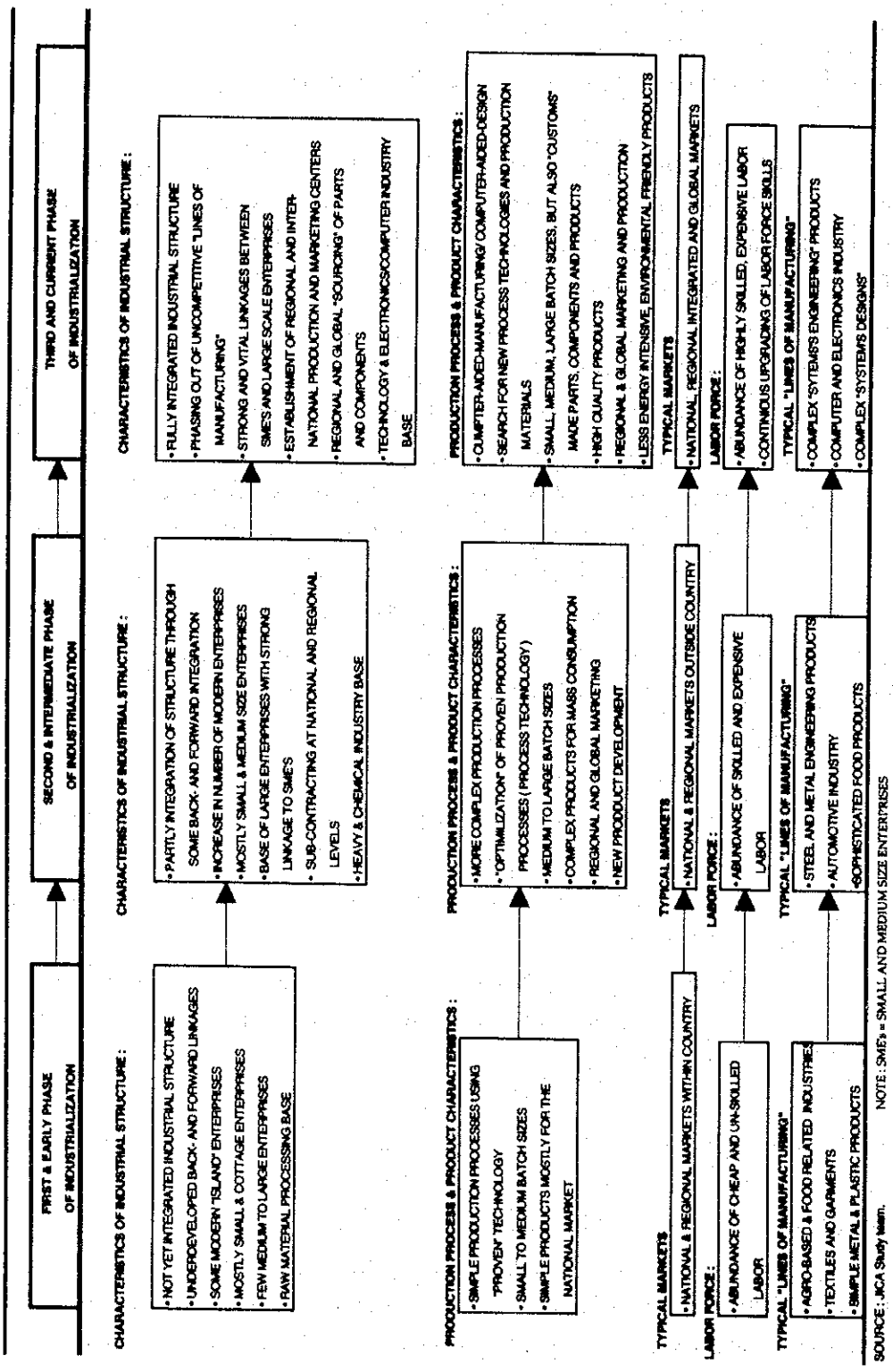
- Firstly, what are the country's basic strategic industrialisation options and which of the options should be selected and then pursued in form of a clearly defined industrialisation strategy, and
- Secondly, what are the "lessons learned" from successful industrialisation processes, for example in the Asian Region, which may help in the formulation of such an indigenous Bangladeshi industrialisation strategy.

The following Figure 8.1 depicts in a schematic manner the three principal and interrelated phases and patterns of the industrialisation process. Each of these phases is characterised by :

- A typical structure of the manufacturing sector
- The mastering of a given range of process and product technologies
- A typical market structure
- Skill and performance characteristics of the labour force and general human resource base
- Typical "lines of manufacturing" (that is a range of products and/or product groups, which can be successfully and profitably sold on national, inter-regional and global markets).

As has been highlighted in other parts of this Report, the present Bangladeshi manufacturing sector is in the early stage of the first phase of industrialisation, showing the typical characteristics as identified in Figure 8.1. The country's principal comparative advantage as compared to other countries (in and outside the region) is her abundance of a cheap and mainly un-skilled labour force. A more detailed discussion of the countries comparative advantage seen from a foreign investment point of view is presented in Annex 5, attached to this Volume. Garments (and to some extent frozen shrimp) is the only product group, in which Bangladesh

FIGURE 8.1: TYPICAL INDUSTRIAL DEVELOPMENT PATH AND PATTERN



in the world). However, such success is partly owned to a garment quota trading system, which will be altered and/or disappear with the new GATT agreement.

The above would suggest that the range of Bangladeshi strategic industrialisation options is narrow. Major constraining factors are :

- The lack of a "critical mass" almost across the board of manufacturing subsectors/product groups, which impedes on achieving economies of scale and, therefore, reducing unit cost and also achieving productivity gains at an accelerated pace
- The lack of appropriate backward and forward linkages in manufacturing sectors with a development potential (for example in garment and leather manufacturing)
- The limited natural resource base and the constrained financial capacity of the country
- The relatively young "entrepreneurial base" of the country, with only limited experience in the global market
- The not yet completed transformation of the economy towards a more or less free market economy.

Major existing advantages are :

- The existence of industrial cores or centres in the country, namely in Dhaka and in Chittagong
- The cheap labour force
- The deep sea harbour facilities in Chittagong
- The country's location between South-East and East Asia and the Indian sub-continent.

8.1.2 Proposed Strategy

It is therefore suggested for Bangladesh to pursue a strategic industrialisation option, which basically directs the country towards the successful completion of the first and fundamental phase of industrialisation as briefly characterised in Figure 8.1.

Figure 8.2 summarises the major elements of such a strategic approach, which ought to minimise risks, while at the same time maintaining a positive and long-term oriented positive future image of the country's industrialisation, that is achieving eventually the third phase of

industrialisation. Figure 8.2 depicts at the same time the basic industrial development direction in terms of major product groups.

The proposed industrialisation strategy rests on three major pillars :

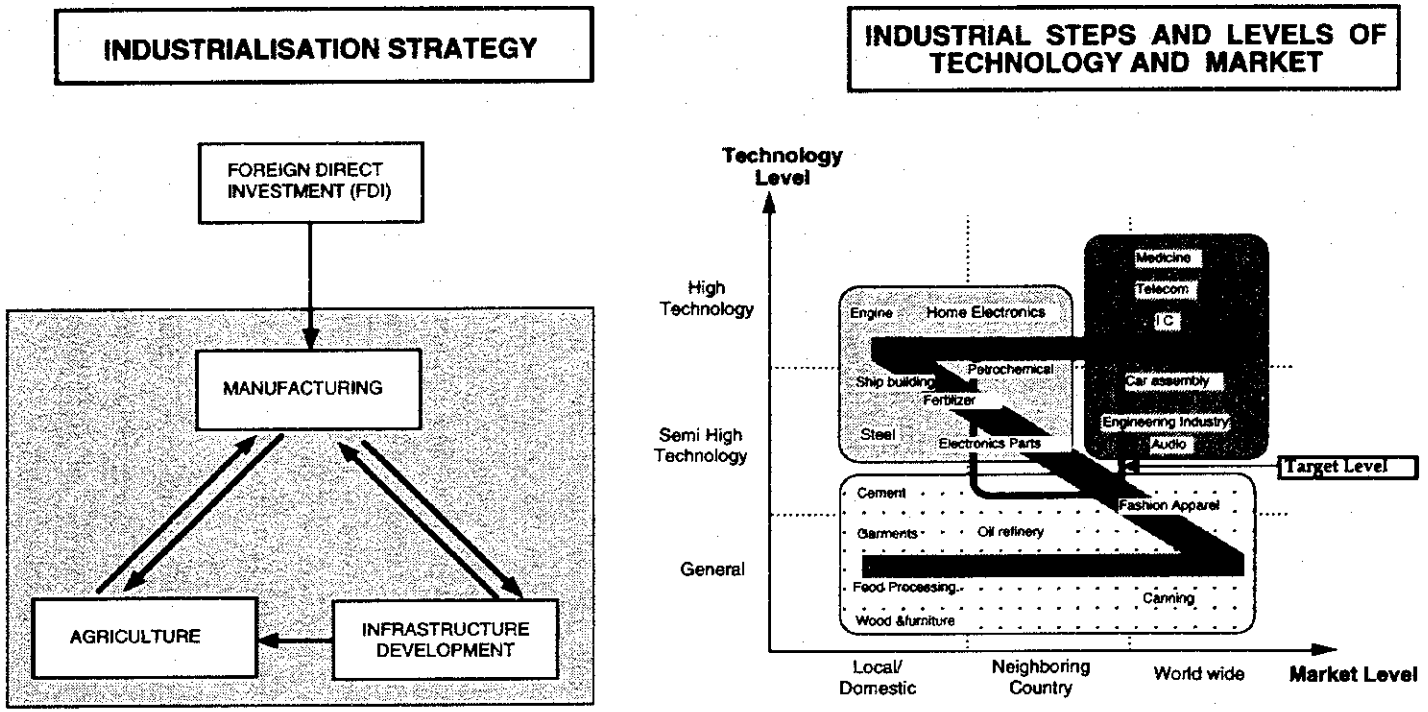
- Accelerated and focused infrastructure development to support the industrialisation process
- Accelerated deepening and strengthening of the linkages between the agricultural and manufacturing sectors (food production and food security are important issues in this context)
- Accelerated development and growth of the manufacturing sector, partly induced through "Foreign Direct Investment" in all those product groups, in which the sector has not yet achieved a minimum level of development.

The proposed strategic approach is geared to :

- Establishing a "critical mass" (economies of scale/minimum sizes; agglomeration effects, externalities) in manufacturing sectors, for which there is a domestic natural resource base as well as a potential domestic market
- Improving the manufacturing capabilities in manufacturing sectors, in which there is already a basic "regional or global competitiveness"
- Establishing, with the help of FDI, industrial cores in manufacturing sectors, where there is yet not enough local expertise available
- Alleviating the employment problem through targeted infrastructure development projects, to be implemented by rather labour than capital intensive methods (road construction, buildings and so on)
- Deepen and broaden the industrial structure with a view to establishing a "critical manufacturing mass" not only in individual manufacturing subsectors but in the manufacturing sector as a whole.

The above "three pillar strategy" would reduce the risks, which are attached to an approach focusing "exclusively" on the targeted and aspired performance of the country's manufacturing sector. At the same time, it would not loose sight of establishing and fostering a sustainable industrial structure.

Figure 8.2 Bangladesh Industrialisation Strategy



Source: JICA Study Team

8.1.3 Operational and Numerical Development Targets : National Level

The above strategy has to be translated into operationalised strategic objectives and numerical targets. The three single most important strategic objectives are :

- To increase absolute per capita income at an accelerated rate
- To promote structural change in the composition of GDP, reflecting an accelerated industrialisation process and path of the country, and
- To focus development efforts, even if this would imply temporary regional disparities.

Table 8.1 provides the numerical targets over the period 1995 to 2020 and at national level. According to these targets, real absolute per capita income would increase over the planning period by factor 3.3, that is from 4,688 Taka/person in 1993 to about 15,546 Taka/person in 2020.

It is estimated that the population size will increase by some 78.8 million people, that is from about 114.4 million in 1993 to about 193.2 million people in the year 2020.
Such population development would increase national average population density from about 775 people/km ^{2} to about 1,309 people/km ^{2}, being almost double the current population density of the Greater Dhaka Region. It is also obvious that this population increase will create strong rural urban dynamics with labour in-migration to regional growth poles.

It is estimated that real GDP will increase over the planning period by factor 5.6, that is from about 536,189 million Taka in 1993 to about 3,002,682 Taka in the year 2020. The real absolute size of the primary sector, mainly carried by agriculture, is expected to increase from 197,662 million Taka in 1993 to about 548,598 million Taka in the target year 2020, implying an expansion by factor 2.8. The size of the industry sector is estimated to grow at factor 10, that is from 94,558 million Taka in 1993 to about 943,131 million Taka in the year 2020. Absolute expansion of the service sector is planned at a factor of 13.1, that is from 243,969 Taka in 1993 to some 1,510,954 million Taka in 2020.

The absolute size of the manufacturing sector is planned to expand by a factor of 13.1, from an absolute size of 54,117 million Taka in 1993 to about 709,474 million Taka in the target year 2020. Hence, the service sector as a whole and the manufacturing sector are planned to show the strongest expansion in absolute terms.

TABLE 8.1 : PROJECTED SOCIO-ECONOMIC FRAMEWORK AT NATIONAL LEVEL 1995 TO 2020

[UNIT : As indicated]

	[UNIT]	Base Year 1993	1995	2000	2005	2010	2015	2020
1. POPULATION SIZE	('000' People)	114,364	119,276	131,716	145,212	159,894	175,844	193,149
2. WAGE SECTOR MANUFACTURING EMPLOYMENT	('000' People)	1,446	1,594	2,035	2,597	3,314	4,230	5,399
3. GROSS DOMESTIC PRODUCT	(Million Taka)	536,189	603,943	819,809	1,125,764	1,509,320	2,117,353	3,002,682
a. PRIMARY SECTOR	(Million Taka)	197,662	213,130	257,257	310,847	375,554	453,848	548,598
b. PRIMARY SECTOR	(% of 3.)	36.86	35.29	31.39	27.61	24.88	21.43	18.27
c. INDUSTRY SECTOR	(Million Taka)	94,558	111,516	169,117	257,904	395,398	609,239	943,131
d. INDUSTRY SECTOR	(% of 3.)	17.64	18.46	20.63	22.91	26.20	28.77	31.41
e. SERVICE SECTOR	(Million Taka)	243,969	279,297	393,435	557,013	738,367	1,054,266	1,510,954
f. SERVICE SECTOR	(% of 3.)	45.50	46.25	47.98	49.48	48.92	49.79	50.32
5. MANUFACTURING	(Million Taka)	54,117	65,482	105,459	169,842	273,533	440,527	709,474
6. MANUFACTURING	(% of 3.)	10.09	10.84	12.86	15.09	18.12	20.81	23.63
7. PER CAPITA INCOME	(Taka)	4,688	5,063	6,224	7,753	9,440	12,041	15,546

SOURCE : JICA Study team computations.

Total wage sector manufacturing employment at national level is estimated to increase by a factor of 3.7, that is from some 1.446 million people in 1993 to about 5.399 million wage employed people in manufacturing in the target year 2020.

8.1.4 Major Assumptions

(1) Compound Growth Rate Assumptions and GDP Composition

Table 8.2 summarises the indicators of past performance trend over the reference period FY 1984/85 to 1991/92 and identifies the estimated compound growth rates for GDP subsectors. The compound real GDP and major GDP sector growth rates are computed results of the subsector growth input data.

The major subsector growth rate assumptions are :

- Agriculture should grow at a rate double the past performance, that is a compound rate of 4.0% over the planning period. Forestry is estimated to grow at the past performance rate of 2.69%. Livestock & fishing is expected to grow at a slightly higher than past rate, that is 3.50%. Since the growth performance of the primary sector is highly sensitive to the growth of agriculture, primary sector expansion would be relatively stable at around 3.8% over the planning period

- Mining & quarrying is an almost negligible industrial sector, the growth performance of which is driven by a single larger project. A 5.0% compound growth rate over the planning period has been assumed

- Manufacturing is estimated to grow at national level at double the past performance rate, that is at 10.0% over the period. Building & construction should likewise grow at a higher than past rate, that is a compound rate of 6.5% over the period. Utilities have shown a high past trend growth rate of some 19%. However, it is assumed that over the planning period a compound trend rate of 7.5% can be maintained

- Under the given subsector growth assumptions, industrial sector growth would slowly increase over the planning period from slightly below 9% to slightly above 9% points

TABLE 8.2 : TREND PERFORMANCE AND GROWTH IMPACT OF MAJOR GDP SECTORS OVER THE PERIOD FISCAL YEARS 1984/85 TO 1991/92

[UNIT : MILLION TAKA / PERCENT]

	AVERAGE SHARE OF MAJOR SECTORS IN REAL GDP 1984/85 TO 1991/92 [%]	COMPOUND REAL GROWTH RATE OVER THE PERIOD 1984/85 TO 1991/92 [%]	IMPACT OF 1 % REAL SECTOR GROWTH ON REAL GDP GROWTH PERFORMANCE [%]	REAL GDP SECTOR GROWTH NEEDED TO GENERATE 1 % REAL GDP GROWTH [%]
MAJOR GDP SECTORS				
Agriculture	30.57	2.09	0.1589	6.29
Forestry	2.58	2.69	0.0172	58.19
Livestock & Fishing	5.62	2.96	0.0413	24.20
PRIMARY SECTOR	**38.76**	**2.24**	**0.2154**	**4.64**
Mining & Quarrying	0.01	306.72	0.0052	191.99
Manufacturing	9.89	4.41	0.1082	9.24
Building & Construction	5.86	5.41	0.0788	12.69
Power, Gas, Water & Sanitary Services	0.99	18.97	0.0465	21.52
INDUSTRY SECTOR	**16.74**	**5.52**	**0.2294**	**4.36**
Transport, Storage , Communication	11.73	4.82	0.1405	7.12
Banking & Insurance	1.94	5.78	0.0279	35.83
Trade Services	9.19	3.26	0.0744	13.45
Housing Services	7.77	3.28	0.0632	15.82
Public Administration & Defense	4.05	9.11	0.0916	10.92
Professional & Misc. Services	9.81	7.31	0.1781	5.61
SERVICE SECTOR	**44.50**	**5.12**	**0.5663**	**1.77**
GROSS DOMESTIC PRODUCT (GDP)	**100.00**	**4.03**	**1.0000**	**n.a.**

NOTES : 1) The impact of 1 % real GDP sector growth on real GDP growth is based on the weighted compound real growth rate over the period 1984/85 to 1991/92.

2) n.a = not applicable.

SOURCE JICA Study team compilation and computation based on table 11.04, pages 485/6; "1993 Statistical Yearbook of Bangladesh", BBS, Dhaka, 1994.

- Transport, storage & communication; banking & insurance and trade services are expected to grow at a compound rate of 7.5%, higher than the past trend mainly due to economic liberalisation measures. Likewise, professional & miscellaneous services are expected to grow faster than before, namely at a compound rate of 8.5%. Housing services are estimated to continue growing at the past trend, that is 3.28%. The growth of public administration and defence, however, is expected to be with a compound rate of 7% below past trend, mainly due to budgetary constraints

- Given the above subsector growth assumptions, the service sectors growth performance would be fluctuating between 7% to 7.5% over the planning period

- GDP real growth performance would, under the above given subsector growth rates, follow a cyclical pattern. If, like is done in Table 8.2, five years planning cycles are chosen for calculation, real compound GDP growth would be about 6.30% over the period 1995-2000; increasing to 6.55% from 2000 to 2005; falling of again to some 6.05% from 2005 to 2010; rising to about 7.00% from 2010 to 2015 and falling of again to 5.77% from 2015 to 2020. Such a pattern would not be untypical, reflecting business cycles of asset replacement and expansion

- The structural composition under this growth scenario indicates a gradual but constant structural shift towards an industry and service driven economy. The share of the primary sector in GDP would decline from 35.29% in 1995 to about 18.27% in 2020. The share of the industry sector would increase from 18.46% in 1995 to about 31.41% in 2020. It must be noted in this context that a manufacturing share in GDP of 23.63% and an industry share of the above magnitude is somewhat high. The share of the services sector would slowly increase from 46.25% in 1995 to about 50.32% in the target year 2020.

(2) Population and Population Growth

Total population estimations are based on the 1991 census total of 109,880,000 people. The 1993 base year has been calculated using the 1981 to 1991 intercensal growth rate. The population increase over the period 1994 to 2020 has been calculated decreasing the annual growth linear by 0.05% per year. The underlying assumption is a decreasing fertility rate.

(3) Wage Sector Manufacturing Employment

Total wage sector manufacturing employment for 1988/89 has been taken from the manufacturing survey of this very year at 1,175,312 people. The base year 1993 has been calculated using output and assuming a linear function between output and employment growth. For the period 1994 to 2020 wage sector manufacturing employment at national level has been calculated using a 5% linear trend function. The differential between output growth is implicit increase in labour productivity.

8.2 Development Scenario for the Chittagong Target Area

8.2.1 Potentials for and Constraints to Accelerated Industrialisation

The Gross Regional Domestic Product (GRDP) of the Chittagong District (CTGD) was Taka 57,737 million in 1993 (in constant 1984/85 prices), which accounts for 10.77% of national GDP. Of the GRDP, the manufacturing sector accounted for Taka 17,331 million or about 30%. This was equivalent to 32% of total Bangladeshi manufacturing at national level.

The total population size in the CTDG in 1993 was some 5.985 million people, out of which 182,000 people, equivalent to 3.0 % of the District's total population, are estimated as the wage employment of the District's manufacturing sector.

The data indicate that a well-established industrial base exists in CTGD sharing major productive functions of the manufacturing sector in Bangladesh. There is also the Chittagong Export Processing Zone (CEPZ) in CTGD, where 54 factories have been and another 34 factories will be located in the future (some of which are already under construction). The existing factories employed some 21,000 workers in 1994.

CTGD is endowed with relatively flat land suitable for agriculture, urban, and industrial use. In addition, as compared to Dhaka, Chittagong has a more favourable geo-strategic position having harbour facilities for international trade and additional deep harbour capacities as well.

Despite the agglomeration of indigenous industries, most of the industrial establishments in CTGD are still at an underdeveloped stage. They belong mostly to the group of so-called "traditional industry" with a long history, but mainly oriented towards the domestic market. There are only very few, which would be categorised as "modern industry" producing products of higher technology. This is one of the fundamental problems characteristic of the existing industrial structure in CTGD or in Bangladesh as a whole.

The "Top 100 Industries in CTGD" in 1989/90 comprised those for food processing such as tea and salt, textiles such as jute, cotton, rope, garment, iron and steel, and bricks. In addition, port-dependent industries such as ship building and repairing, ship breaking, fish processing, grain milling, fertiliser, industrial chemicals, petroleum refinery, cement and so on are agglomerated in CTGD. These are the industries that may thrust the industrial development in CTGD.

Major export industries in CTGD are rather limited to those related to frozen shrimp, tea, jute, garment, leather, fertiliser and petroleum. The industries in CTGD are heavily dependent on

imported materials mostly from developed countries. This creates serious trade imbalances, in particularly with the SAARC countries.

The Chittagong Export Processing Zone (CEPZ) enterprises exported goods in 1993/94 worth a total of Taka 6 billion, which represents a 15% growth over the export value in 1992/93. There seems to be latent potentials for the development of the Export Processing Zone.

Bangladesh is a member country of the General Agreement on Tariff and Trade (GATT), which has been transformed into the World Trade Organization (WTO) in January 1995. This implies that Bangladesh should ratify the agreement of the GATT Uruguay Round in the near future. Under such circumstances, the Government should proceed with its open-market policy and strengthen the international competitiveness of export-oriented as well as domestic-market-oriented industries.

According to the results of the primary survey conducted by the JICA Study Team (Chapter 5 refers), the existing industries in CTGD evaluated themselves in general terms as having relative strength in quality control, design, durability, manpower, brand and management. As relative weaknesses were identified exporting power and channels, capital raising, information on technology, marketing, product development and production technology and skills. The results disclose that obsolete production facilities, lack of R&D functions, low rate of productive operations, environmental problems, lack of skilled workers are, among other things, major constraints of the existing industries in CTGD.

The obsolete production facilities are crucial problems common to all subsectors, and this may be partly attributable to the devastating Cyclone that hit the area on April 29-30, 1991. Exposure to cyclones is inherent to CTGD and one of the crucial factors affecting industrial development in CTGD.

The survey also disclosed that inadequate infrastructure, particularly electricity supply, telecommunications and flood control and drainage systems are major constraints for the management and production of the existing industries. Urgent needs exists for improving the supporting infrastructure in CTGD.

Domestic Capital Formation (DCF) in Bangladesh constitutes more or less 10% of total GDP. This DCF ratio is absolutely too low as compared to about 20% in the Philippines and more than 30% in Japan, Korea, Thailand, Malaysia, Singapore and Indonesia. There is no growth without investment and too little investment in the industrial sector is the most crucial factor that Bangladesh should address and solve.

Low accessibility to the capital market and high interest rates of commercial loans are the most crucial constraints common to all industries.

In summary, there are many constraints for the industrial development in CTGD, which are mostly categorised as "deficient fundamentals" to support the development such as inadequate infrastructure, undeveloped private sector, underdeveloped capital market, inadequate institutional framework, poor social mobility and so on. However, Bangladesh has certain geo-strategic advantages of being located in between East Asia and India, both of which would be major economic regions in the 21 century. There would be quite a potential for the industrial development in Bangladesh in general and in CTGD in particular, if appropriate efforts be exerted by the Government to reform its economy by removing gradually but steadily the constraints or "lacking fundamentals" for development.

8.2.2 Development Strategy and Goals

Bangladesh should break through the existing social and economic vicious circle caused by poverty, social unrest, and resultant sluggish economy, through reshaping the existing industrial structure by placing much more emphasis on the growth of the manufacturing industry.

The structural and performance analysis of GDP (Chapter 2 refers) revealed that the existing GDP structure is very biased towards the agricultural sector. The manufacturing sector accounts for a very small share in GDP, less than 10 percent and the service sector is inflated over its real size, which is owned largely to the so-called "informal sector" that remains quite unproductive yet absorbs agricultural surplus labour.

The modest real GDP growth recorded in the reference period is to a large extent nullified by demographic increase, practically impeding that the real growth effect pushes the economy up onto a track towards a sustainable development path. Most of the East Asian countries are enjoying the success of their economic development and India is also close to joining the Newly Industrialized Economies (NIEs).

As has been observed above, there is common belief that a rapid industrialisation process will boost overall real GDP growth performance and help alleviate the country's rising unemployment problem. In general terms, accelerated industrialisation could bring about the following merits to Bangladesh :

- It has higher ripple effects on the development of other sectors, particularly on the service sector, due to its strong linkage, with the result of pushing up the growth of GDP as a whole.

- It can earn foreign exchange to redress the trade imbalance, which would become even more serious once the economy thrust its momentum and needs to import more capital and consumable goods.
- It has the capacity of creating employment opportunities, which naturally contribute to achieve a more "shared growth" and/or more equitable distribution of income over the country.
- More importantly, it has a probable effect to change the people's mind or mentality to be more compatible with a market-oriented economy, because manufacturing is the world of "rationale" inevitably linked to the outside world.

The National Development Plan should precisely guide and direct the development policy towards industrialisation, along with setting the explicit goals and objectives to be achieved on a short-, medium- and long-term basis.

It is important in this regard to define a readily understandable target that may also be useful to formulate a national consensus on the policy pursued. Such a target could be, for instance, "doubling the per-capita income by the year 2005 or within the forthcoming 10-years time". A target at such a level is required for subsequent full-fledged economic growth and real "take off". The numerical development targets over the planning period 1995 to 2020" contained and discussed in sections 8.1.3 and 8.2.3 are basically assumed along such a concept.

The needed economic performance is :

- Real GDP to grow at the minimum of 6% to 7% annually over the coming decades, with manufacturing to grow at around 10 % annually at national level,
- Gross Regional Domestic Product (GRDP) of the Chittagong target area to grow some percent points above the national average and manufacturing in the target area to grow annually at real 12 % per year,
- Public investment spending to be focused in the target area; and
- Increased domestic and foreign investments in the target area.

The most essential actions that need to be taken are :

- Aggressively promote the country for foreign direct investment (FDI)

- Mobilise internal and external savings, modernise the banking and financial sectors to channel savings into investments promising the highest returns and create a functioning capital market
- Create the market economy on a contest basis

- Proceed with privatisation, and
- Focus development efforts on the manufacturing industry, social and physical infrastructure development, simultaneous trade and agriculture development, and realign the country's social fabric to enhance social mobility.

The functional approach to economic growth recently introduced by the World Bank is highly applicable to the Bangladeshi economy.

More specifically, input will be made from policy choices consisting of fundamentals, selective interventions and appropriate institutions. Such inputs will be based on the competitive discipline of a market and a contest basis, in order to enhance the growth functions of the accumulation of human capital and high investment, allocation of human and capital resources and productive change with technology, with the eventual achievement of rapid and sustainable growth and equitable distribution of income. The following are the points to be addressed by the Government.

The fundamentals include :

- A stable macro economy,
- High human capital,
- Effective and secure financial systems,
- Limiting price distortions,
- Openness to foreign technology, and
- Agricultural development policies.

Selective interventions include :

- An export push,
- Financial repression,
- Directed credit, and
- Selective promotion.

Appropriate institutions include :

- The elimination of extreme bureaucracy and technocracy,
- A high quality civil service, and
- Monitoring.

The previous Figures 8.1 and 8.2 illustrate the industrialisation strategy and pattern, which Bangladesh should follow and explains the three pillars, on which the accelerated industrialisation process should be based.

Chittagong should be given priority consideration within the industrial development policy, taking into consideration its primary function as the national gateway having international port facilities and its inherited trade and industrial base functions.

In consideration of the geographical and functional characteristics of Bangladesh, it is a logical consequence that Chittagong should be developed as the primary industrial base having trade and industrial functions as well as intra- and international physical distribution functions.

Dhaka should also be developed as the inland economic growth centre of the country, simultaneously strengthening the economic linkages between Chittagong and Dhaka. Another major linkage required in the country is the Dhaka-Sylhet corridor, particularly in relation to the maximum use of the natural resources available in the Sylhet area.

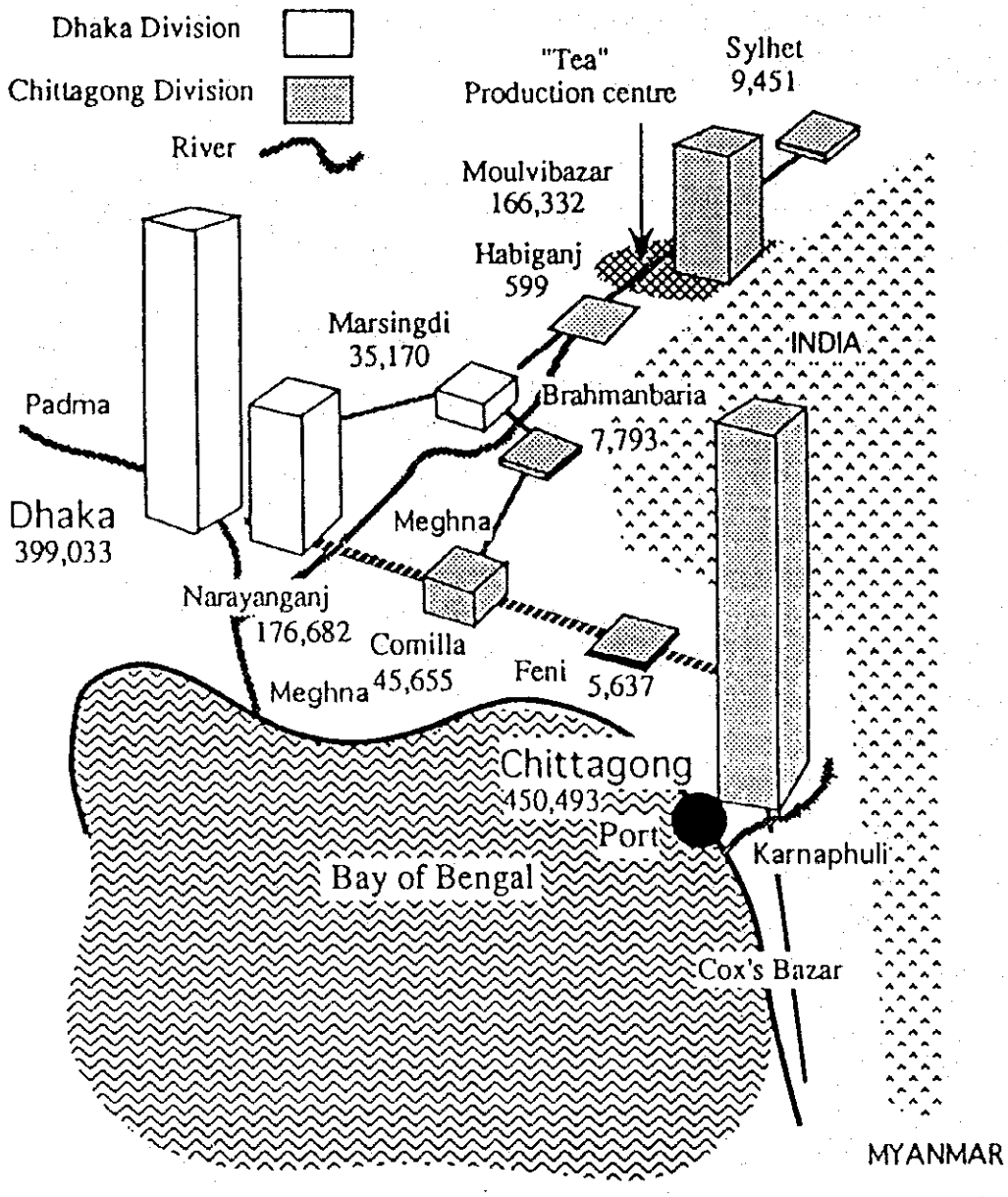
To achieve the equitable distribution of income over the country, economic linkages or networks should be strengthened between Dhaka and other regional nucleus cities at the District level. It is quite clear that accelerated industrial growth will take place firstly in and along the country's existing industrial cores and corridors. Figure 8.3 shows the Bangladeshi existing industrial centres.

Taking into consideration this spatial assignment strategy over the country, the industrial development in Chittagong is of national strategic importance and significance, implying not merely developing the regional industrial base, but building the national industrial base for the benefit of the whole country.

In summary it can be said that :

- As compared to Dhaka, Chittagong has a more favourable geographical position as well as deep sea harbour capacities,
- CTGD accounted in 1993 for only about 5.2% of Bangladeshi total population, but,
- Per capita income in Chittagong district is factor 2.13 above the national average
- Gross Regional Domestic Product has grown at some 5.3% over the period 1985/86 to 1991/92, clearly above the national average,

Figure 8.3 Industrial Corridors



Source: Directory of Manufacturing Establishments (BBS)

- With only some 182,000 industrial workers, CTGD accounts for some 32% of Bangladeshi total gross value of manufacturing output, and
- Finally, but not least, Chittagong has already a well established network of industrial estates and the existing EPZ.

However, basic constraints for the Chittagong target area to be developed as a sort of "focal point" for accelerated industrial development of national importance may be summarised as follows :

- The already congested situation on the Northern bank of the River, where the capacity of the existing infrastructure to meet needs is already beyond its established capacity and insufficient to meet further urban and industrial development,
- The very low development level of infrastructure across on the Southern bank of the River. This area lacks urban cores and is currently the host of only two fertiliser factories,
- The insufficiency of well placed river crossings, the capacity of which would be suitable to handle increasing passenger and cargo traffic across the river in both directions,
- The lack of modern "state of the art" industrial sites and locations together with an appropriate supporting structure; and
- The fact that certain areas along the River banks and along the coastal area are potential flooding zones.

The existing industries in CTGD have also a lot of inherent constraints that would hamper future industrial growth. The following constraints, which have been highlighted already earlier, are underlined again :

- Most of the industries are so-called "traditional industries" biased to be resource-based, such as tea and coffee processing, jute, textiles, garments, cotton textiles, edible salt refinery, bricks and tiles and so on,
- Obsolete production facilities, lack of R&D capacity and economies of scale, low rate of operations, lack of space for storage, pollution problems particularly for water and so on are the most critical problems common to almost all industries,
- Inadequate infrastructure, such as electricity supply, telecommunications, flood control and drainage, among other things, create severe constraints on the production and management; and
- Relatively high cost and unstable supply of raw materials do not warrant higher productivity.

In addition to the inadequate economic fundamentals, there are so many "system losses" largely attributable to inappropriate institutions and a social fabric not compatible with the modern market economy.

8.2.3 Bangladesh International Product-linkage Polis - BIPP

Industrial development in Chittagong should be properly integrated in the regional and urban development plans, aiming at developing the fast-track infrastructure as early as possible, whilst curtailing public spending as much as possible.

Obviously, the productive function is one of the key functions assigned to the region and City. In this context, industrial development in Chittagong should be properly integrated into the regional and City development plans in the Chittagong area.

Suitable infrastructure facilities such as roads, railways, ports, airports, water supply, sewerage, electricity, telecommunications, energy supply and so on are the singly most important economic fundamental that would enable industrial development.

In a broader social context, education, health care and sanitation, amenities and so on are also regarded as infrastructure that is needed to support and ensure sound industrial development.

Such physical and social infrastructure serves primarily as public and communal facilities and, hence, development cost for such infrastructure should be somehow shared equitably between the costs for civil services and industrial use.

As a matter of fact, the cost for infrastructure development cannot be borne in many cases by the industrial sector alone, because of the massive investment needs. The industrial development in Chittagong should be well integrated in the regional and urban development plans and programs, particularly in terms of land use and infrastructure development for this reason.

It is suggested to name the urban development in Chittagong the "Bangladesh International Product-linkage Polis", or BIPP in short.

Figure 8.4 shows the planned future development stage of the "Bangladesh International Product-linkage Polis" in the Year 2020, the structure of which can be referred to as a "core city with seven self-contained satellite cities".

In principle, the development direction is based on :

- Infrastructure development led industrial and overall regional and urban growth, and
- Industrial development fully integrated with further urban development of the Chittagong urban area.

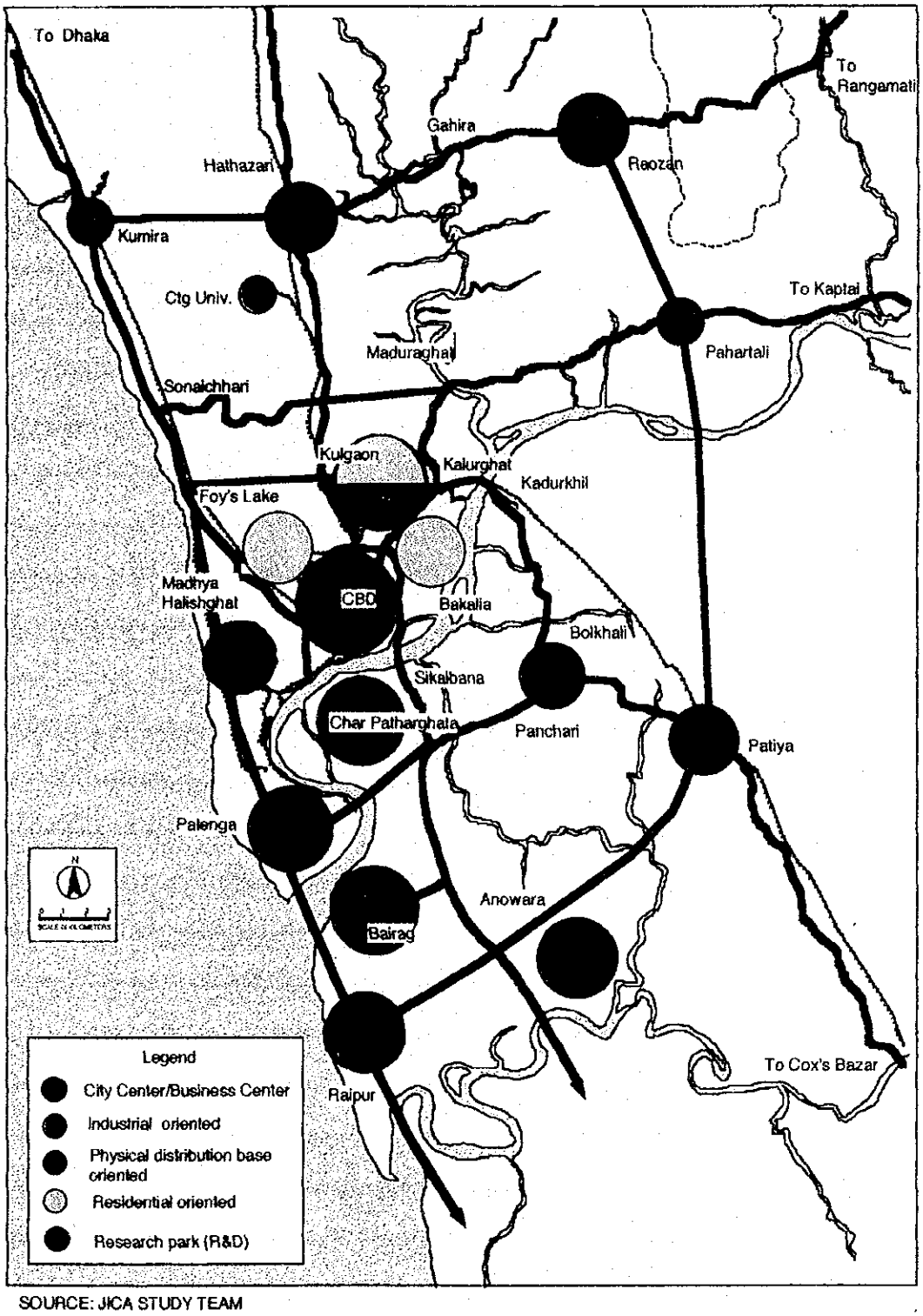
Hence, the major development components of the BIPP comprise :

- Modern urban development on the Sorthern bank of the river, particularly re-developing the existing Central Business District (CBD)
- The establishment of new core cities on the southern bank of the River, including a new CBD roughly located opposite to the existing one
- The provision of modern and suitable industrial locations and sites
- The establishment of one "heavy industry core" having the waterfront facing the sea
- Inland industrial sites for light industries
- A new deep-sea harbour with modern container handling facilities in the proximity of the heavy industrial core
- Inland transport and container depots; and finally,
- A new and modern international airport having direct linkages with major cities in East Asia and South Asia.

The "Chittagong Industrial Development Plan, CIDP/BIPP" is a 25-years plan broken down into five 5 years interval planning periods and starting from 1996. Each plan will be a so called "rolling plan", that is each plan will roll into the next and be inter-connected.

CIDP/BIPP will have a four years formal review cycle when the then current plan will be reviewed and adjustments will be made to the next planning period, based on the progress and results achieved at that stage.

Figure 8.4 The Future BIPP Structure



SOURCE: JICA STUDY TEAM

The 25-year plan may be combined into three broader phases, that is 1995 to 2000 as the short-term, 2000 to 2010 as the medium-term and 2010 to 2020 and further as the long-term planning periods.

Bangladesh should promote herself as the newly industrialised economy, in an attempt to induce massive foreign direct investments (FDI), and probably sell her image together with the countries engulfed by the Bay of Bengal within the framework of the SAARC or the SAFTA currently in debate.

Nowadays, the international economy is moving across the borders of countries, strengthening the mutual economic linkage among major regional cities having nucleus business functions such as New York, London, Tokyo, Singapore, Hong Kong, Shanghai and Bangkok, for example.

Also, under the fierce market economy on a contest basis, regional economic co-operation arrangements such as NAFTA, APEC, ASEAN and EU are becoming increasingly popular.

Besides the substantive co-operation within the member countries such as elimination of tariff barriers, common use of information and transport network and so on, such regional co-operation is motivated by the will of the member countries to sell themselves as the "group" rather than a single country.

Bridging the two distinct regions of East Asia and South Asia, Bangladesh is located in the Bengal Bay, where potential regional development centres are accumulated, including Chittagong, Calcutta, Madras, Colombo and Yangon of Myanmar in the near future.

Chittagong's physical distributing functions as an international gateway city, which caters for the "land-locked" regions and countries such as the North Eastern India, Bhutan and Nepal should be recognised as the important natural hinterland of the Chittagong Port.

Bangladesh would have certain merits to enhance her image as the newly industrialised economy, if the region is integrated as the "Bengal Bay Economic Cooperation Zone" in the future.

There may certainly be conflicting interests, unsolved political issues, historical rivalry, complicated people's sentiments and so on. However, today's global economy may not allow the type of economic individualism, which is less resistible and flexible against changing political and economic circumstances.

Bangladesh is a member of GATT which was transformed to the World Trade Organization (WTO) in January 1995, and the ratification on the agreement with the Uruguay Round would have grave impacts on the Bangladesh economy in terms of non-tariff barriers.

Under such circumstances, international competitiveness is crucial for survival of the existing industries in the Chittagong District, not only for export oriented industries but also domestic market oriented industries.

Appropriate institutional arrangements are the key for the efficient and effective implementation of CIDP/BIPP, and that should place strong emphasis on the establishment of an autonomous, independent implementation agency, empowered with the functions for regulation, licensing, permission, and other administrative affairs, and rested with the responsibility for planing, implementation, and operation and management of the entire development cycle.

The principal objective of the development is to build a regional nucleus city, BIPP, having predominant trade and industrial functions of international standards, which is of national importance and significance to achieve sustainable growth of the Bangladesh economy with more equitable distribution of income.

Therefore, the central Government should designate the development as a "strategic national project" and support it institutionally and financially.

By its nature, however, the project is of the regional or urban development type and the local government should take the responsibility for its implementation therefore. As yet, such decentralisation is not a reality in Bangladesh. Hence, a Chittagong based, independent agency should be organised and virtually full authorisation should be delegated to this agency, including for planning, financing and managing the project implementation.

Generally speaking, any development plans and programs should not be implemented beyond the "absorptive capacities", which may be defined as the social capacity of the citizens or financial capacity of the implementation body.

One of the possible approaches to formulate a consensus with the citizens or the people directly involved in the development of BIPP, is to organise a "deliberation council" made up by representatives of the public sector, business sector and academy. This deliberation council should function to reflect its views in the decision making process of the implementation agency.

The CIDP/BIPP should be implemented in phases, but in an integrated manner so that multiple components such as roads, electricity supply, flood control and drainage, industrial estates and son on can be packaged as one integrated urban and industrial development project.

The development of CIDP/BIPP would involve substantial investments that could possibly cost billions of US Dollars by the year 2000, which would create a heavy burden on the financial affordability of the country. However, as long as industrialisation is to be sought for economic development, there is no possible way to preclude the costly but needed infrastructure development.

In order for the CIDP/BIPP to be viable, some "creative" funding mechanism should be realised together with some innovative thinking of policy makers. Conventional thinking and methods for evaluating the economic feasibility may not necessarily work for CIDP/BIPP, because of the project's broad implications and potential risks.

Such funding mechanism may include, among other things, the Government's subsidy and directed credits, sub-loans from bi-lateral and multi-lateral lending agencies, long-term loans from domestic and foreign commercial banks, issuing development bonds, income from the sale of the long-term lease rights on land and property and other appropriate tax levies.

One thing which can be noted at present is that the substantial investments will bring about considerable ripple effects on the country's economy, particularly in the construction related industries, and will produce plentiful employment opportunities.

And part of the burden to the public side may be reduced by privatising the project components, which can generate reasonable incomes such as power plants and port operations.

Potential risks that may arise in the course of the project should be reasonably managed by means of careful implementation planning, including planning for appropriate measures that should be taken in case such risks occur.

8.2.4 Numerical Development Targets 1995 To 2020 at District Level

As has been the case on national level, the above strategic approach has to be translated into qualitative and quantitative operational planning targets. Table 8.3 provides the key parameter and indicators as they are projected to develop in the Chittagong District over the planning period 1995 to 2020.

Real Gross District Domestic Product (GDDP) measured in constant 1984/85 prices was 57,737 million Taka in 1993, equivalent to about 10.8% of Bangladeshi real GDP in the same year. Real Chittagong GDDP is forecasted to expand by factor 10.0 over the planning period, that is to about 575,220 million Taka in the target year 2020. Such a performance would increase Chittagong's share in Bangladeshi GDP to some 19.2% in 2020.

The District's absolute population size was estimated at 5.985 million people in 1993, that is about 5.23% of total Bangladeshi population in that year. It is expected that the District's population will increase by factor 1.7 to about 10.466 million people in the target year 2020. This would be equivalent to a share of 5.42% of Bangladeshi total population in 2020.

Given such GDDP and population size developments, real per capita income in the Chittagong District would expand over the planning period by factor 5.7, that is from 9,647 Taka/person in 1993 to about 54,961 Taka/person in 2020. The accelerated economic and industrialisation process in the District would result, among other things, in the District having a real per capita income of factor 3.54 that at average national level.

Manufacturing in the District, which accounted for some 32% of total national manufacturing in the base year 1993, is expected to expand by factor 21.3 over the planning period, that is to about 369,582 million Taka. As a consequence of the accelerated industrialisation process in the District, its share in total national manufacturing would subsequently increase to about 52.1% of the national total. Likewise and consistent with the inherent changes of the structural composition of the Districts GDDP, the share of manufacturing would increase to some 64.3% of GDDP in 2020.

Table 8.3 Projected Socio-economic Framework at Chittagong District Level 1995 to 2020

[UNIT : As indicated]

	[UNIT]	Base Year 1993	1995	2000	2005	2010	2015	2020
A. BANGALDESH NATIONAL LEVEL								
1. POPULATION SIZE	('000' People)	114,364	119,276	131,716	145,212	159,894	175,844	193,149
2. WAGE SECTOR MANUFACTURING EMPLOYMENT	('000' People)	1,446	1,594	2,035	2,597	3,314	4,230	5,399
3. GROSS DOMESTIC PRODUCT	(Million Taka)	536,189	603,943	819,809	1,125,764	1,509,320	2,117,353	3,002,682
a. PRIMARY SECTOR	(Million Taka)	197,662	213,130	257,357	310,847	375,554	453,848	548,598
b. PRIMARY SECTOR	(% of 3.)	36.86	35.29	31.39	27.61	24.88	21.43	18.27
c. INDUSTRY SECTOR	(Million Taka)	94,558	111,516	169,117	257,904	395,398	609,239	943,131
d. INDUSTRY SECTOR	(% of 3.)	17.64	18.46	20.63	22.91	26.20	28.77	31.41
e. SERVICE SECTOR	(Million Taka)	243,969	279,297	393,335	557,013	738,367	1,054,266	1,510,954
f. SERVICE SECTOR	(% of 3.)	45.50	46.25	47.98	49.48	48.92	49.79	50.32
5. MANUFACTURING	(Million Taka)	54,117	65,482	105,459	169,842	273,533	440,527	709,474
6. MANUFACTURING	(% of 3.)	10.09	10.84	12.86	15.09	18.12	20.81	23.63
7. PER CAPITA INCOME	(Taka)	4,688	5,063	6,224	7,753	9,440	12,041	15,546
B. AT CHITTAGONG DISTRICT LEVEL								
8. POPULATION SIZE	('000' People)	5,985	6,251	6,970	7,771	8,664	9,529	10,466
9. POPULATION SIZE	(% of 1.)	5.23	5.24	5.29	5.35	5.42	5.42	5.42
10. WAGE SECTOR MANUFACTURING EMPLOYMENT	('000' People)	182	210	302	433	622	893	1,283
11. GROSS DISTRICT DOMESTIC PRODUCT	(Million Taka)	57,737	67,113	99,339	150,339	226,801	358,061	575,220
12. GROSS DISTRICT DOMESTIC PRODUCT	(% of 3.)	10.77	11.11	12.12	13.35	15.03	16.91	19.16
13. MANUFACTURING	(Million Taka)	17,331	21,740	38,313	67,521	118,995	209,710	369,582
14. MANUFACTURING	(% of 11.)	30.0	32.4	38.6	44.9	52.5	58.6	64.3
15. MANUFACTURING	(% of 3.)	3.2	3.6	4.7	6.0	7.9	9.9	12.3
16. MANUFACTURING	(% of 5.)	32.0	33.2	36.3	39.8	43.5	47.6	52.1
17. PER CAPITA INCOME	(Taka)	9,647	10,736	14,252	19,346	26,177	37,576	54,961
18. PER CAPITA INCOME	(Factor of 7.)	2.06	2.12	2.29	2.50	2.77	3.12	3.54

SOURCE : JICA Study team computations.

Total wage sector manufacturing employment at national level in 1993 has been estimated based on the 1988/89 manufacturing census data to be around 1.446 million people and that for the Chittagong District to be some 182,000 people, about 12.6% of the national total. Total wage sector manufacturing employment at national level is predicted to expand by factor 3.7, that is to 5.399 million people in the target year 2020.

Total wage sector manufacturing employment in the Chittagong District is expected to expand by factor 7 to some 1.283 million people in the year 2020. The above implies that in the target year 2020 some 24% of total wage sector manufacturing employment would be located in the Chittagong District.

At Chittagong District level such development would have the following implications :

- The absolute size of the wage labour force in manufacturing would increase by about 1.1 million people over the planning period
- The annual average increase in wage sector manufacturing jobs would be in the order of 44,000 additional jobs, which translates into some 220,000 new wage sector manufacturing jobs over each five years planning cycle
- The District would have to identify and allocate additional industrial land for the accommodation of the increasing manufacturing labour force.

Table 8.4 contains a summary of the projected employment developments at national and Chittagong District levels. The following key developments are important to note :

- Modern sector wage employment at national level would expand from 32.7% of the Bangladeshi total civil labour force in 1993 to about 49.02% in the target year 2020
- Wage sector manufacturing employment at national level would expand from some 4.42% of total modern sector wage employment in 1993 to about 11.01% in 2020
- Wage sector manufacturing employment in the Chittagong District would expand from 5.78% of the Districts total civil labour force to about 23.2% of the total in the target year 2020

- The Chittagong District would hold 5.42% of total Bangladeshi population in 2020 and 23.8% of Bangladeshi wage sector manufacturing employment.

Table 8.4 (1) Estimated Employment in Manufacturing at National and Chittagong District Levels 1995 to 2020

[UNIT : as indicated]

PARAMETER	Base Year 1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1. TOTAL NATIONAL POPULATION ('000')	114,364	116,823	119,276	121,721	124,156	126,633	129,153	131,716	134,324	136,977	139,676	142,420	145,212	148,051	150,938	153,873	156,858	159,894
2. TOTAL POPUL. CHITTAGONG DISTRICT (MIO.)	5.985	6.117	6.251	6.389	6.529	6.673	6.820	6.970	7.123	7.280	7.440	7.604	7.771	7.942	8.117	8.295	8.478	8.664
3. CHITTAGONG DISTRICT POPUL. AS % OF NATIONAL TOTAL	5.23	5.24	5.24	5.25	5.26	5.27	5.28	5.29	5.30	5.31	5.33	5.34	5.35	5.36	5.38	5.39	5.40	5.42
4. TOTAL NATIONAL CIVIL LABOR FORCE	57,068	58,295	59,519	60,739	61,954	63,190	64,447	65,726	67,028	68,352	69,698	71,068	72,461	73,877	75,318	76,783	78,272	79,787
5. TOTAL ESTIMATED MODERN SECTOR WAGE EMPLOYMENT	18,661	19,314	19,990	20,690	21,414	22,164	22,939	23,742	24,573	25,433	26,323	27,245	28,198	29,185	30,207	31,264	32,358	33,491
6. MODERN SECTOR WAGE EMPLOYMENT AS % OF CIV. LAB. FORCE	32.70	33.13	33.59	34.06	34.56	35.07	35.59	36.12	36.66	37.21	37.77	38.34	38.92	39.50	40.11	40.72	41.34	41.98
7. WAGE SECTOR MANUFACTURING EMPLOYMENT (MIO.)	1.446	1.518	1.594	1.674	1.758	1.846	1.938	2.035	2.136	2.243	2.355	2.473	2.597	2.727	2.863	3.006	3.156	3.314
8. MANUFACTURING EMPLOYMENT AS % OF TOTAL MODERN SECTOR	4.42	4.58	4.75	4.91	5.09	5.26	5.44	5.63	5.83	6.03	6.24	6.45	6.67	6.90	7.14	7.38	7.64	7.90
9. WAGE SECTOR MANUFAC. EMPLOYM. CHITTAGONG DISTRICT	0.182	0.196	0.210	0.226	0.243	0.261	0.281	0.302	0.325	0.349	0.375	0.403	0.433	0.466	0.501	0.539	0.579	0.622
10. CHITTAGONG MANUF. EMPLOYMENT AS % OF CHITTAGONG CIVIL LABOR FORCE	5.78	6.08	6.40	6.73	7.08	7.44	7.83	8.24	8.66	9.11	9.59	10.08	10.61	11.16	11.73	12.34	12.98	13.66

SOURCE : JICA Study team computations.

Table 8.4 (2) Estimated Employment in Manufacturing at National and Chittagong District Levels 1995 to 2020

[UNIT : as indicated]

PARAMETER	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1. TOTAL NATIONAL POPULATION ('000')	162.980	166.117	169.306	172.549	175.844	179.194	182.599	186.059	189.576	193.149
2. TOTAL POPUL. CHITTAGONG DISTRICT (MIO.)	8.831	9.001	9.174	9.350	9.529	9.710	9.895	10.082	10.273	10.466
3. CHITTAGONG DISTRICT POPUL. AS % OF NATIONAL TOTAL	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42	5.42
4. TOTAL NATIONAL CIVIL LABOR FORCE	81.327	82.892	84.484	86.102	87.746	89.418	91.117	92.843	94.598	96.381
5. TOTAL ESTIMATED MODERN SECTOR WAGE EMPLOYMENT	34.663	35.876	37.132	38.431	39.776	41.169	42.609	44.101	45.644	47.242
6. MODERN SECTOR WAGE EMPLOYMENT AS % OF CIV. LAB. FORCE	42.62	43.28	43.95	44.63	45.33	46.04	46.76	47.50	48.25	49.02
7. MODERN SECTOR MANUFACTURING EMPLOYMENT (MIO.)	3.480	3.654	3.837	4.029	4.230	4.441	4.663	4.897	5.142	5.399
8. MANUFACTURING EMPLOYMENT AS % OF TOTAL MODERN SECTOR	8.16	8.44	8.73	9.03	9.33	9.65	9.97	10.31	10.66	11.01
9. WAGE SECTOR MANUFAC. EMPLOYM. CHITTAGONG DISTRICT	0.669	0.719	0.773	0.831	0.893	0.960	1.032	1.110	1.193	1.283
10. CHITTAGONG MANUF. EMPLOYMENT AS % OF CHITTAGONG CIVIL LABOR FORCE	14.4	15.1	15.9	16.8	17.7	18.7	19.7	20.8	22.0	23.2

SOURCE : JICA Study team computations.

8.2.5 Major Assumptions

The major assumptions underlying the projections at national level have already been addressed in section 8.1.4. Chittagong District specific assumptions of the forecast are as follows:

(1) Manufacturing Growth

The manufacturing sector is expected to grow at a compound real trend growth rate of 12.0% over the planning period, that is some 2.0% above national average.

(2) Chittagong District Population

The total population of the Chittagong District was 5,730,000 people according to the 1991 census. The population size for the base year 1993 has been calculated using the historic (1901 to 1991) District population growth rate of 2.2% per year. The population increase for the period 1994 to 2010 has been calculated using the same historic trend rate. The differential to national average population growth is mainly labour in-migration. For the period 2011 to 2020 district population growth has been assumed at the same rate like national level with the District having reached some sort of absorption capacity point

(3) Chittagong Wage Manufacturing Employment

Wage manufacturing employment in the Chittagong District for the base year 1993 has been calculated by using the 1988/89 census data as basis and using a linear output growth/employment growth correlation. Wage manufacturing employment over the planning period 1994 to 2020 has been calculated using a 7.5% linear trend function

(4) Chittagong Civil Labour Force

The Chittagong wage manufacturing employment as percent of the Chittagong civil labour force has been calculated using the formula : wage manufacturing employment divided by the district population multiplied by the crude activity rate estimated at 52.6%.

8.2.6 Development Policy And Measures

(1) Principal Objectives of CIDP

The principal objective of the CIDP is the founding of a regional economy by increasing income and employment and achieving a certain level of regional self-reliance.

The region should have a certain degree of economic self-reliance, which is well co-ordinated with other parts of the country and making the best use of its regional characteristics and endowment. Regional industrialisation should be so interpreted as the fundamental way of achieving this target.

Chittagong, the nucleus city of the region, had a population size of some 1.5 million in 1991. Chittagong is the second largest city following Dhaka, and its population is forecasted to increase to some 2.8 million in 2020.

Taking into consideration the size of Chittagong and its metropolitan area (CTGD), Chittagong should have an appropriate level of self-productive functions to cater for consumable goods as well as productive goods for such a large population.

The Chittagong Industrial Development Plan (CIDP) should aim at achieving social and economic stability by increasing regional per capita income and employment opportunities. Chittagong is currently in a situation where productive functions are not compatible with its consumptive capacity or demographic scale.

(2) Achievement of Export Competitiveness

Under the circumstances where Bangladesh will also be involved in the global free-trade economy under the WTO structure, CIDP should aim at structuring the regional industries so that they can produce products having an international competitiveness in both, quality and price; in other words, these products and services are export competitive.

For this end, the Government should provide the industries with reasonable support for strengthening their productive abilities, and at the same time, induce foreign manufacturers to come and invest in Chittagong with their productive and managerial know-how and expertise. This is particularly needed to quickly enhance the productive

abilities of the existing industries and to strengthen their "backwards linkage" with the Foreign Direct Investment (FDI) manufacturers.

(3) Declaration As International City Of Free Economy

CIDP should be oriented to make Chittagong an international city of free trade and economy (the concept of "Bangladesh International Product-linkage Polis") assuming the nucleus functions within the economic region of the Bay of Bengal.

Bridging the two distinct regions of East Asia and South Asia, Bangladesh is located in the Bengal Bay, where potential regional development centres are accumulated including Myanmar, Thailand, Sri Lanka, Malaysia, Singapore and the Eastern side of India (West Bengal and South East India). In addition, the land-locked North Eastern Indian States, Nepal, and Bhutan are the natural hinterland for the port of Chittagong.

As the nucleus city in the region of the Bengal Bay, Chittagong should be inter-linked with the other nucleus cities such as Calcutta, Madras, Colombo, Yangon, with free exchange of persons, information, funds, and goods.

(4) Important Policies to be Adopted under CIDP

(a) National Industrial Development Plan (NIDP)

The objective of NIDP is to delineate the future industrial structure of Bangladesh, by setting forth the targets of the industrial development at the national level in terms of the type, scale, employment, and productive amounts.

The NIDP should also touch on appropriate industrial resources allocation such as industrial materials and energy from the point of the national economy, and establish necessary institutions regarding legal adjustments, administrative structure, financing and budgeting scheme for support of the industrial development.

(b) Industrial Special Allocation Plan (ISAP)

On the basis of NIDP, a special allocation plan of industries should be established taking into consideration the potentials and resource endowments of each region. As for strategic development regions, resources should be mobilised on a priority basis, and particular efforts should be made to induce FDI to such regions.

(c) Industrial Park Development Plan (IPDP)

A need exists to develop industrial parks as receptacles of industrial development. The success of the industrial park development is dependent upon the provision of adequate infrastructure, promotion and inducement of tenants, and proper operation and management of the parks. This requires to establish a specific implementation body, which takes care of the development right from the planning stage up to operations and management.

The type of industrial parks are dominated by their location conditions, type of manufacturers to be induced, size and scale of the parks and so on as roughly categorised below :

- General industrial park,
- Export-oriented industrial park,
- Specific industrial park.
- Regional industrial park, and
- Small- and medium-scale industrial park.

(d) Industry-related Infrastructure Development Plan (IIDP)

It is a mandatory requirement to develop the supporting infrastructure related to the industrial development, which includes those related to production, utility, transportation, and communications. IIDP should establish the development scheduling, planning, and programming in a way consistent with the industrial development plan at the national and regional levels.

(5) Establishment of Special Industrial Development Region (SIDR)
and Special Economic Zone (SEZ)

Such an industrial development policy would involve trade-off between the "intensive" investments, which pursue investment efficiency and "equitable" investments, which seek a regional balance over the country.

However, from the aspect of making the best use of limited resources, it would be wiser to invest in an intensive manner to the most potential regions at the beginning phase of the industrialisation. According to the strategic approach, it is recommended to designate the most potential regions as Special Industrial Development Region (SIDR),

in which resources should be allocated on a priority basis. In Bangladesh, the following four regions would have a potential to be designated as SIDR :

- Dhaka Region,
- Chittagong Region,
- Sylhet Region, and
- Khulna Region.

Apart from the priority resources mobilisation, various institutional incentives should be given to the SIDR so that they should attract FDI and promptly grow to the internationally acknowledged "liberalised economic regions".

(6) Establishment of the Research and Development Policy (RADP)

There is a definite need to strengthen the R&D ability as an important part of industrial development. RADP should clarify the industrial sector that crucially or strategically need the R&D functions, and make necessary legal, institutional, and organisational arrangements together with financial supporting systems. RADP may be executed along with the industrial park development in the form of the following concepts as is the case in Japan :

- Techno park,
- High-tech park,
- Business park, and
- Research park.

The R&D functions of those parks have a linkage with regional research institutes of academies as well as common linkages among the companies that exist in the parks. The concept is beneficial not only in terms of agglomeration of information and know-how, but also inducement to attract FDI companies.

8.2.7 Principal Phases of Implementation

The following is the tentative scenario for the development phasing of the target area as presently perceived. The rough phasing identifies the general development direction as well as the general physical expansion within the target area.

(1) Phase 1 : short-term from 1995 to 2000

The first phase of the comprehensive industrial and urban development of the target area would focus on the development of a modern CBD on the Northern bank of the River, while at the same time establishing the basic infrastructure on the Southern bank of the River, aiming at creating a large-scale "new industrial city" in the future.

Such CBD will be created by the re-development or renewal of the existing urban structure to induce and more vitalise the business and commercial functions.

The existing EPZ and general industrial sites would be upgraded and expanded during the phase. Industrial development efforts should concentrate on the establishment of a "critical industrial mass", based on the availability of cheap labour and centred around the processing of natural resources; for example, food-related and agro-based industries, and gas-oriented industrial activities.

(2) Phase 2 : Medium term from 2001 to 2010

During the second phase, additional industrial sites are likely to be needed across the River, together with physical distribution and cargo depot facilities. Urban development efforts would focus on the creation of a new urban structure surrounded by an inner ring.

Industrial development efforts would aim at diversifying industrial goods with focus on the production of export competitive products.

Typically, such phase would be based on the availability of industrial raw materials, and as such, a raw materials industrial complex will be promoted. This phase of industrial advancement is likely to require a new deep-sea harbour in order to cope with drastic increase of cargo movements.

(3) Phase 3 : long-term from 2011 to 2020

During the third phase, the industrialisation would typically shift to manufacturing of high quality and more advanced products.

Emphasis would be on developing the area between the inner and outer ring depicted in the BIPP structure, aiming at creating a new industrial zone having quality physical distribution functions.

Along with the shift in the level of industrial development would typically go the establishment of logistics centres and industrial software facilities, such as a high technology institute city, sophisticated containerisation facilities, and door-to-door cargo handling and distributing systems.

A new and modern international airport would also become necessary to ensure high mobility of persons and goods in this phase. Figure 8.5 shows the development scenario for Chittagong Industrial Development Plan (CIDP).

8.2.8 Industrial Estate Development And Site Identification

(1) General Policy For And Roles Of Industrial Estate Development

(a) Objectives

- Lead the industrialisation process
- Facilitate proper industrial location
- Attract and receive foreign direct investment
- Activate and intensify the local and national economy
- Formulate a future urban core area
- Promote rational urban and infrastructure development
- Create employment opportunities.

(b) Basic Policies

Industrial estate(s) will be developed in the direction of the region's development. The industrial estate development must go hand-in-hand with the comprehensive land use of the area. Effective development of industrial estates requires a large area of land in order to use the land in an efficient and sound manner.

Industrial estate development in harmony with a sound environment will contribute much to the creation of an attractive production and working environment with amenity

Industrial estates will create employment opportunities by attracting industrial establishments.

Figure 8.5 Development Scenario for Chittagong

		SHORT-TERM	MID-TERM		LONG-TERM	
	Unit	1st 5 Year Plan 1995 - 2000	2nd 5 Year Plan 2001 - 2005	3rd 5 Year Plan 2006 - 2010	4th 5 Year Plan 2011 - 2015	5th 5 Year Plan 2016 - 2020
Development Frame						
• Population	Thousand	6,970	7,771	8,664	9,529	10,466
• Employment Manuf.	Thousand	302	433	622	893	1,283
• CRDP	Mil. Taka	99,339	150,339	226,801	358,061	575,220
• Manuf. GRDP	Mil. Taka	38,313	67,521	118,995	209,710	369,582
• Per Capita Income	Taka	14,252	19,346	26,177	37,576	54,961
Development Strategy and Goals		**Preparatory Phase**	**Starting Growing Phase**	**Accelerated Growing Phase**	**Consummating Growing Phase**	**Maturing Phase for Subsequent "Take-off"**
		• Formulation of a consensus on CIDP as a national project • Legal, institutional, organizational arrangements • Initiation of a pilot project • Preparation for mobilization of public-sector investments	• Attraction of as much FDI as possible • Inducement of increase in production • Solution of bottle-neck infrastructure • City planning guidance to create a new CBD in the south of the River	• Improvement of infrastructure to be compatible with a full-fledged CIDP • Diversification of indigenous industries • Enhancement of the quality of products and resultant competitiveness for exportation	• Provision of high-order infrastructure and amenity such as new airport, new port, tele-port, urban landscape, recreation/sports facilities, etc. • Transformation of industries towards more advanced and value-added structure	• Provision of adequate operation and management of infrastructure • Preparation and initiation for the "next-generation" industrial development
Conceptual Development Target		**Quantitative enlargement of production** with cheap labor force and locally abailable resources	**Diversification of products** focusing on increase of export competitive products	**Enhancement of quality of products** with advancement of industrial structure	**Augmentation of the ability of products development** with R & D functions	**Maintenace of quality and quantity production with ripple effects to other regions**
Requirements for Production Structure		• Supply of industrial raw materials • Evolving and Strengthening of indigenous industries • Stable supply of industrial energy	• Development of processing industry • Introduction of assembling industry • Evolving and strengthening of export-oriented industry	• Continuous growth of assembling industry • Introduction of advance technology industry • Accelerated growth of export-oriented industry	• Continuous growth of advance technology industry • Development of R & D type industrial parks	• Achievement of well-balanced industrial structure and its operation and management at then international level
Development of Industrial Estates		• Expansion of EPZ • Development of general industrial parks (GIP)	• Enhancement of quality and quantity of EPZ and GIP to accommodate diversified industries	• Development of water-front type industrial parks adjacent to port facilities • Establishment of physical distribution centers	• Development of industrial parks with R & D functions	• Development of "air-front" (adjacent to international airport) type industrial parks

		SHORT-TERM	MID-TERM		LONG-TERM	
	Unit	1st 5 Year Plan 1995 - 2000	2nd 5 Year Plan 2001 - 2005	3rd 5 Year Plan 2006 - 2010	4th 5 Year Plan 2011 - 2015	5th 5 Year Plan 2016 - 2020
Policies for Inducement and Augmentation of Industries		• Inducement of FDI companies • Privatization and agglomeration of indigenous industries	• Establishment of a regional technology center • Substantiation of vocational education	• Introduction of advanced technology industries • Encouragement of technology oriented venture business	• Encouragement of R & D related industries	• Encouragement of locally-based creative venture business
Development of Major Urban Infrastructure		• New EPZ and GIP • Improvement of overall urban infrastructure focussing on solution of bottle-necks	• New CBD in the south of the River • Inner Ring with a new crossing • Containerization of existing harbor • Projects for prevention of disasters	• Outer ring with a new crossing • Exhibition and convention centers • New deep-sea port with handling capacity of ocean-going containers • Water-front physical distribution center	• New airport in thesouth of the River • International logistics center • Regional highway and railway network	• Establishment of proper operation and maintenance systems
Institutional Building		• Establishment of a Special Zone Development Committee * • Establishment of Chittagong Development Company (CDC) • Proclamation of Special Industrial Development Regions (SIDR) • Enactment of Special Economic Zone (SEZ)	*Note:This committee will be organized as inter-ministerial ad hoc committee specifically for assuming a policy making role for the SEZ development. Under the committee, a task force will be organized to assume substantial work for initiation and embarkation of the SEZ Project.			
Environmental Improvement Plan and Programme		• Establishment of regional environmetal monitorng systems • Establishment of regional environmental administration machinery	• Enforcement of environmental conservation and protection laws and regulations	• Sea water-front and river sides beautification and landscaping projects		

(2) Roles of Industrial Estate Development

The development of industrial estates is expected to play the following roles:

- Serve as production site for investment and introduction of foreign enterprises, which will employ the labour force of the region
- Create job opportunities
- Introduce enterprises, which can lead Chittagong's economic development, have a ripple effect and assist in stabilising and industrialising the economy
- Contribute to the efficient development of related facilities (housing, commercial facilities, roads and other supply and treatment facilities) and intensive land use
- Encourage technology exchange among enterprises, form an industrial complex based on mutual encouragement and complementation, brought about by the accumulation of a number of enterprises
- Accommodate existing industries, which need to be relocated from the existing urbanised areas, helping thereby to rationalise the land use in such urbanised areas
- Serve as a development core within the regional structure, which contributes to the urbanisation process in a harmonious manner and within a natural environment.