No. 43

THE PEOPLE'S REPUBLIC OF BANGLADESH

THE STUDY

ON

DEVELOPMENT PLAN OF SMALL SCALE INDUSTRIES

SEPTEMBER, 1980

JAPAN INTERNATIONAL COOPERATION AGENCY

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PREFACE

It is with great pleasure that I present this report entitled The Study on Development Plan of Small Scale Industries to the Government of the People's Republic of Bangladesh.

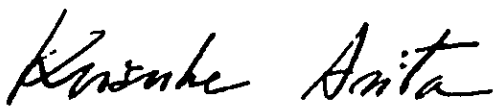
This report embodies the result of two field surveys which were carried out from November 11 to December 1, 1979 and January 13 to March 31, 1980 by the Japanese survey team commissioned by the Japan International Cooperation Agency following the request of the Government of the People's Republic of Bangladesh.

The survey team, headed by Mr. Tan Hashida, had a series of close discussions with the officials concerned of the Government of the People's Republic of Bangladesh and conducted a wide scope of field survey and data analyses.

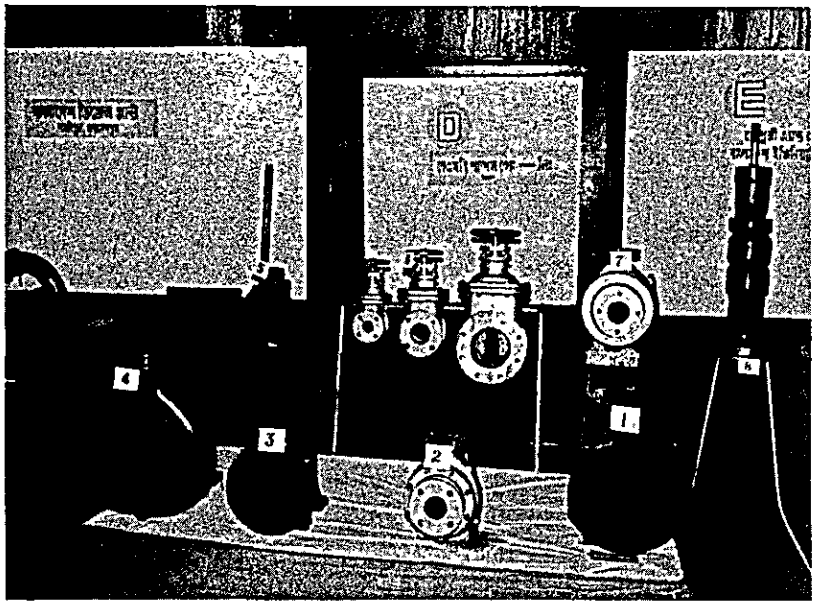
I sincerely hope that this report will be useful as a basic reference for development of the project.

I am particularly pleased to express my appreciation to the officials concerned of the Government of the People's Republic of Bangladesh for their close cooperation extended to the Japanese team.

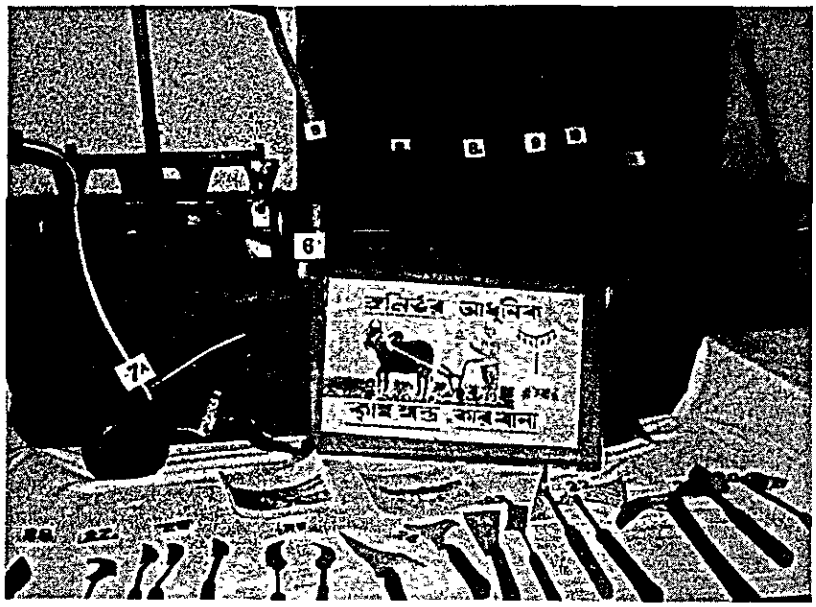
September, 1980



Keisuke Arita
President
Japan International Cooperation Agency

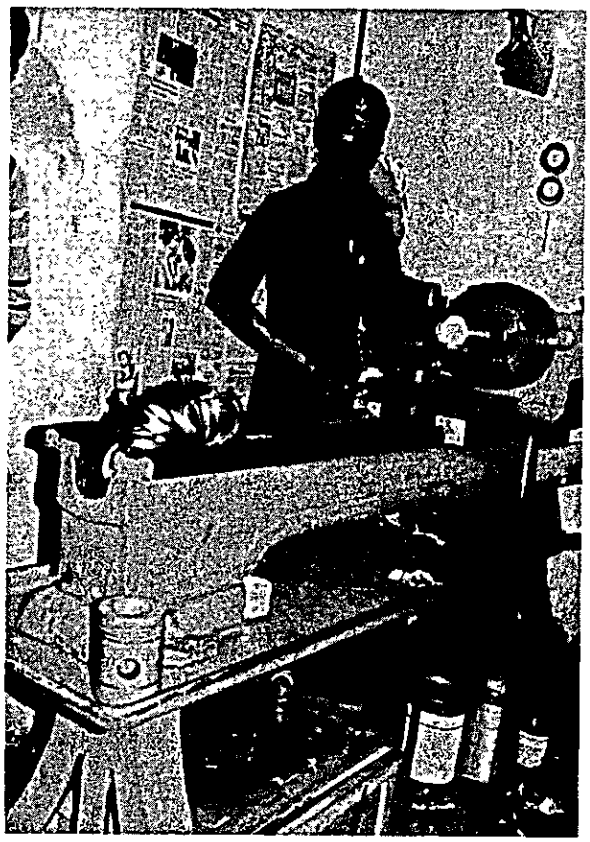


Centrifugal Pumps and Valves Made in Bangladesh



Improved Farming Tools and Implements
Developed by a Farmer/Industrialist

A Typical Small Scale Metal Working and
Light Engineering Industrial Unit in Kushtia



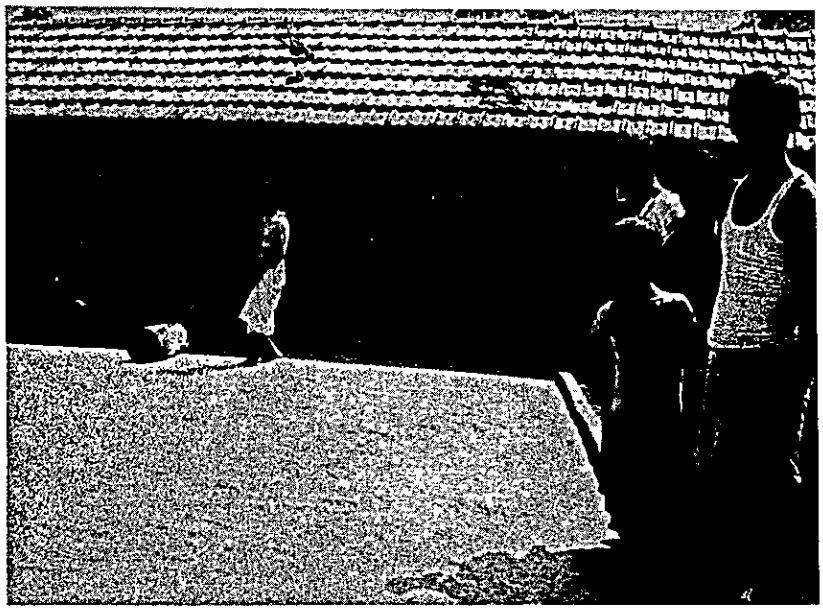
A One-Man-Lathe Workshop in Old Dacca
(The Lathe was manufactured in this area.)

Casting of Hand Pumps at a Foundry
in Tongi Industrial Estate

Manufacture of a Sickle at
a Blacksmith's Workshop in Bogra

Production of Pedal Threshers in Dacca

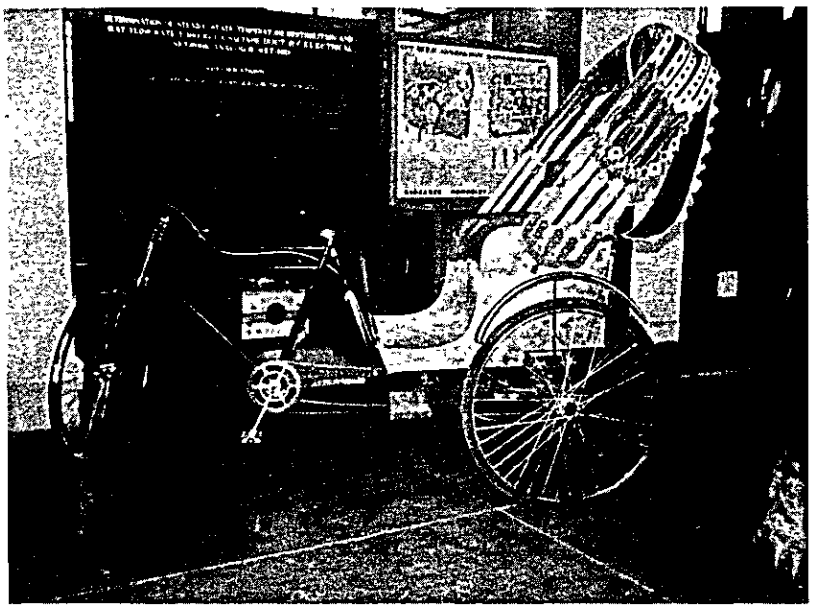
Production of Paddy Weeders in Comilla



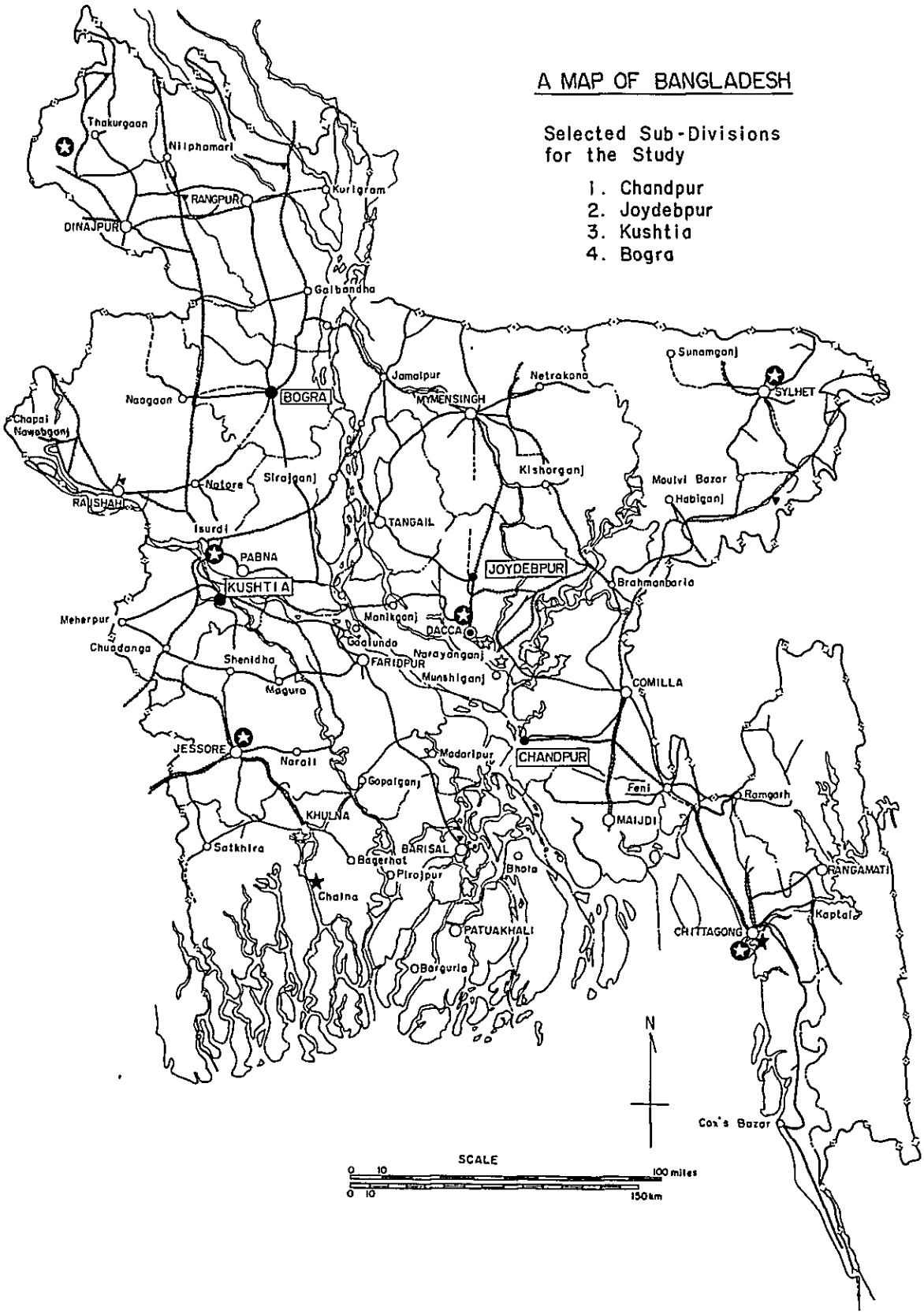
Drying Khandesari (Raw Sugar) at
a Khandesari Factory in Kushtia

BITAC Chandpur
under Construction

Wooden Push Carts in Bogra



Improved Design of Rickshaw
Developed by BUET


A MAP OF BANGLADESH
Selected Sub-Divisions for the Study
1. Chandpur
2. Joydebpur
3. Kushtia
4. Bogra
Thakurgaon
Nilphamari
RANGPUR
Kurigram
DINAJPUR
Gaibandha
Sunamganj
Jamalpur
Netrakona
SYLHET
Naogaon
BOGRA
MYMENSINGH
Chapai Nawabganj
Kishorganj
Moulvi Bazar
Habiganj
Natore
Sirajganj
RAJSHAHI
Isurdi
TANGAIL
PABNA
JOYDEBPUR
KUSHTIA
Brahmanbaria
Meherpur
Manikganj
DACCA
Chuadanga
Gopalganj
Narayanganj
Shenidha
FARIDPUR
Munshiganj
COMILLA
Magura
JESSORE
Madaripur
CHANDPUR
Narail
Gopalganj
Feni
Ramgarh
KHULNA
MAIJDI
Satkhira
BARISAL
Bagerhat
Bhola
RANGAMATI
Pirojpur
Chalna
Kaptai
PATUAKHALI
CHITTAGONG
Barguna
N
Cox's Bazar
SCALE
0 10 100 miles
0 10 150km

CONTENTS

Page

Page

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

1. Bangladesh Organizations

BADC	Bangladesh Agricultural Development Corporation
BARD	Bangladesh Academy of Rural Development
BARI	Bangladesh Agricultural Research Institute
BB	Bangladesh Bank
BBS	Bangladesh Bureau of Statistics
BCSIR	Bangladesh Council of Scientific and Industrial Research
BITAC	Bangladesh Industrial and Technical Assistance Center
BKB	Bangladesh Krishi (Agricultural) Bank
BLSI	Bangladesh Standard Institution
BMDC	Bangladesh Management Development Center
BMTF	Bangladesh Machine Tool Factory
BRRI	Bangladesh Rice Research Institute
BSCIC	Bangladesh Small and Cottage Industries Corporation
BSEC	Bangladesh Steel and Engineering Corporation
BSFIC	Bangladesh Sugar and Food Industries Corporation
BSB	Bangladesh Shilpa (Industrial) Bank
BUET	Bangladesh University of Engineering and Technology
CC	Coal Controller
CERDI	Central Extension Resources Development Institute
IAT	Institute of Appropriate Technology
IBA	Institute of Business Administration (University of Dacca)

IRDP	Integrated Rural Development Program
MOE	Ministry of Education
MMDL & SW	Ministry of Manpower Development and Social Welfare
NEC	National Economic Council
PDB	Power Development Board
TCB	Trading Corporation of Bangladesh

2. Foreign and International Organizations

ADB	Asian Development Bank
IDA	International Development Association
ILO	International Labor Organization
IRRI	International Rice Research Institute
JICA	Japan International Cooperation Agency
UNDP	United Nations Development Program
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development

3. Other Abbreviations

DTW	Deep Tube Well
GDP	Gross Domestic Production
HYV	High Yield Variety (of Rice)
LLP	Low Lift Pump
MM	Million(s)
MW/LE	Metal Working and Light Engineering
PPDC	Prototype and Product Development Center (Proposed by BSCIC)

PTDC	Production Technology Development Center
SSI (SI)	Small Scale Industry (Small Industry)
STW	Shallow Tube Well
Tk	Taka
TTC	Technical Training Center
VTI	Vocational Training Institute

INTRODUCTION

BACKGROUND

The Government of the People's Republic of Bangladesh submitted an official request to the Government of Japan in July 1979, asking for the cooperation in development planning of small scale industries. In response, the Japan International Cooperation Agency (hereafter abbreviated as JICA) organized a Team to undertake the Study. Two field surveys were conducted by the team during the period of November, 1979 and January to March, 1980. The study team worked in closed cooperation with the Bangladesh Small and Cottage Industries Corporation under the Ministry of Industries, which provided a team of counterparts. A member list of the Teams for the study is shown in ANNEX.

Small scale industries in Bangladesh are approximately 24,000 in number and contributed to 2.8% of the total GDP in 1978. The Second Five Year Plan 1980-1985, which is expected to be made public shortly, will place stress on rural development. Rural industrialization will form one of the key nucleii of the development, hopefully creating employment and elevating regional self-sufficiency. The target of rural industrialization will only be achieved through introduction of small scale industries into rural areas. For this obvious reason, development of small scale industries, in particular, in rural areas, will become one of the most important measures to accomplish targets of the Second Five Year Plan.

The Study Team, fully recognizing the overrinding importance of developing small scale industries in Bangladesh, firstly examined the present status of small scale industries and actual needs for the development. Secondly, the Team reviewed the existing promotional measures for the development. Thirdly, the four Sub-Divisions designated for further study by the Team, namely Chandpur, Joydebpur, Kushtia and Bogra, were covered through field surveys and their regional characteristics were analyzed to identify development potentials. Also scrutinized were development potentials of agro-supporting industrial sub-sectors, out of which metal working and light engineering industry has been indentified as most important to the

industrial development as a whole, as well as to the agricultural sector. Fourthly, the present status and problems of this particular sub-sector of industry were clarified and identified. Based upon the results of the above analysis, fifthly, recommendations on policy measures were formulated and described. And lastly, as an example of the action programs for the development, a concrete measure to improve and develop technologies for manufacturing small metal products and light machinery was formulated.

PREMISES

The four Sub-Divisions, namely Chandpur, Joydebpur, Kushtia and Bogra, jointly selected by the Planning Commission and Ministry of Industries as well as the two major centres of industrialization, Dacca and Chittagong were surveyed by the Team.

This Study dealt with small scale industries whose fixed asset (or machinery and equipment, according to BSCIC) investment does not exceed Tk 2,500,000 and perhaps is above Tk 100,000. Thus, cottage industries were not included in this Study.

STUDY PROCEDURES

The development planning was conducted in the following three steps:

1) Background study
2) Problems and diagnosis study
3) Plans and recommendations

The background study includes analysis of the present status of small scale industries as a whole, and reviewing of promotional measures and institutions which were designed to assist development of small scale industries.

The problems and diagnosis study is composed of identification of the regional characteristics and selection of important sub-sectors out of agro-supporting industries. Metal working and light engineering industry, whose product line includes agricultural tools, implements and machinery, has been selected as the most important sub-sector. In order to delineate the structure of the sub-sector, a long list

of products which can be manufactured in the sub-sector, is prepared and presented. Priority is given to a certain number of products for urgent improvement or development based on a few selection criteria. The existing problems about these products including quality, design and markets are assessed.

The metal working and light engineering sub-sector is diagnosed from multiple points of view such as technology and product quality, marketing and distribution channels, raw materials supply, management, finance and other institutional aspects.

Plans and recommendations include a Sub-Divisonal development plan for the metal working and light engineering sub-sector as well as national development plan for the sub-sector. A concrete policy measure to improve and develop the production technology is formulated and presented in this sector of the Study.

The details of the study and its conclusions are presented in the chapters which follow as listed below:

Chapter 1 Basic Needs for Development of Small Scale Industry

Chapter 2 Promotional Measures for Developing Small Scale Industries

Chapter 3 Potentials of Small Scale Industry Development

Chapter 4 The Present Status and Problems of Small Scale Metal Working and Light Engineering Industries

Chapter 5 Recommendation on Development of Small Scale Metal Working and Light Engineering Industries

Chapter 6 Measures for Production Technology Development

SUMMARY AND RECOMMENDATION

INTRODUCTION

The prime objective of this Study is to assess the potential of the small scale industry development, in particular, the small scale agro-supporting and agro-based industries development, in the People's Republic of Bangladesh, and to recommend effective policy measures for the development. The following Sub-Disions have been selected as the Study Areas and were covered by the Field Surveys:

- Chandpur, Chittagong Division
- Joydebpur, Dacca Division
- Kushtia, Khulna Division
- Bogra, Rajshahi Division

This report has been prepared based on results of the two Field Surveys conducted in November 1979 and January to March 1980. The contents of the report consist of the following Study items:

1) Needs for development of small scale industries
2) Existing promotional measures for development of small scale industries
3) Potentials of small scale industry development in the four Sub-Divisions and selected industrial sub-sector for the priority development
4) The present status and problems of the selected industrial sub-sector
5) Recommendation on development of the small scale industrial sub-sector
6) Measures for production technology development.

1. NEEDS FOR DEVELOPMENT OF SMALL SCALE INDUSTRIES

(1) The Present Status of Small Scale Industries

The number of small scale industries with machinery and equipment investment of less than Tk2.5 millions according to the BSCIC's designation amounted to approximately 24,000 units in 1978/79, which employ 6.3 workers per unit on an average. The 1978/79 census on small scale industries revealed high concentration of the industrial units in Decca and Chittagon areas, about 40% of the total number of units and the total employment. There is a sign of dispersion, however, in terms of geographical distribution of small scale industries. More than 70% of the total number of small scale industrial units was categorized as the food-related industries, namely rice and wheat milling, which had gradually substituted the position of the textile sub-sector. The recent expansion of industrial sub-sectors included basic metals, metal products and machinery.

(2) The Second Five Year Plan (1980 - 1985)

The plan was in the process of the final review, when the Team completed the second Field Survey in March. The prime targets of the Plan are understood to include (i) population control, (ii) food selt-sufficiency and (iii) rural development and employment increase. The Long-Term Perspective Plan up to the year of 2000 is expected to lay the foundation of the Five Year Plan, which envisages the following economic growth:

- Real term GDP growth : 7.0% p.a.
- Real term agriculture sector growth : 4.7% p.a.
- Real term industrial sector growth : 12.6% p.a.

The contribution of the small scale industries to the total GDP amounted to 2.8% in 1978/79 and is expected to reach 4% at the final year of the Plan, 1985. The rapid growth of the small scale industries during the Plan period, with the expected growth rate up to 20% p.a., will result in employment of approximately 300,000 to 400,000 primarily in rural areas.

2. EXISTING PROMOTIONAL MEASURES FOR DEVELOPMENT OF SMALL SCALE INDUSTRIES

(1) Investment and Finance

An Industrial Investment Schedule for the Five Year Plan was yet to be made public at the end of March. The following industries are possibly to be given priorrity for development and adequate incentives:

- Industrial investment in developing areas other than Dacca and Chittagong,
- Export-oriented industries,
- Small scale and cottage industries, in particular in rural areas, and
- Agro-related industries.

Funds for small scale industry finance have been raised either from own resources or from loan provided by international funding agencies represented by IDA. Loans to small scale industries are normally arranged through major branches of the commercial banks and some specialized banks including Bangladesh Shilpa Bank. The largest source of the small scale industrial finance is the IDA Credit Program, which is expected to provide the sum of Tk450 millions for two years from 1980 to 1982. The ADB subloans to small scale industries amount to approximately Tk60 millions and the Bangladesh Government is understood to provide loans of more than Tk50 millions to small scale industry development. It is believed that the afore-mentioned financial arrangement will considerably promote small scale industry development.

(2) Technical Training

There are three important technical training institutions for small scale industries, namely (i) the Technical Training Centres under the Ministry of Manpower Development, Labour and Social Welfare, (ii) the Vocational Training Institutes under the Ministry of Education and (iii) Bangladesh Industrial and Technical Assistance Centre under the Ministry of Industries. None of the three institutions, however, offers training curriculum specifically designed for workers of small scale industries. The existing courses also appear less effective in training small

scale industry employees in view of lengthy training period, two years, and relative high training fee.

Most of these training institutions are suffering from lack of machinery and equipment, operational budget and instructors, resulting in degradation of the training quality. Those who completed the training are known to demand higher wages than the average regardless of their skills or capability. Establishment of a technical certification or qualification system will diminish the perverted quality and encourage workers without proper training to upgrade their skills.

(3) Management Training

Majority of small scale industries are managed by the owner-(proprietor-) managers. More than 90% of the total number of the managers were reported to have received no management training at all.

There are two important management training institutions in Bangladesh, namely the Bangladesh Management Development Centre and the Institute of Business Administration, and the both offer courses for workers of large scale industries. BMDC, however, organizes an experimental "entrepreneurship development training program for self-employment of educated unemployed youths" in cooperation with BSCIC and Bangladesh Bank.

It is recommended that effective measures are to be taken in view of the pressing need for management training courses specifically designed for workers in small scale industries.

(4) Infrastructure Development

Small scale industries are known to suffer from inadequate infrastructure, in particular, transportation, electricity and other sources of energy, industrial estates and perhaps telecommunication.

Small scale industries have to depend chiefly on road transportation for their raw materials acquisition and products shipping, in which cargo transport by truck is by far most important. The truck industry is reported to be gradually on the decline because of aggravated road condition, prolonged waiting time for ferry services and price competition with the railway service. It is feared that the weak-

ened truck industry will bring undersirable impacts on the development of small scale industries.

Acute shortage of electricity is felt all over the Country, among others, in the Western region where generating capacity is definitely lacking. In the major Eastern industrial areas the inexpensive pipeline gas is available for industrial use but in the Western region coal or fuel oil with prices twice as much as that of the pipeline gas in terms of heat content. The inadequate electricity supply situation in the West must be somehow improved, otherwise, industrialization including small scale industry development in the region will eventually suffer setback.

BSCIC has constructed twenty industrial estates for small scale industries in all over the Country. In contrast to the full occupancy of the industrial estates in large cities, considerable vacancies were observed in those situated in cities in rural areas. Need for constructing new industrial estates in the neighborhood of large cities is strongly felt, whereas those in rural areas are better to be equipped with such basic infrastructure as electricity supply and telephone. Also needed include the on-the-spot consultation and advisory services to industries located themselves in the industrial estates.

3. POTENTIALS OF SMALL SCALE INDUSTRY DEVELOPMENT IN THE FOUR SUBDIVISIONS AND SELECTED INDUSTRIAL SUB-SECTOR FOR THE PRIORITY DEVELOPMENT

(1) Sub-Divisional Characteristics

There were few distinctive characteristics among the four Sub-Divisions which would open up possibility of new small scale industries in each. Some implication of industrial development potential is as follows:

- Chandpur: Industrial activities in this Sub-Division is less conspicuous compared with the other three except for small scale rice and wheat milling. The future prospect will include production of some consumer goods to be distributed via the inland waterways, and repairing boats and marine engines.

- Joydebpur: This area has been considerably industrialized to constitute a part of the Dacca metropolitan industrial zone and the progress of indstrialization is expected to continue without particular effort. Selective and orderly industrialization in future is, therefore, desirable which will include production of consumer goods such as foods and garments, durable consumer goods such as household electrical appliances and capital goods such as electrical and non-electrical machinery.

- Kushtia: Industries in this area were observed as less active as agricultural activities. Revitalization of the existing industries by introducing new product lines including some consumer goods and by modernizing machines and equipment currently in use.

- Bogra: This area can be identified as a centre for goods supply to the neighbouring Sub-divisions in view of its strategic location and convenient transportation network. The fairly established industrial activities at present must be developed properly so as to include the supply of consumer goods and small capital goods, for example agricultural implements and light machines.

(2) Selected Industrial Sub-Sector for Priority Promotion

Among agro-supporting and agro-based industries, manufacture of small metal products, light machinery and their parts and components has been identified as most important. The sub-sector of small scale industries, namely metal working and light engineering industry, is expected to contribute to the agricultural developemtnt through supply of farming tools, farming implements and simple agricultural machines of high quality.

Development planning of the agro-based industries should be dealt with within the framework of the agricultural development.

Small scale metal working and light engineering industry can extend its supporting activities to the other economic sectors including industry, transportation, construction and household as well as agriculture, and thus can establish and strengthen its linkages with these economic sectors. Another national economic benefit of developing the sub-sector will include substitution of a part of machine parts import presently amounting to Tk600 millions.

A long list of products possibly manufactured by the metal working and light engineering industry has been prepared and presented in Table 1.

(3) Selected Products and Demand Projection

The products listed in the long list have been further screened according to the following criteria:

i) National development objectives,

ii) Basic human needs or national welfare objectives,

iii) Resource utilization,

iv) Foreign currency saving,

v) Industrial linkage development,

vi) Development of specific technologies, and

vii) Elevation of the technology level.

Table 1 Long List of Metal Working and Light Engineering Products

Category	Final Use	Finished Products		Semi-Finished Products
1. Capital Goods				
a. Machinery and Equipment	- Agriculture	1) Rice Mill 2) Flour Mill 3) Oil Mill 4) Sugar Cane Crusher	5) Centrifugal Pump 6) Paddy Dryer 7) Tractor 8) Power Tiller 9) Cotton Decorticating Machine	Parts and Components for 1) - a)
	- Transport	10) Auto-Rickshaw 11) Rickshaw 12) Bicycle	13) Tricycle 14) Push Cart 15) Bullock Cart	Parts and Components for 10) - 15)
	- Textile	16) Sawing Machine 17) Power Loom	18) Other Machines for Jute and Textile Mills	Parts and Components for 16) - 18)
	- Electrical	19) Electric Motor 20) Transformer	21) Watt-Hour Meter	Parts and Components for 19) - 21)
	- Wood Working	22) Circular Saw 23) Planer	23) Mortisier Machine 24) Spindle Sander	Parts and Components for 22) - 24)
	- Metal Working and Machining	25) Drilling Machine	26) Lathe 27) Hacksaw	Parts and Components for 25) and 26)
	- Other Machinery and Vessels	27) Boiler 28) Water Tank	29) Gas Cylinder	

- continued -

Category	Final Use	Finished Products		Semi-Finished Products
2. Consumer Goods				
a. Tools and Implements	- Agriculture	30) Hand Pump 31) Plough 32) Weeder 33) Winnower 34) Seed Drill	35) Paddy Thresher 36) Hand Hoe 37) Spade 38) Sickle 39) Rake	Parts and Components for 30) - 39)
	- Wood Working	40) Hammer 41) Plane 42) Saw	43) Chisel 44) Vice 50) Wood Binder	
	- Metal Working	51) Hammer 52) Metal Saw 53) Chisel 54) Screw Driver 55) Wrench	56) Pliers 57) Vice 58) Grinder 59) Hand Drill 60) File	
b. Others	- Household Items	61) Metal Utensil 62) Hurricane Lantern 63) Cutlery	64) Pressure Lamp 65) Cooking Stove	
	- Building Hardware	66) Sanitary Pipe and Fitting 67) Window Frame and Grill 68) Gate 69) Fence 70) Steel Container 71) Lock and Padlock	72) Bolt and Nut 73) River 74) Washer 75) Nail 76) Screw 77) Hinge 78) Meshed Metal Wire Net 79) Metal Furniture	
	- Electrical	80) Electric Heater and Stove	81) Switch 82) Plug and Socket	

(Source) JICA Team

Products thus selected are as follows:

- Farming or agricultural tools and implements such as hand hoes, ploughs, sickles, paddy weeders, pedal threshers, grain dryers and hand sprayers,
- Water supply equipments such as centrifugal pumps, hand pumps and pipe fittings,
- Simple agro-processing machines such as rice mills, flour mills, oil milling machines and machines for local sugar mills,
- Low cost transport equipment such as wheelbarrows and handcarts,
- Machine parts and components such as parts and components for textile and jute mills, and bicycle parts, and
- Others including hand tools and cutlery.

Estimated demands for the typical products selected are shown in Table 2.

Table 2 Demand Estimation for Typical Products

	1979/80 in use	1984/85 demand
* Centrifugal	81,500	23,035
* Hand Pump	450,000	185,000
* Paddy Weeder	25,584	96,751
* Pedal Thresher	13,872	32,894
* Winnower	3,200	18,595
* Seed Drill	10,000	10,544
* Grain Dryer	—	4,741
* Bullockcart	91,152	1,643
* Pushcart	15,273	19,167

(4) Development Guideline

Development guideline for the small scale metal working and light engineering industry in the four Sub-Divisions is summarized as follows:

i) To establish at least one production or repair-cum-production base in each Thana,

ii) To fully utilize the existing capacity of metal working and light engineering industry, if necessary, by improving and modernizing the facilities,

iii) To allocate adequate fund to the new establishment or the modernization,

iv) To establish a technical backup system,

v) To organize raw materials and parts supply systems, and

iv) To organize new cooperative marketing channels and/or to improve the the existing marketing systems.

4. THE PRESENT STATUS AND PROBLEMS OF THE SMALL SCALE METAL WORKING AND LIGHT ENGINEERING INDUSTRY

(1) Technology and Quality of Products

Small scale metal working and light engineering industry in Bangladesh has achieved progress to manufacture varied types of products, which, however, tend to offer low quality in spite of cheap prices.

Generalized problems of the technology presently owned by the industry are as follows:

- There are no clear specifications of products manufactured. Use of technical drawings, viz. blue prints, is very limited and, whenever observed by the Survey Team, drawings are found to be too simple to put into shape, frequently neglecting such necessary specification data as tolerance and surface roughness. Machine assembly is carried out entirely by tailoring parts and components on the spot, and, therefore, interchangeability of the parts and components is not warranted.
- There is little regard for the "know how of finishing", which is characteristic to each product. Most of the domestically made machines have resemblance to the originals of foreign origin, but their quality and performance are by far inferior, obviously due to negligence of or to incapability of attaining the know how,
- Products procured by the Government agencies tends to be of inferior quality to those widely marketed. This is also due to disregard of product specifications when procured.
- There is strong tendency among the small scale metal working and light engineering industrial units to become "integrated", in other words, to comprise every manufacturing process within their factories. It is feared, therefore, that upgrading production technology through manufacture of specialized products and achieving high capacity utilization of machines and equipment will not be expected.
- Elements of each production technology, examples of which include correct

centering during turning and proper moisture control of casting molds, are not firmly established. There seem to be considerable potentials for the improvement of the existing product qualicy simply by acquiring the basic elements of technology.

- Raw materials supply is very restricted in terms of both quantity and quality. It is always difficult to obtain raw materials with desired specifications and only those of similar quality can be secured if one is fortunate enough. The public importing agencies have been reported to import raw materials of inferior quality probably because of their low prices with less regard to quality, and
- There is a prevailing negligence of fundamental practice of machine designing, often causing excessive stress concentration on a certain small parts and resulting in failure of the entire machine. Slight modification of the machine design will warrant extended life.

(2) Marketing and Distribution Channels

It is interesting to know that most industrial goods are placed in the seller's market in spite of the low average purchasing power. The seller's market has created disincentives to the manufacturers to exploit new markets, to increase productivity and to upgrade quality of products.

New product development to meet the market needs has seldom taken place and idle production capacity is quite common because of neglecting market survey. The Government is expected to play a major role in collecting and disseminating market information of metal products and light machinery, and the concrete policy measures are yet to be formulated.

Distribution channels of products manufactured by the small scale metal working and light engineering industry have been proved relatively simple, primarily direct sales of the products from manufacturers to customers. There are, however, more complicated distribution routes such as the cases of irrigation equipment procured by the Governmental agencies and then leased to farmers, cases of rural sugar cane crushers leased via the regional agents and cases of bicycles marketed through the established sales agents.

(3) Raw Materials Supply

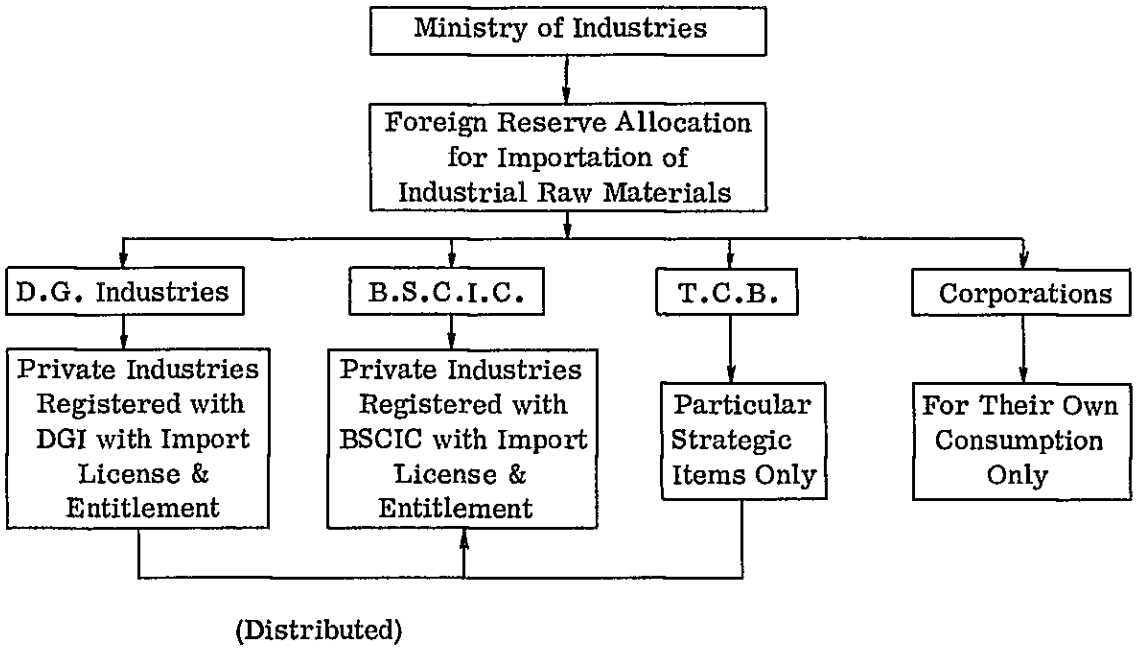
Raw materials import is largely influenced by the level of the foreign currency reserve. Even in the case of locally manufactured reinforcement steel bars, they are also dependent on imported scraps and billets. The import vulnerability inevitably has resulted in high prices and unstable supply of steels and other metal raw materials. Figure 1 illustrates the system of importation of industrial raw materials.

Small scale industries, which usually find difficulty in obtaining import license due to foreign currency shortage, sometimes are forced to rely on the high-priced local supply.

Problems of the raw materials supply are summarized in the following:

- Improper foreign currency allocation,
- Creation of free markets of raw materials due to short supply,
- Extraordinary high prices of imported raw materials resulting from the high import duty and the seller's market,
- Lengthy time needed to obtain foreign currency allowcation,
- Narrowed distribution channels of raw materials due to the cash settlement procedure, and
- Additional cost and time of shipment usually borne by the purchasers.

Fig. 1 System of Importation of Industrial Raw Materials



Source: Compiled by JICA Team

(4) Management

There are three types of managers expected to participate in the development of the small scale metal working and light engineering industry as shown in Table 3.

A majority, 80%, of the managers of the existing small scale metal working and light engineering industrial establishments considers the financial matter as most important. The prime reason for this is attributed to lack of working capital, possibly caused by the excessive raw material inventory and inadequate fund management.

Fundamental knowledge regarding production management, inventory control, marketing, labor and personnel management and so forth is also lacking, and management training of small scale industrialists should be further intensified.

Table 3 Comparison of Possible Managers of Small Scale Metal Working/Light Engineering Industry

Item	(i) Technical/Marketing Experts of the Industry	(ii) General Investors in Manufacturing	(iii) Educated but Inexperienced People with Little Fund
1. Sources of Supply	• Existing small scale metal working and light engineering industry • Nationalized large scale companies	• Owners of manufacturing companies in other sub-sector • Owners of merchandizing companies	• Diploma Engineers • Graduates of TTC courses (• Rural blacksmiths)
2. Advantages	• Technical and marketing know-how	• Financial and general managerial know-how	• Eagerness of starting business in rural areas
3. Disadvantage	• Lack of financial and accounting know-how	• Lack of technical and marketing know-how	• Lack of technical, marketing, financial and accounting know-how
4. Desirable Capacity	• Cost consciousness	• Quality consciousness • Marketability consciousness	• Cost consciousness • Marketability consciousness
5. Needs for Management Training	• Accounting/bookkeeping • Personnel/labour management	• Production Management • Raw materials and products management • Sales and marketing	• Accounting/bookkeeping • Production management • Raw materials and products management • Sales and marketing

Source: JICA Team

(5) Finance and Other Institutions

No specific efforts have been made to develop the small scale metal working and light engineering industry apart from the fact that 7 to 8% of the total small scale development loan has been brought in this sub-sector. In the agricultural sector, however, Bangladesh Krishi Bank has a program to foster a certain number of agricultural machinery manufacturers through selective financing.

Problems of financial aspects include the following:

- Shortage of bank branches and lacking capability of the loan processing,
- Unfavorable loan conditions of the IDA small industry sub-loans for the metal working and light engineering industry,
- Complicated loan application procedures and lengthy loan processing time, and
- Lack of special consideration of giving loans to technology intensive small scale engineering industries.

Other related institutions eventually to be established or improved are as follows:

- Industrial standards,
- Raw material testing and chemical analysis service,
- Counselling and advisory services for establishing small scale industrial firms,
- Investment incentives for small scale industries, and
- Technical qualification and certification systems for skilled workers employed by small scale industries.

5. RECOMMENDATION ON DEVELOPMENT OF SMALL SCALE METAL WORKING AND LIGHT ENGINEERING INDUSTRY

(1) Sub-Divisional Development Plan

The plan envisages establishment of at least one production or repair-cum-production base of metal working and light engineering in each Thana of the four Sub-Division. The implementation mesures include the following:

- The size of the base is standardized in four classes and the class in each Thana is determined according to the population, the area and the degree of industrial development,
- Definition of the four classes is listed in Table 4. The class 1 base corresponds to a modernized metal working and light engineering factories employing less than 100 workers, whereas the class 3 base is the smallest industrial units categorized under the "small scale industries". The class 4 base is categorized as cottage industries.

Table 4 Outline of Production and Repair-cum-Production Basis

Class	Major Activities	Investment (Tk)
1	• Production of varied metal products and light machinery • Repairing automobiles and light machinery • Production of machine parts	1,000,000 — 2,500,000
2	• Production of limited types of metal products and light machinery • Repairing automobiles and light machinery • Repairing automobiles and light machinery • Production of machine parts	500,000 — 1,000,000
3	• Production of agricultural tools and implements • Repairing automobiles and agricultural tools, implements and machinery	100,000 — 500,000

- Continued -

Class	Major Activities	Investment (Tk)
4	• Production of small agricultural tools and simple implements • Repairing agricultural tools and implements • Makeshift repairing of automobiles	below 100,000

Source: JICA Team

- Assuming that one base is to be established in each Thana of the four Sub-Division, distribution of bases by class is estimated as shown in Table 5.

Table 5 Distribution of Production and Repair-cum-Production Basis in Each Thana

Class	Chandpur	Joydebpur	Kushitia	Bogra
1	1	1	1	1
2	1-2	2	1	2
3	2-3	2	2	5-6
4	0	0	2	1-2
Sub-Total	5	5	6	10

Source: JICA Team

- The cost of establishing one base in each Thana of the four Sub-Divisions is estimated at Tk17 millions. Provided that the existing facilities including BITAC Chandpur and some factories located at the Tongi BSCIC industrial estate are fully utilized, the investment needed will possibly to reduced to Tk9.1 millions.

The total investment necessary to establish one base in each Thana throughout the Country is estimated at Tk150 to 270 millions and the figures can be further diminished when the existing facilities are modernized and utilized for this purpose.

Financing the entire project can be arranged by the private investment together with the IDA small industry subloans, probably up to the level of 60 to 70% of the total within the Second Five Year Plan period. Taking into consideration of other sources of loan supplied by international financing institutions including ADB and the existing idle capacity of metal working and light engineering industry, 100% achievement of the project target will be possible during the next five year period.

(2) Development Policy and Institutional Measures

For the development of the small scale metal working and light engineering industry, policy and institutional measures for solution of such problem areas as finance, taxation, investment, raw materials supply, infra-structure, marketing and distribution channels, management and technology have been formulated, among which finance, raw materials supply, marketing and technology are identified as most important and recommendations on solution of the problems are summarized in Table 6.

Out of the four problem areas, finance and technology should deserve close attention at present. Financing the small scale metal working and light engineering industry, however, is expected to become less problematic on the ground that the Third IDA Small Scale Industry Project is being implemented in which training of the bank personnel as well as the loan sub-program is included.

The low level of the technology, being a prime reason for the poor quality of products and the low productivity, should be urgently improved and raised. Effective countermeasures for the problem should include a production-oriented technical training program based on an entirely different concept from the existing technical training scheme, a demonstration program of improved production technology and a technical consultation program.

Table 6 Problems and Recommendations for Development of Small Scale Metal Working and Light Engineering Industries

Problem Area	Problems	Recommendations
1. Financial Area	- Loan unavailability	- Allocation of a certain percentage of small scale industrial loans to metal working and light engineering industries.
	- Outdated machinery and equipment	- Special fund for modernization of machinery and equipment.
	- Slow loan processing and appraisal	- Decentralization of loan appraisal and sanction powers.
	- Lack of working capital	- A special loan system and a credit insurance system for working capital borrowing.
2. Raw Material Supply Area	- Inefficient and inproper foreign reserve allocation	- Streamlining the entire procedures of foreign reserve allocation.
	- Excessive high prices of raw materials	- The Government's control on import duties and on domestic market prices of imported metals.
3. Marketing Area	- Lack of product standardization	- Establishment of industrial standards for small metal products and light machines.
	- Unavailability of market and product information	- Exhibitions, fairs and displays. Establishment of a centralized machine for dissemination of information.
	- Lack of innovative and improved design	- A patent and design registration system. Establishment of a centre for industrial design and prototype development.
	- Unavailability of proper marketing channels	- Encouragement of organizing collective sales and distribution systems.

(Continued)

Problem Area	Problems	Recommendations
4. Technological Area	- Low level of specific technologies	- Advisory on proper selection, use and maintenance of machines. Technical training of workers.
	- Low production technology level	- Establishment of demonstrative production unit(s) where on-the-job training can be conducted.
		- Establishment of a product and production process development centre.
	- Negligence of basic engineering designs and specifications	- Training workers in this regard.
	- Lack of quality consciousness	- Establishment of industrial standards and quality standards of a certain types of products.
	- Unnecessary integration	- Promotion by the Government to specialize in a certain fields of metal working and light engineering subsector.

Source : JICA Team

6. MEASURES FOR PRODUCTION TECHNOLOGY DEVELOPMENT

(1) An Organization for Production Technology Development

Elements of the organizational function for the production technology development and transfer are as follows:

- Demonstration of production,
- Training of production technology,
- Technical extension services,
- Development of new products, prototypes and new production technologies, and
- Supply of specific parts and components.

There are at least ten organizations either in existence or under planning, which perform a part of the above-mentioned functional elements, as illustrated in Fig. 2, none of them are considered to satisfy the entire functional requirements for the development and the transfer of production technology. Concept of a new organization is therefore formulated in order to extend technical support to small scale private firms as well as to the proposed rural production and repair-cum-production bases. The new organization is also expected to contribute to raising the overall technological level of the small scale metal working and light engineering industry.

(2) Production Technology Development Center

The new organization, tentatively entitled as the Production Technology Development Center (PTDC), is to conduct the five functional activities, namely, (i) production demonstration, (ii) on-the-job technical training, (iii) technical consultation and extension, (iv) research and development and (v) supply of specific parts and components.

An organizational structure of PTDC is illustrated in Fig. 3, which corresponds to the final stage of the three-phase development with the total employment of approximately 160 persons.

The followings are recommended operational guidelines of PTDC:

- PTDC be established under the Ministry of Industries, either belonging to a function of BSCIC or BITAC, or obtaining an autonomous status on an equal level to BITAC.
- Periodical review of product items will become necessary when the markets of a certain products are fully developed and the technology transfer is completed. PTDC will then start efforts on other new items.
- Demarcation of research and development fields be needed so as not to duplicate the efforts with other research organizations.
- PTDC be allowed to obtain foreign currency allocation and import license in order to secure stable supply of raw materials, a prerequisite for trouble-free operation.
- Some linkage between PTDC and financial institutions be established to facilitate entrepreneurs to acquire technical and managerial knowledge of the metal working and light engineering industry.

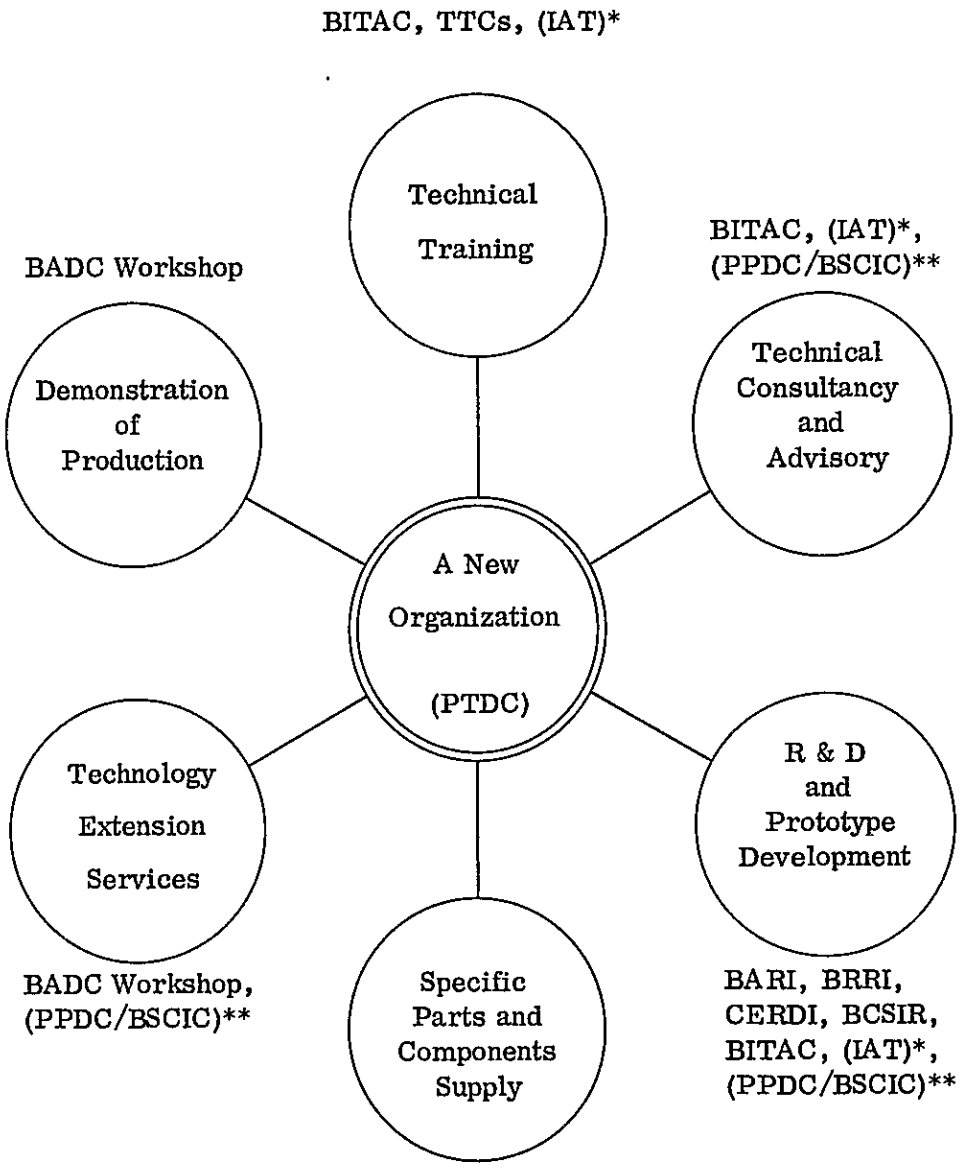
It is desirable that PTDC's function be expanded in three stages as indicated in Table 7. In the first stage, the production demonstration and the technical training are to be established, in the second stage, technical consultation and specific parts supply and, in the third stage, technical extension services and development of new products and production technologies.

The location of PTDC is tentatively recommended to be in the vicinity of Joydebpur after scrutinizing the site conditions of the four Sub-Divisions.

Six to seven product items have been selected out of the existing products of poor quality and new products whose demand has already become actual and recommended to be manufactured at PTDC for the purpose of demonstration and on-the-job training.

The buildings, machinery and facilities of PTDC should be allowed to have a certain excess capacity to cope with the possible expansion of the future activities.

Fig. 2 Elements of Production Technology Development and Transfer

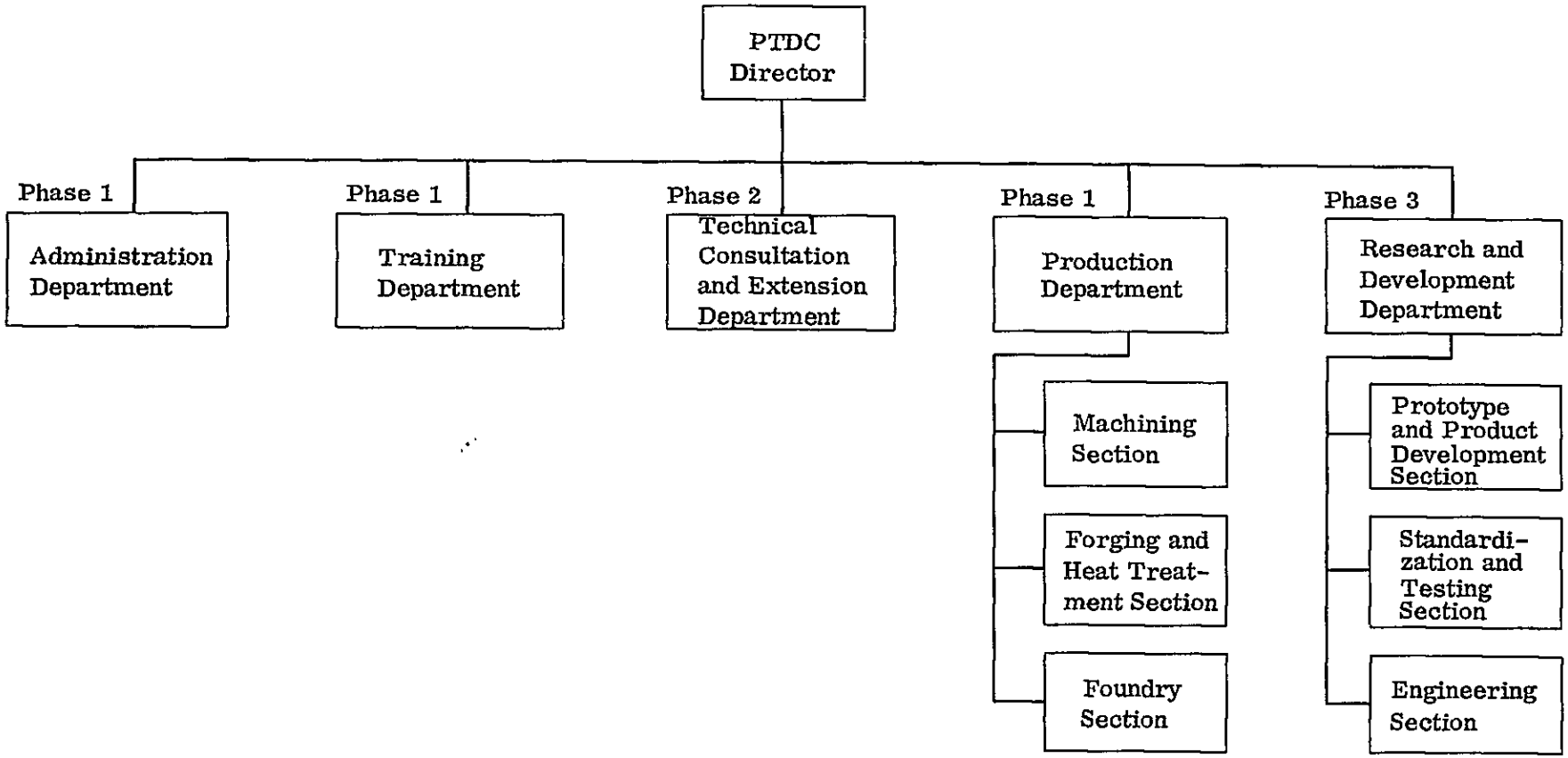


(Source) JICA Team

* IAT: Institute of Appropriate Technology

** PPDC/BSCIC: Prototype and Product Development Centre proposed by BSCIC

Fig. 3 Organization Chart of the Proposed PTDC



Source: JICA Team

Table 7 Operational Plan of PTDC

Plan Items	Phase I	Phase II	Phase III
1. Demonstration of Production	• Test run of machinery and equipments • Trial production of selected products • Testing and inspection of raw materials and final products	• Full scale production • First review of product lines • Establishment of simple quality control system • Establishment of machinery maintenance system	• Second review of product lines
2. Technical Training	• Training of PTDC staff of the Production Dept. • Training of government officers and TTC instructors	• Training of skilled workers from small scale industries	
3. Technical Consultation, Advisory and Extension		• Technical consultation and advisory at PTDC • Circuit on-the-spot advisory	• Extension services on new products and production technology
4. Research and Development		• Collection of information on new products	• Prototype and new products development • Fabrication technology development • Standardization study • Dissemination of information on new products and their production technology
5. Specific Parts and components Supply	(• Construction of production bases* and repair-cum-production bases*)	• Manufacture and supply of specific parts and components	• Gradual transfer of PTDC's part supply capacity to selected production bases*

Source: JICA Team
Note: * Refer to 5.1

CHAPTER 1 BASIC NEEDS FOR DEVELOPMENT OF SMALL SCALE INDUSTRY

CHAPTER 1 BASIC NEEDS FOR DEVELOPMENT OF SMALL SCALE INDUSTRY

1.1 THE PRESENT STATUS OF SMALL SCALE INDUSTRIES

1.1.1 Results of the Census of Small Industries 1978/79

(1) Overall Picture

There are 24,025 units of small scale industries in the Country, according to the Census of Small Industries 1978/79 (the reference year of the Census is 1978). The total number of persons employed by all the 24,025 small scale industries is 152,145 and the average number of persons employed per unit is 6.33. Value added generated by these small scale industries in the year amounted to Tk. 1,763 million.

Small scale industry is defined in the census as a manufacturing unit which employs hired labour and whose total investment does not exceed Tk. 2,500,000. (The total investment refers here to land, building and machinery. The definition of small scale industry by BSCIC has been amended after this census to a manufacturing unit whose fixed assets in machinery do not exceed Tk. 2.5 million.) The census covers all the small scale industry units in Bangladesh known to fit to the definition, except that handloom units employing 20 or more workers were excluded.

Statistics are not available to compare the small scale industries with industries of other sizes. An estimate, however, puts it that there are medium and large scale industries with about one tenth in the number of units, employing one fifth of workers and generating three times of value added of those of small scale industries. Besides, there exist cottage industries much larger in terms of the number of units and employment, roughly estimated over a half million and one and a half million respectively (employment in the cottage industries includes part-time workers).

Results of the Census of Small Industries 1978/79 are still under process. In this section an attempt will be made to describe the structure of the existing small scale industries by utilizing preliminary results of the Census. In so doing,

only three yardsticks, that is, the number of units, employment and value added, are resorted to. It is expected that other data such as those concerning the amount of investment and wages will be made available soon and will reveal more detailed picture of the industries.

(2) Distribution by Region

Dacca is the largest centre of small scale industries. The Dacca district accounts for 27%, 29% and 35% of the national total in terms of the number of units, employment and value added respectively. Chittagong is the second largest centre with these figures standing at 12%, 10% and 8%. The rest of the small scale industries are thinly scattered around in the remaining 18 Districts. Of these 18 Districts, Khulna, Comilla, Rajshahi and Sylhet may be grouped as Districts of the secondary importance. As seen in Table 1.1.1, however, they individually account for only 5-7% of the national total of the number of units, employment and value

Table 1.1.1 Districts with More Developed Small Scale Industries

(Unit : % of the National Total)

	No. of Units	No. of Workers	Value Added
Dacca	26.9	29.3	33.5
Chittagong	12.0	9.9	7.9
Comilla	6.5	5.2	7.8
Khulna	7.1	7.4	7.3
Rajshahi	4.7	6.5	5.1
Sylhet	5.3	5.3	4.2
Sub-total	62.5	63.6	65.8

Source : Table 1.1.2, 3 and 4

added. On the other hand, Tangail, Jamalphur, Chittagong Hill Tracts, Kushtia and Patuakhali Districts may be grouped as those with least developed small scale industries. Each of them account for below 2% of the national total of the these yardsticks (see Table 1.1.2, 3 and 4).

Table 1.1.2 Number of Small Scale Industry Units, 1978

District	31 Food	32 Textile	33 Wood	34 Paper	35 Chemical	36 Non-metal	37 Basic Metal	38 Fab. Metal	39 Others	Total	% of Total
Dacca	3,057	1,108	224	500	216	121	896	316	6	6,444	26.9
Mymensingh	723	-	35	18	27	-	38	4	-	845	3.5
Faridpur	937	23	7	29	6	-	29	1	-	1,032	4.3
Tangail	270	1	6	16	2	6	26	22	-	349	1.5
Jamalpur	291	-	7	14	4	-	13	-	-	329	1.4
Chittagong	2,016	41	87	63	88	10	411	166	8	2,890	12.0
Ch. Hill Tract	190	-	30	-	-	-	3	-	-	223	0.9
Comilla	1,332	13	55	50	44	1	50	11	-	1,556	6.5
Noakhali	1,019	1	55	45	8	1	24	7	-	1,160	4.8
Sylhet	1,136	8	43	42	12	5	11	5	1	1,263	5.3
Khulna	1,344	8	68	60	23	9	111	80	-	1,703	7.1
Jessore	718	5	40	17	15	1	37	21	66	920	3.8
Kustia	354	17	-	5	2	1	11	9	4	403	1.7
Barisal	926	2	67	41	13	-	12	1	-	1,062	4.4
Patuakhali	298	-	11	9	2	-	-	-	-	320	1.3
Rajshahi	956	18	32	25	6	60	20	5	-	1,122	4.7
Bogra	400	2	11	32	12	-	11	8	8	484	2.0
Dinajpur	589	1	14	19	10	-	5	-	-	638	2.7
Pabna	280	63	33	49	15	-	10	3	-	453	1.8
Rangpur	520	117	45	54	21	1	25	5	45	833	3.4
Total	17,356	1,428	870	1,088	526	216	1,743	664	138	24,029	100.0
% of Total	72.2	5.9	3.6	4.5	2.2	0.9	7.3	2.8	0.5	100.0	

Source : Preliminary Tabulations of the Census of Small Industries, 1978/79

Table 1.1.3 Number of Persons Employed in Small Scale Industries, 1978

District	31 Food	32 Textile	33 Wood	34 Paper	35 Chemical	36 Non-metal	37 Basic Metal	38 Fab. Metal	39 Others	Total	% of Total
Dacca	16,145	8,639	1,629	3,713	2,035	4,069	5,926	2,488	13	44,657	29.3
Mymensingh	2,703	-	236	83	171	-	242	32	-	3,467	2.3
Faridpur	3,137	149	57	126	86	-	137	3	-	3,695	2.4
Tangail	1,357	4	49	58	6	1,266	71	73	-	2,884	1.9
Jamalpur	1,678	-	57	77	28	-	62	-	-	1,902	1.3
Chittagong	8,660	453	873	558	516	752	2,293	903	58	15,066	9.9
Ch. Hill Tract	1,384	-	251	-	-	-	14	-	-	1,649	1.1
Comilla	5,609	289	444	267	737	17	306	172	-	7,841	5.2
Noakhali	4,954	6	377	263	45	3	116	58	-	5,822	3.9
Sylhet	6,871	114	314	300	198	25	165	79	31	8,097	5.3
Khulna	8,511	56	680	462	294	123	717	418	-	11,261	7.4
Jessore	3,236	103	329	100	123	33	193	131	179	4,427	2.9
Kustia	1,286	119	-	24	43	69	64	22	9	1,636	1.1
Barisal	6,931	22	527	290	385	-	92	30	-	8,277	5.4
Patuakhali	2,656	-	101	89	26	-	-	-	-	2,872	1.9
Rajshahi	7,023	273	298	262	73	1,732	228	49	-	9,938	6.5
Bogra	1,930	16	110	349	457	-	151	49	57	3,119	2.0
Dinajpur	6,367	11	128	134	130	-	18	-	-	6,788	4.5
Pabna	1,577	627	539	203	201	-	116	36	-	3,299	2.2
Rangpur	2,993	1,318	266	285	162	3	175	11	160	5,373	3.5
Total	95,008	12,199	7,265	7,643	5,716	8,092	11,086	4,554	507	152,070	100.0
% of Total	62.4	8.0	4.8	5.0	3.8	5.3	7.3	3.0	0.3	100.0	

Source : Same as in Table 1.1.2

Table 1.1.4 Value Added of Small Scale Industries, 1978

(Unit: 1,000 Tk)

District	31 Food	32 Textile	33 Wood	34 Paper	35 Chemical	36 Non-metal	37 Basic Metal	38 Fab. Metal	39 Others	Total	% of Total
Dacca	265,682	70,021	22,307	76,966	23,028	22,113	83,065	28,000	64	591,246	33.5
Mymensingh	27,254	-	4,248	622	1,053	-	1,187	236	-	34,600	2.0
Faridpur	44,402	721	317	831	615	-	1,833	17	-	48,736	2.8
Tangail	10,002	23	361	437	33	1,853	805	313	-	13,827	0.8
Jamalpur	9,636	-	377	517	154	-	325	-	-	11,009	0.6
Chittagong	77,469	3,257	6,593	13,310	5,533	1,501	22,504	8,270	571	139,008	7.9
Ch. Hill Tract	5,656	-	616	-	-	-	84	-	-	6,356	0.4
Comilla	98,350	3,405	6,511	6,658	13,387	245	5,184	3,075	-	136,815	7.8
Noakhali	63,010	26	4,882	5,998	1,193	160	1,305	518	-	77,092	4.4
Sylhet	61,316	572	3,381	4,160	1,581	84	2,230	519	168	74,011	4.2
Khulna	91,857	476	9,691	12,270	3,068	632	7,745	3,395	-	129,134	7.3
Jessore	67,256	2,119	5,899	2,245	3,248	265	5,539	2,890	402	89,863	5.1
Kustia	23,176	753	-	312	368	317	905	188	79	26,098	1.5
Barisal	58,142	303	4,133	1,933	1,967	-	754	163	-	67,395	3.8
Patuakhali	14,130	-	717	610	151	-	-	-	-	15,608	0.9
Rajshahi	69,851	5,190	2,972	1,958	622	6,524	2,496	346	-	89,899	5.1
Bogra	26,873	214	937	3,566	3,436	-	1,800	782	457	38,065	2.2
Dinajpur	45,983	297	1,294	1,039	864	-	104	-	-	49,581	2.9
Pabna	49,045	2,423	1,994	1,368	1,040	-	888	484	-	57,242	3.3
Rangpur	47,156	5,909	2,820	6,192	2,425	15	1,842	208	777	67,244	3.8
Total	1,156,246	95,709	79,950	140,992	63,806	33,709	140,595	49,404	2,518	1,762,929	100.0
% of Total	65.6	5.4	4.5	8.0	3.6	1.9	7.8	2.8	0.1	100.0	

Source : Same as in Table 1.1.2

Small scale industries in less developed Districts (less developed in terms of the level of activities of small scale industries) are less diversified, as might well be expected. That is, the number of industrial categories into which existing small scale industries in these Districts are classified at the ISIC 5 digit level is much smaller than the corresponding figures of more developed Districts. While small scale industries in Dacca are classified into 135 industries at the 5 digit level, those in Chittagong Hill Tracts and Patuakhali Districts fall into only 7 and 9 categories respectively. Other 6 Districts have 20 or so different kinds of small scale industries. These are Mymensingh, Faridpur, Jamalpur, Kushtia, Barisal and Dinajpur Districts. If the food and allied industry is excluded such figures become much small (see Table 1.1.5).

(3) Distribution by sub-sector

The overwhelming majority of the Country's small scale industries falls in the food and allied industry sub-sector, which accounts for 72% of the total number of the small scale industrial units. Employment in the sub-sector represents 62% of the total and value added 66%. The picture is not very different among Districts. In Dacca, where small scale industries are most developed, the sub-sector is less conspicuous but the corresponding figures still stand at 47%, 37% and 45%. In most of other Districts these figures go up to 70-80% or even higher. Within the food and allied sub-sector, the rice mill industry dominates the scene. This industry along accounts for 51% of the number of units, 39% of employment and 37% of value added of the entire small scale industries.

The sub-sector which follows the food and allied industry is the basic metal industry accounting for 7-8% of the number of units, employment and value added of all the small scale industries. If Dacca is excluded, however, these figures would be much smaller. The census data further subdivide the sub-sector to industrial branches such as 'steel products', 'steel furniture', 'iron work', 'engineering products', etc. Among these industrial branches, the 'light engineering industry' is the largest and most widely disperced.

Table 1.1.5 Diversity of Small Scale Industries by District, 1978

District	Number of Industrial Categories at ISIC 5 Digit Level									
	Total	31 Food	32 Textile	33 Wood	34 Paper	35 Chemical	36 Non-metal	37 Basic Metal	38 Fab. Metal	39 Others
Dacca	135	20	23	8	8	26	11	13	25	1
Mymensingh	20	9	-	2	1	3	-	3	2	-
Faridpur	17	7	1	1	3	3	-	1	1	-
Tangail	26	10	1	1	1	2	1	3	7	-
Jamalpur	13	6	-	1	1	3	-	2	-	-
Chittagong	74	13	11	5	6	15	3	8	11	2
Ch. Hill Tract	7	4	-	2	-	-	-	1	-	-
Comilla	50	14	8	6	2	10	1	4	5	-
Noakhali	30	10	1	3	3	2	1	5	5	-
Sylhet	26	7	3	1	2	3	1	5	3	1
Khulna	50	15	4	2	2	10	3	6	8	-
Jessore	36	9	3	3	1	6	1	4	8	1
Kustia	20	8	1	-	1	2	1	3	3	1
Barisal	22	8	2	3	2	4	-	2	1	-
Patuakhali	9	5	-	2	1	1	-	-	-	-
Rajshahi	36	11	6	4	2	2	2	5	4	-
Bogra	30	9	1	1	2	5	-	6	5	1
Dinajpur	18	8	1	1	1	6	-	1	-	-
Pabna	27	9	5	2	2	5	-	3	1	-
Rangpur	43	14	8	7	1	3	1	4	3	2

Source : Same as in Table 1.1.2

Note : Diversity of small industries is defined here as the number of industrial categories into which existing small industries in a given district are classified at the ISIC 5 Digit Level.

1.1.2 Development Over Time

The preceeding census is that refers to the year 1961. The data obtained by this census are, however, not strictly comparable to those of the recent census quoted above, due to some changes in the definition of small scale industries, the classification of industries and coverage of industries, etc. The most serious trouble is that the recent census excludes handloom units employing 20 persons or more, which were covered in the previous census. The number of these handloom units is known to be about 3,500 in 1978. BSCIC considers the discrepancy due to changes in the difinition of small scale industries and the industrial classifcation is nearly negligible. If these changes were neglected, following remarks could be made:

- During the inter-census period, the number of small scale industries increased from 21,199 in 1961 to 24,025 (about 27,500 of handloom units were counted) in 1978. The total number of persons employed in the industries, however, decreased from 186,423 to 152,145 during the period. (If the handloom industry had been covered by the recent census, the employment figure in 1978 would have been much larger and would register an increase by a few thousands over the 1961 figure.) The value added data are not available for the year 1961.

- The degree of concentration of small scale industries into the two largest centres has somewhat lowered. While Dacca accounted for 35% of the units and 31% of the total employment in 1961, which have decreased to 27% and 29 29% in 1978, the corresponding figures for Chittagong are 14% and 14% in 1961 and 12% and 10% in 1978.

- The sub-sector-wise structure of the small scale industries has undergone some noticeable changes. In 1961, the agriculture and food products industry accounted for 40% of the total number of units and 30% of the total employment. After 17 years since then the food sub-sector has become to occupy much larger share as mentioned earlier.

- The textile industry, which accounted for 34% of the total number of units.

and 33% of the total employment in 1961, has fallen down to one of the sub-sectors of minor importance. Even if the recent census had included the handloom industries, the textile sub-sector would have accounted for about 18% of the all small scale industry units. The decline of the importance of the sub-sector during the inter-census period was thus substantial.

- The share of the engineering sub-sector has remained almost unchanged during the same period. The engineering sub-sector refers here to those classified as the metal working industry in the previous census and those classified as either the basic metal industry or the fabricated metal products and machinery industry in the recent census. The metal working industry existed in 1961 was disaggregated into 22 categories and basic metal industry, fabricated metal products and machinery industry in 1978 are subdivided into a total of 38 categories.

1.1.3 Additional Remarks

It may be worthwhile to touch upon industries of other sizes also. Medium and large scale industries are dominated by public industries. The public industry sector is estimated to account for about 25% of employment and 50% of value added of the overall industry sector. Within the public industry sector, jute mills and textile mills jointly constitute the largest sub-sector, employing about 80% of workers in the sector. Other industries owned by public corporations are sugar mills, fertilizer industry, a petroleum refinery, steel rolling mills and a machine tool factory. Promotion of linkages between these industries and small scale industries has been receiving attention. Although such linkages, if promoted successfully, could give a major impetus for the development of small scale industries, there is not much interactions between the two parties at present.

As already mentioned, it is estimated that there exist over a half million units of cottage industries. Many of them are located in villages and they are dispersed in all over the Country. Although wide variety of industrial activities is undertaken by these cottage industry units, the majority in terms of the number of units and employment is concentrated in a limited number of industries. According to the

Rural Industry Study Project of BIDS which covered eleven selected Thanas, four industries accounted for 60% of the total number of units and 69% of the total employment of rural industries in these Thanas. These industries are handloom, cordage and rope, rice and grain milling, and gur making. Of all the cottage industry units under the study, the majority does not use any machine at all and most of the machines are nonpowered. Only 41% of them use some machine; less than 2% use powered machines.

Following remarks are implications possibly drawn from the data presented in the foregoing paragraphs:

- While the small scale industries as a whole have not registered a sizable growth in the past decade or so, they have undergone noticeable structural changes as a process to adjust themselves to changing economic environment. The food and allied industry sub-sector, the rice milling industry in particular, has achieved a remarkable growth, perhaps, by absorbing the role traditionally played by cottage industries and coping with increased demand for food.

- The textile industry has been in the process of decline giving way to newly developed larger industries (some small scale textile mills in the past might have grown out to medium or large scale industries) and, to some extent, leaving some room for cottage industries.

- The engineering industries has become the second important sub-sector maintaining similar share in the number of units and employment. The sub-sector has diversified its range of industrial activities.

- Some sign of dispersal of industries from the two largest centres to other Districts is noticed. This development has, however, taken place mainly through the dispersal of rice milling and other food industries into regions and, perhaps, only to regional centres. Although a major development of small scale industries outside the two largest cities is yet to be seen, several district towns seem to deserve attention as possible growth centres.

- Cottage industries, on the other hand, can be located even in the remotest areas of the Country and their existing and potential contribution to the national economy is significantly large. The nature of the cottage industries, however, would dictate adoption of promotional measures quite different from those for small and larger scale industries.

1.2 THE SECOND FIVE-YEAR PLAN (1980 - 1985)

1.2.1 Planning Guidelines

The Second Five-Year Plan (1980 - 1985) was not yet made public at the time the Survey Team was in Bangladesh (January - March, 1980), but it is understood that the Plan's outline had already been completed. It should be noted that this Second Five-Year Plan has been established within the framework of the Twenty-Year Perspective Plan (1980 - 2000), which aims to accomplish the following objectives:

- Provision of basic human needs (BHN)
- Creation of employment opportunity
- Growth with equity
- Improvement of literacy rate
- Major foods self-sufficiency
- Industrial growth
- Domestic resources mobilization
- Sustained economic growth
- Improvement of public services
- Development of institutions for rural development

Particularly important of the Perspective Plan's objectives are to control the national population, which will otherwise approach 130 million by the year 2000, to establish a system for food self-sufficiency, and to accomplish industrial development for employment increases and rural development. The achievement of these objectives will require the economy to continue to grow at an annual rate of about 7% throughout the 20 years to come. As a result, it is expected that per capita Gross Domestic Products (GDP) will rise from the Tk 1,400 (US $93) in 1979/1980 to Tk 4,000 (US $250) by 1999/2000.

However, the Perspective Plan is subject to some uncertainties, which include:

- If average annual population increase rate can really be suppressed to 1.5% as hoped for, when the current rate is higher than 2%.
- If the average annual economic growth rate of 7% can really be sustained for

the 20 years, when GDP has increased by only 3.3% during the past 20 years or, even if the recent five years is concerned, by 6%.

- If the productivity of agriculture, the sector which constitutes the major portion of GDP, can really be continuously improved, and if substantial industrial development can really be accomplished.

The Perspective Plan places the major development strategy emphasis on non-metropolitan (or rural) areas where 90% of the population live or, more specifically, on agricultural development in order to provide these people with ample food supplies, the promotion of rural industrialization in order to increase employment opportunities while satisfying rural needs for industrial products, and the development of medical and educational institutions in rural areas.

It is under this rural development guideline that the Second Five-Year Development Plan envisages the following accomplishments on village level:

- Organization of village communities
- Consolidation of land holdings
- Fixation of minimum necessary quota of essential agro-raw materials to the village organization
- Devolution of certain power and functions from the central government to the regional councils comprising people's representative

This development policy will not only facilitate the accomplishments which will meet the rural needs and conditions but will also encourage the rural masses to actively participate in development. It apparently aims at "self-relied development" whereby the rural populace voluntarily carries out agricultural and industrial development and the development of infrastructure, as in the case of the canal digging which is already under way.

Specific ways and means of development have not yet been disclosed (as of March, 1980), but they are presumed to be as described hereunder:

(1) Agricultural Development

The self-supply of and an adequate stockpile of food will be accomplished to feed the population (including the future population increments). The production of not only rice but also of poultry, cultured fish, and vegetables will be expanded so as to actualize "a well balanced diet". Also, the production of cotton, jute, rubber, and other agro-products to be used as industrial raw materials will be expanded. Soil and other regional characteristics will be taken into full consideration in the agricultural development. These achievements will require adequate supply of inputs, namely irrigation pumps and other agricultural tools and implements, fertilizer, chemicals and so on, as well as funds, farm products price stabilization measure, and distribution channels.

The Perspective Plan anticipates an average annual agricultural value added expansion of 4.7% (as against 7% GDP increases) during the plan period of 20 years. The contribution of agricultural sector to GDP will consequently decline from the present 55% to 36%.

(2) Industrial Development

Partly because the nation's land is limited in size, it is claimed that, in a long term view, future Bangladesh population increases will have to be absorbed into industrial sector through industrial development. The basics of industrial development would be to utilize the available local labor and raw materials and to satisfy the local demands. Then, the course to be taken will include manufacturing as many simple machines in Bangladesh as possible and promoting labor-intensive but modern small and cottage industries. Such industries currently operate as private enterprises with little technical and managemental capabilities, and, therefore, it is essential that measures will be taken for the improvement of their capabilities. Particular efforts should be directed to training of skilled laborers. Technologies to be adopted by small scale industries must be appropriate taking into consideration of overall technological level of the country.

Large scale industries must also be strengthened as needed. Particularly, jute, fertilizer, petro-chemical, pulp and paper, machinery, and steel industries will be developed in accordance with the demand and in such a manner as that they will assist small industries.

The smallest unit of rural industrialization in Bangladesh is Thana. Appropriate agro-based or agro-supporting industries can be started in Thanas, and such industries can be consolidated into and assisted by industrial growth centers of approximately 1,000 units. Under this new system, the new industries will form a network together with existing industries to materialize more complex industrial linkage.

(3) Energy Development

Fire wood, fallen leaves, straw, and organic waste constitute from 70 to 75% of the total energy supply in Bangladesh, while the consumption of petroleum products and electric power is increasing rapidly as the total energy consumption is rising remarkably along with economic growth. Coal and natural gas resources, whose occurrence has been confirmed in Bangladesh, will be exploited in order to mitigate the current reliance on petroleum. Exploration for hydrocarbon resources will also be intensified.

As alternative energy sources, the utilization of renewable resources such as biomass, solar energy, and wind power will be seriously considered. Rural electrification has started with priority areas for the complete coverage of all villages by the year 1990.

(4) Land and Water Policy

A land utilization plan will be established, under which irrigation, which presently covers only 12% of the entire arable land, will be expanded. To this end, a large number of small scale projects will be implemented for canal digging and the installation of low-lift pumps and tube wells. On the other hand, a large scale water management program will be carried out on a long run basis for both irrigation and flood control purposes.

(5) Infrastructure Development

Emphasis will be placed on the development of transportation infrastructure including river transport. One way of achieving this will be to link the effort with the large scale water management program. A major road network will be developed to connect Thana industrial growth centers with major cities, while means of transportation which will meet the needs of various levels will be introduced. Wider use of mass transit systems in large cities will be achieved.

Multi-storied flats will be constructed in cities, while simple houses will be built with locally available materials in villages. The present dispersed village pattern is partly responsible for the inefficient land utilization and, therefore, will shift toward more concentrated village pattern.

(6) Manpower Development

Reduction of illiteracy rate and technical training will receive major emphasis. To begin with, primary education will be made compulsory by the end of this Plan period and technical training programs will be intensified in rural areas. Intensive programs for various kinds of education and training will be carried out on Thana level.

The amount of investment needed for the accomplishment of the Perspective Plan will have to increase rapidly. The external assistance which supplement the domestic saving in funding the Plan is expected to rise during the next 10 years and then fall by the year 2000. Therefore, domestic saving, which is now about 4% of GDP, will have to be gradually increased.

To increase domestic saving, it will be essential that import and tax systems be reformed and an incentive be introduced to encourage people to save income increments. In view that tax revenue currently amounts to only 8% of GDP, particularly serious consideration will be given to raise this revenue in coming years. In addition, non-urgent expenditures, if any, should be curtailed and saved, various subsidies be phased out, and nationalized companies make profits.

The Plan expects that the rate of external assistance to GDP will gradually decline. In order to secure external funds to the face of shrinking foreign assistance

commodity exportation will have to be much vitalized and import substitution promoted.

Economic development of Bangladesh will most likely be achieved through a system so-called "mixed-economies", and a healthy balance will be maintained between the public and the private sectors. Because the public sector represents 20% of total GDP or as much as 40% of GDP excluding agriculture, it will be imperative that the private sector will be much expanded under the Second Five-Year Plan. Within the framework of the mixed-economies, however, it will be necessary that such private sectors as housing, transportation, and distribution are placed under certain government control and at the same time that the principle of competition is introduced to such sectors. In order to foster private enterprises, it will be essential that both private saving and government fund available to them are expanded, and other appropriate policy measures will have to be taken.

1.2.2 Development of Small Scale Industries

(1) Development Needs and Guidelines

In view of the emphasis on rural development by the Perspective Plan (and the 2nd 5-Year Plan), promotion of small industries in rural areas will become the core of industrial development. Existing small industries are concentrated in Dacca, Chittagong, and Khulna Districts, which represent 27%, 12%, and 7%, respectively, and collectively 46% of the total number of small scale industrial units in Bangladesh. The fact that these districts are most urbanized and industrialized in Bangladesh and that the latter two are ports of entry indicates that most of these are demand-oriented, imported materials processing industries. This siting behavior under economic rationale is justifiable to these industries, which are privately managed. In order to achieve the dispersion of small industries to rural areas in the future, however, measures which will take into consideration of this behavior will become necessary.

Small scale industries now located in rural areas remain at no more than meeting small local demands by the use of an obsolete technology, even if powered as in the case of rice mills. When Bangladesh is going through a substantial socio-

economic transformation, fosteration of small scale industries which will come motive force for rural development will be extremely important, and the implantation of small but modern industries in rural areas will become a major national development objective.

The total number of small scale industries in Bangladesh excluding handlooms is estimated at about 24,000, and the number of cottage industries including handlooms over 500,000 units. Together, they employ about two million workers. Value added by small scale industries amount to 2.8% of total GDP and 35% of the industrial sector of GDP. It is expected that the value added will increase slightly until it will become 4% of total GDP and 40% of the industrial sector portion of GDP by 1985.

Many difficulties are however foreseen to hinder the realization of this rapid growth of small scale industries, as well as their decentralization, and, therefore, the selection of effective policy measures has now become extremely important. Measure to achieve healthy development should include the following:

a) Fields of Activities Appropriate to Small Scale Industries

- Appropriate small scale industrial sub-sectors for priority promotion
- Demarcation between small and large scale industries
- Existing sub-sectors modernization program

b) Fosterage of Small Scale Industries

- Financing system
- Management promotion and extension
- Technical promotion and extension
- Adjustment of taxation system
- Development of markets and distribution channels
- Cooperative organization
- Stable raw materials supply
- Infrastracture development

- Design improvements and prototype development

c) Proper Geographical Distribution of Small Scale Industries

- Priority industries by region
- Financial and tax incentives
- Priority infrastructure development
- Markets development

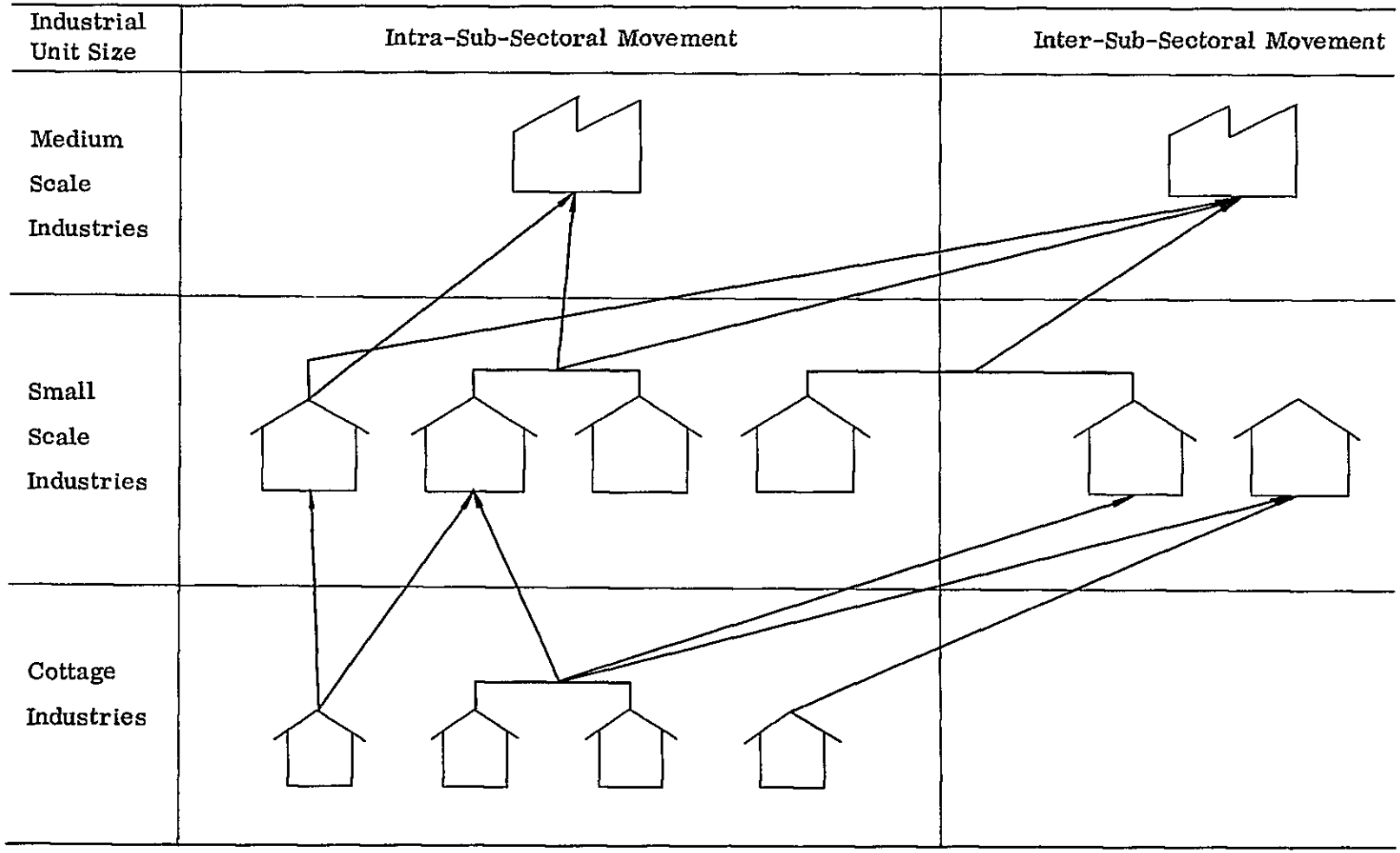
While these measures are being taken, the following activities should be carried out concurrently for the fosterage of small scale private industries:

- Private capital formation
- Identification of entrepreneurs
- Appropriate managerial and technical advisory and assistance to entrepreneurs
- Assistance on markets development

Small scale industrial development should be accomplished with full attention to relationship with medium and cottage industries. The official definition of small scale industry in Bangladesh is that the amount of its machinery and equipment investment is Tk 2,500,000 or less, having the following characteristics, (i) that is partly or totally powered, and (ii) that it relies chiefly on hired manpower. Upward movement of industries from cottage to small scale and from small scale to medium scale should be promoted from the standpoint of long term industrial development in Bangladesh (see Fig. 1.2.1), that is,

- Expansion within each sub-sector
- Expansion into a different sub-sector
- Expansion through cooperative and joint action

Figure 1.2.1 Upward Movement of Industrial Development



Source: JICA Team

It should be noted, however, that small scale industries are usually more labor-intensive, have a smaller capital, achieve a higher capital productivity, and, in the current situation of Bangladesh, show a larger overall profits-sales ratio than medium scale industries and, therefore, the expansion of small scale industries to medium scale will have to be accomplished selectively in consideration of regional and sectoral characteristics.

(2) Small Scale Industries Development Program

The Second Five-Year Plan places an emphasis on small scale industries development with the following targets (according to the Draft Outline Plan prepared by BSCIC):

a) To elevate the contribution of small scale and cottage industries to GDP from the present 2.78% up to 4%,

b) To newly generate 300,000 - 400,000 additional employment within small scale and cottage industries,

c) Establish at least one training-cum-production center at each Thana headquarters,

d) To expand domestic production to achieve self-sufficiency of:

- Agricultural tools and implements,
- Pumps and spare parts
- Stationeries
- Small hand tools
- Educational equipment and servicing facilities

The formulation of districtwise small scale industries development programs, the priority development of agro-based and agro-supporting industries, and the promotion of industries ancillary to large scale industries are proposed as means of accomplishing the above targets.

In addition to the intensification of BSCIC activities, the following policy measures are being advocated:

- Establishment of a Small and Cottage Industry Wing in both the National Coordination Council and the Ministry of Industries.
- Establishment by BSCIC of a District Industries Center and the construction of a mini-industrial estate(s) in rural areas.
- Establishment of a sub-contracting organization for the enlargement of small scale industries' markets through sub-contracting.
- Establishment of a Training Institute for greater management and technical training functions.
- Establishment of a Prototype Development Center for greater design and prototype development functions.
- Collection of data, preparation of project profiles, and councelling in order to promote the participation of entrepreneurs in the small scale industrial development.
- Establishment of a Training-cum-Production Center for the demonstration of model production units and the intensification of technical training in rural areas.
- Establishment of a Development Financing Bank and simplication of loan procedures for greater financial loan availability to assist small scale industries.
- Market information development, sales promotion activities, and preferential purchase by government agencies for the expansion of markets for small scale industries products.
- Tax system revision to impose protective tariff or import restriction on the products of small scale industries and to provide excise tax waiver or reduction.
- Establishment of a material importation/distribution organization, and collection and dissemination of information on materials, tools, and machinery in order to guarantee their adequate supply for procurement by small scale industries.

The total amount of investments in small scale and cottage industries both in private and public sectors under the Five-Year Plan has been estimated as follows:

Government Expenditure:	
BSCIC	Tk 750,000,000
Other Agencies	Tk 1,500,000,000
Sub-Total	Tk 2,250,000,000
Prive Investments:	Tk 5,000,000,000
Total	Tk 7,250,000,000

An investment schedule for small scale industries has been drafted for the Second Five-Year Plan, and over 50 sub-sectors have been identified for small scale and cottage industries. This schedule will invite entrepreneurs to participate in small scale industries development and offer adequate information for them to make decisions and, it is hoped that a system will be established through which satisfactory consultations will be given on establishment and operation of private enterprises.

While policy measures to be taken in the coming five years have been already clarified, practical actions should be taken for the identification and fosterage of private entrepreneurs under priority emphasis in order that small scale industries can be developed. Full attention should be paid to the following, which private entrepreneurs most strongly demand:

- Fixed capital investment and working capital finance
- Merchandise and market information
- Manufacturing technology
- Business management know-how

If small scale industries development cannot be accomplished effectively on private basis, the government may well consider implementation of public-funded projects in association with private entrepreneurs for disinvestment or ultimate transfer. The economy of each such project must be fully appraised prior to implementation.

The following exceptions must be borne in mind in when the fosterage of small scale industries is implemented over a long period:

- There can be small scale industries which are capital-intensive
- Some small scale industries are not necessarily labor-intensive
- Small industries of a high-level and technology-intensive may be fostered for demonstration effects.

CHAPTER 2 PROMOTIONAL MEASURES FOR DEVELOPING SMALL SCALE INDUSTRIES

CHAPTER 2 PROMOTIONAL MEASURES FOR DEVELOPING SMALL SCALE INDUSTRIES

2.1 INVESTMENT AND FINANCING

2.1.1 Investment in Small Scale Industries

The Industrial Investment Schedule for the Second Five-Year Plan was not yet revealed at the time of the survey (March, 1980). It is predicted that the new Schedule will resemble the 1976/1978 Schedule, provided that a greater emphasis will be placed on the industrialization of rural areas and the development of agro-related industries. It should be reasonable to presume that more incentives will be given to private investments and investments from abroad under this emphasis.

The 1976/1978 Schedule provided the following incentives for rural industrialization, which applied to the entire territory of Bangladesh excepting Dacca Zone, Chittagong Zone, and Khulna Zone as developing areas:

- Import duty on capital machinery is 2.5%
- Reduction of import duty on spare parts to 50% of the existing rate
- Relaxation of limit on borrowed capital from the ordinary borrowed-own equity ratio of 70 : 30 to 80 : 20
- Extension of grace period for the repayment of loans from the ordinary three years to five years
- Preferential treatment by financial institutions
- Extension of tax holiday from the ordinary five years to nine years
- Priority supply of electric power
- Reduction of or subsidy for petroleum product prices
- Reserved investment for small scale and cottage industries, at least Tk 6,000,000,000.

The new Industrial Investment Schedule is believed to offer different levels of but same kinds of incentives and to additionally offer some concessions for export-oriented industries.

Private industrial investment proposals in an amount less than Tk 2,500,000 will be reviewed for sanctioning by BSCIC, excluding those cases where imported raw materials are exceeding 20% of the total raw material requirement which is sanctioned by the Investment Board. The application must conform to the prescribed form. BSCIC form includes the following items:

- The name, address, nationality, and assets of and bank transactions by the applicant
- Project title, location, and industrial investment schedule classification
- The product and annual production
- Breakdown of investment by land, building, machinery, other property, start-up expenses, and working capital
- Production and sales plans
- Marketing and distribution plans
- Required quantities of raw materials and spare parts
- Utilities and other requirements
- Manpower requirement
- Total production cost
- Acquisition of technical know-how
- Sources and means of finance and loans applied for

The appraisal of small scale industry projects is very often difficult due to the lack of capability on the part of the applicants for assessing the feasibility of his project. BSCIC should continue to assist applicants and have them clearly outline the projects and establish project feasibility, thereby shortening the time needed for application processing.

The 1978/1980 Industrial Investment Schedule for the private sector stipulated a total of 139 sub-sectors in 12 categories. It will be desirable that the new Schedule cover a greater number of sub-sectors and identify subsectors which will be suitable for small scale industrial investment.

2.1.2 Financing of Small Scale Industries

Small scale industries are being financed either (i) with own resources, or (ii) by international credit systems. In all cases, the financing is channelled through one to three of six commercial banks (Agrani, Janata, Pubali, Rupali, Sonali, Uttara, and Bangladesh Shilpa Banks) under the supervision of the Bangladesh Bank (see Fig. 2.1.1).

(1) Financing with Own Resources

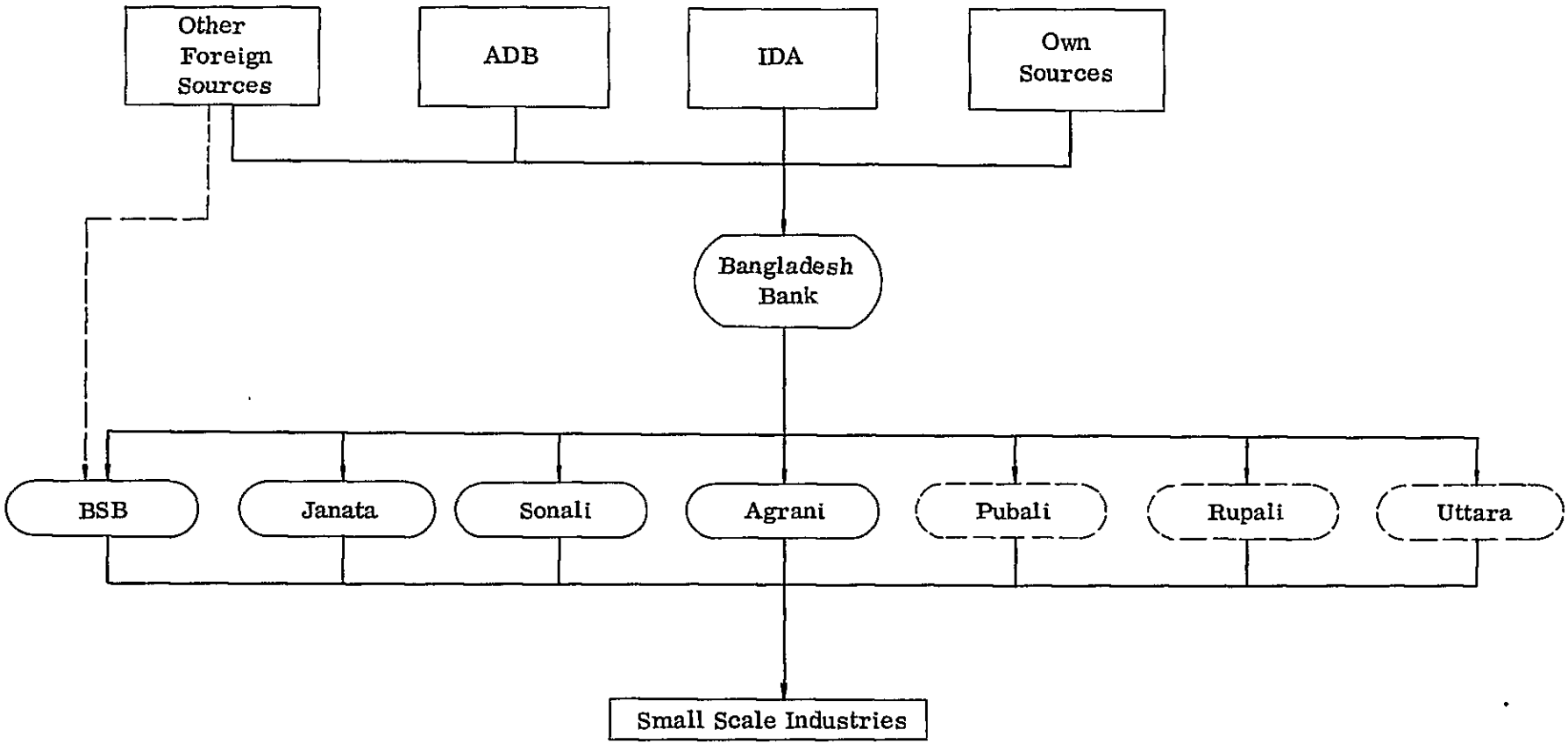
a) Ordinary-Term Loans for Small Scale and Cottage Industries

The nationalized commercial banks have been advised by the Bangladesh Bank to direct 2% of their time and demand deposits to loans for small scale and cottage industries. The Bangladesh Bank guarantees 30% of the total loan amount, collecting a 0.25% guarantee fee from commercial bank. This loan is provided chiefly for the purpose of providing small scale and cottage industries, as well as the self-employed, with working capital of Tk 100,000 to enterprises and Tk 50,000 to individuals at an annual interest of 11.5%.

b) Special Credit System

The special Credit System was established in 1977 for the purpose of expanding financing of small scale and cottage industries through a commercial banks. Loan application is filed with the District Selection Committee composed of District Deputy Commissioner, Bank Branch Manager, and BSCIC District Officer. When the Committee has appraised and sanctioned the project, it recommends the commercial bank concerned to provide the loan. This procedure has been devised to shorten the time needed for loan processing, because appraisal and sanction by commercial banks used to require an excessive amount of time. Terms of loan for investment in fixed assets are the maximum loan of

Figure 2.1.1 Small Scale Industry Finance System



Source: JICA Team

Tk 100,000 - 200,000, a grace period of five years, and an interest of 11.5% per annum, and that for working capital, a grace period of three years and an interest of also 11.5% per annum. These loans are also guaranteed up to 30% to 70% by the Bangladesh Bank for the fee of 0.25%.

Projects in a total amount of Tk 73 million have been recommended, and approximately 75% of the total have been disbursed. Major sub-sectors represented by these projects were rice mill, oil mill, and light engineering.

(2) IDA and ADB Credit Program

a) IDA Program

The Second Small Scale Industry Project of IDA was implemented from 1978 to early 1980.

The total amount of this project, which included the following components, was seven million U.S. dollars:

- US$6.1 million sub-loans for small scale industries via Janata and Sonali Banks to finance up to 70% of the total fixed asset investment and working capital requirements.
- US$0.2 million additional sub-loans for entrepreneurs who are unable to raise 30% of their financial requirements from own resources, to finance one-half of the 30%, or 15%.
- US$0.4 million as cottage industries promotion fund.
- US$0.3 million as BSCIC technical assistance for small scale industries promotion and extension.

Of these, the sub-loans for small scale industries are being made in amounts from Tk 100,000 to Tk 2.5 million covering a total of about 200 projects. As of March 1980, 90% of the sub-loans had been committed. The loan conditions are as follows:

- That the amount of machinery and equipment investment should not exceed Tk 2.5 million,

- That projects in a developing area (that is, outside Dacca, Chittagong, and Khulna Zones) are given priority,
- That the manufacturing cost of the project will not exceed the price of existing products,
- That, with the exception of export-oriented industries, 60% of raw materials will be procured domestically,
- That the capital investment per employee is not in excess of US$3,000, and
- That the industries suitable to this project are some 40 sub-sectors including agro-product processing, agricultural tools and implements, and machinery manufacturing.

The loan terms include an interest of 11.5% or more per year, a grace period of three years or less, and a maturity period of 12 years or less. The Bangladesh Bank guarantees against up to 50% of bad debts and receives a guarantee fee of 1% per annum.

IDA is planning to start from 1980 a Third Small Scale Industry Project with a much greater total credit of US $35 million, which will include sub-loans to be extended to small scale and cottage industries in a total amount of about US$30 million, via Sonali, Janata, and another commercial bank.

It is believed that this Third Project will stipulate conditions and terms of loan similar to those stipulated by the Second Project, provided that loan maximum will probably raised, working capital loans will be offered, and commercial banks and other loan channels will be diversified. Agro-related industries, cargo transport, and repair workshops are likely objects of the loan, and a high priority will be given to cottage industries in rural areas.

b) ADB Program

Of the total US $25 million ADB Industrial Project loans handled by Bangladesh Shilpa Bank, US $4.0 million is allocated to small scale industries. The loan terms are maximum loan of Tk 1.0 million, an interest of 11.5% per annum,

a grace period of 1.5 to two years, and a maturity period of 10 to 12 years. Generally, BSB loans are for medium scale or larger industries, and, therefore, small scale industries are subject to the same complicated loan procedures as for such larger industries; not much loans have so far been disbursed to small scale industries.

BSB has only 11 branches--fewer than commercial banks do--and therefore has a limited functions for loan provision to small industries in rural areas. It is believed, however, that small and medium scale industry financing project will be intensified in Rajshahi and Khulna Divisions by BSB from rural development standpoint.

Loan systems discussed heretofore are summarized in Table 2.1.1.

Table 2.1.1 Small Scale Industry Financing

Source of Funds	Total Loan Amount	Loan Conditions	Loan Terms	Loan Channels*
1. Government of Bangladesh	- Up to 2% of time and demand deposits of commercial banks	- Primarily for cottage industries - Up to Tk 100,000 for enterprises and Tk 50,000 for the self-employed	- Interest: 11.5% p.a.	- BB→CB - 30% of loan amount guaranteed by BB
2. Government of Bangladesh	- Tk 73 million (Tk 56 million disbursed as of early Jan. 1980)	- Up to Tk 100,000 for fixed asset investment	- Interest: 11.5% p.a. - Grace Period: Working Capital; 3 years Fixed Assets; 5 years	- BB→CB→DSC - 30% of loan amount guaranteed by BB
3. IDA	- 2nd Program Subloan US$6.1 million - 3rd Program Subloan US$30 million	- Up to Tk 2.5 million - Priority on the developing areas and on cottage industries - Production costs should not exceed the existing sales prices - More than 60% of locally available raw materials - Less than US$3,000 of capital investment per employee	- Interest: 11.5% p.a. - Grace Period: 3 years - Repayment Period: 12 years	- IDA→BB→CB (+BSB) - 50% of loan amount guaranteed by BB
4. ADB	- U.S.$40 million	- Up to Tk 1.0 million	- Interest: 11.5% p.a. - Grace Period: 1.5-2 years - Repayment Period: 10-20 years	- ADB→BB→BSB

Source: Compiled by JICA Survey Team

Note: * BB: Bangladesh Bank
CB: Commercial Banks
DSC: District Selection Committee
IDA: International Development Association
BSB: Bangladesh Shilpa Bank
ADB: Asian Development Bank

2.2 TECHNICAL TRAINING

2.2.1 Technical Training Institutions

Technical and vocational training programs represent only a small portion of the entire educational activities in Bangladesh (see Table 2.2.1).

Table 2.2.1 Education and Training

	Primary	Secondary	Higher
Number of Grades	5	3 + 2 + 2	3 - 5
Age Group	6 - 10	11 - 17	18 +
Enrollment (millions)	8.2	1.8	0.354
Enrollment Ratio (%)	66	23	-
Ratio of Technical and Vocational (%)	-	2.2	3.5

Source: Ministry of Manpower Development, Labour and Social Welfare

The vigorous outflow of skilled workers to Middle East and other foreign countries has resulted in, on the other hand, aggravating skilled labor shortage in the nation. Yet, the Government of Bangladesh plans to further intensify technical and vocational training to achieve a greater manpower exportation.

Technical and vocational training is chiefly under the jurisdiction of, and shared in the following manner by, the Ministry of Manpower Development, Labour and Social Welfare (MMDL&SW), the Ministry of Education (MOE), and the Ministry of Industries (MOI):

- General training of skilled workers: MMDL&SW, MOE (partially),
- High grade technical education and training: MOE
- On-the-job training of skilled workers: Corporation and Centers under MOI

Technical and vocational training activities are sumarized by skill level in Table 2.2.2. The number of skilled workers trained is small in relation to the

Table 2.2.2 The Present Technical and Vocational Training (1976/77)

	Entrance Requirement (Grade Completed)	Number of Institutions	Annual Admission	Total Admission
Engineers				
- BUET	12	1	460	1,960
- College of Engineering	12	3	540	2,160
- Teacher Training College	12	1	120	150
Technicians				
- Polytechnics	10	17	1,600	6,800
- Monotechnics	10	5	340	840
Skilled Workers				
- Min. of Manpower Dev. Tech. Training Centres	8	5	713	1,426
- Min. of Education Vocational Training Institutes	8	23	920	1,840
- Trade Courses in Polytechnics	8	13	1,060	2,120

Source: IDA Education and Training Project Proposals, 1978

number of technicians and engineers educated or trained. These training activities are supplemented by the skilled worker--particularly agro-related industrial worker--development in rural areas by training centers of such voluntary organizations as CARITAS (Mirpur Agricultural Workshop and Training School) and CARE operating under the supervision of MMDL&SW and by Thana workshop-cum-training centers under IRDP.

As far as technical and vocational training for small scale industries are concerned, the Technical Training Centres (TTCs) of MMDL&SW, the Vocational Training Institutes (VTIs) of MOE, and the Bangladesh Industrial and Technical Assistance Centre (BITAC) play important roles.

(1) TTCs

Presently five TTCs are in operation (2 in Dacca, 1 in Narayanganj, 1 in Chittagong, and 1 in Rajshahi), six are under construction (1 each in Mymensingh, Bogra, Comilla, Khulna, Barisal, and Rangmati), and 10 are in plan (1 each in Sylhet, Noakhali, Kushitia, Pabna, Rangpur, Dinajpur, Jessore, Tangail, Patuakhali, and Jamalpur). The completion of 8th grade is the requirement for enrollment to these TTCs, where two years of training is offered in courses shown in Table 2.2.3.

In addition, a TTC instructor course is given at Dacca and Chittagong TTCs. Diploma in engineering and two years of industrial experience are required for enrollment. The duration of training is for six months to one year.

A total of 1,500 are currently being trained at the five operating TTCs. When the additional seven TTCs now under construction have been completed, the total number of trainees will increase to 2,880, and when the additional 10 planned TTCs have been completed, to 5,060. The construction and operation of these TTCs are being accomplished under ILO/UNDP assistance program, and IDA financial assistance is now being contemplated for the TTCs. Some TTCs have enjoyed financial and technical assistance of West Germany and Norway.

(2) VTIs

Presently 23 VTIs are in operation, and 14 are in plan for construction in Sub-Division Headquarters. Also, there is a plan for the construction of 17 Thana level VTIs. Those who have completed 8th grade are admitted for various 2-year training courses. A Vocational Teachers Training Institute (VTTI) is now under construction in Bogra.

The average capacity of each VTI is about 80 trainees, and the average number of courses offered by each VTI is two (see Table 2.2.4). The most frequently offered course is farm mechanic, reflecting the needs in rural areas. A total of about 1,200 were trained in 1979. The construction and operation of VTIs have been under Swedish assistance program.

Table 2.2.3 Technical Training Centres

	Courses
1. Existing TTCs	
- Bangladesh Institute of Marine Technology, Narayanganj	D/SD/M/GM
- Bangladesh German Technical Training Centre, Dacca	E/W.SM/CD/MD/A/GM
- TTC: Dacca	F/RA/RTV/DC/MD/GM/W.SM/E/A/WW/M
- TTC: Chittagong	MD/CD/F/GM/M/W.SM/A/E/RTV/RA/WW
- TTC: Rajshahi	W/CD/E/WW/A/MD/GM/M
2. Under Construction	
- TTC: Mymensingh	GM/A/P/E/WW/S/B
- TTC: Bogra	GM/A/P/E/WW/S/B
- TTC: Comilla	CM/A/P/E/RTV/WW/S/B
- TTC: Khulna	MD/DC/GM/S/RTV/WW/B/M/W/AD/E
- TTC: Barisal	GM/A/P/E/WW/B/S
- TTC: Rangmati	GM/SM.W/A/B
- TTC: Faridpur	To be organized
3. Under Planning	
- TTCs: Sylhet, Noakhali, Kushtia, Pabna, Rangpur, Dinajpur, Jessore, Tangail, Patuakhali, Jamalpur	To be organized

Source: Ministry of Manpower Development, Labour and Social Welfare

Legend:

A	: Auto	MD	: Mechanical Drafting
B	: Building Construction	P	: Pump Mechanic
CD	: Civil Drafting	RA	: Refregeration Air Condition
D	: Diesel	RTV	: Radio and TV
E	: Electricity	SD	: Ship Drafting
F	: Foundry	SM	: Sheet Metal
GM	: General Mechanics (Fitter)	W	: Welding
M	: Machinist (Milling-Turning)	WW	: Wood Working

Table 2.2.4 Vocational Training Institutes

Location	Courses	Location	Courses
1. Dacca Division		3. Rajshahi Division	
- Munshiganj	RA/W	- Nator	FM/RTV
- Manikganj	RA/W	- Naogaon	FM/M
- Narayanganj	RA/W	- Navabganj	FM/AD
- Kishorganj	FM/E	- Kurigram	FM/E
- Tangail	AD/RA	- Gaibanda	FM/M
- Netrakond	FM/E	- Nilphamari	FM/E
- Jamalpur	FM/M	- Thakurgaon	FM/M
- Madaripur	FM/AD	- Sirajganj	FM/E
- Rajbari	FM/E	4. Chittagong Division	
- Gopalgonj	FM/RTV	- Brahmanbaria	M/E.RTV
2. Kuhlna Division		- Chandpur	AD/RA
- Patuakhali	FM/AD.E	- Maijdi	AD/M. FM
- Pirozpur	FM/E.AD	- Maulvi Bazar	M/E
- Bhola	AD/E	- Sunamganj	FM/E
- Satkhira	FM/AD	- Habiganj	FM/W
- Bagherhat	FM/RTV	- Cox-Bazar	FM/AD
- Narail	FM/AD	- Kagrachari	FM/AD
- Meherpur	FM/E	- Bandarban	FM/AD
- Chundanga	FM/M		
- Magura	FM/AD		
- Jhenaida	FM/E		

Source: Ministry of Education

Legend:
AD : Auto and Diesel
E : Electricity
FM : Farm Mechanic
M : Machinist
RA : Refregeration Aircondition
RTV: Radio and TV
W : Welding
WW : Wood Working

Courses offered at VTIs are also offered by 13 Polytechnic Institutes as their second shift trade courses. Yearly training capacity is 530, but the total number trained exceeds 1,200.

(3) BITAC

For the purpose of further improving the technical levels of trained workers, 14-week courses are offered in metal working and auto-engineering at BITAC, Dacca. A center for exclusive training is in plan for Bogra.

Forty trainees are admitted each training period, and a total of 160 to 200 are trained yearly.

Industrial experience and technical competency are required of secondary school graduates and other candidates for enrollment. Diploma engineers and graduate engineers may also be admitted. Employer's approval of training is also required for admission.

Presently, many of the trainees are those from sugar mills, textile mills, and other large public corporations. Training cost has been discounted from the previous Tk 750/14-week to Tk 500/14-week for small scale industry workers, but their participation is reportedly very limited.

Additional to those training activities are those of previously mentioned voluntary organizations and in-house training (with some trainees accepted from outside) by the jute industry, BSEC, Power Development Board, and other large public corporations. Enterprises with 50 or more employees are required by the 1962 Act to give an apprentice training, but this requirement is not applicable to small scale industries.

2.2.2 Technical Training Needs and Problems

(1) Inflexible Training Program

It has become a rule that those who completed 8th grade (primary and secondary education) are trained for 2-year period, and, therefore, no training opportunity is available to workers with a lower level of education. Also, small

scale industries, which cannot afford TTC graduates who are liable to demand higher wages because of their qualification, tend to hire workers with a low level of education and train them by trade. Moreover, no training program, except for that of BITAC, is available for the further development of workers who have acquired certain skills in small scale industry.

(2) Obsolete Training Method

The curricula offered are becoming obsolete, training materials are inadequate, and instructors are in shortage--all in all preventing the provision of effective training programs. Curricula should be re-organized into nationally uniform ones which will reflect the needs from industries, as revealed through hearings, and separate curricula should be offered for basic training and practical training. Also a specially designed curriculum is needed in order that those with less than 8th grade education can also be trained.

It has been observed that, generally, a large number of training hours are spent in classrooms rather than in shops, probably because of the lack of adequate training equipment and materials. The utilization of new training aids (such as audio-vidual) will be one way to reduce classroom hours by a large margin. At least 80% of the total training hours should be spent in shops as a rule, and the additional on-the-job training hours will be desirable.

(3) Shortage of Qualified Instructors

Many competent instructors have fled to industry or abroad, and TTCs are observed to suffer noticeably from the shortage of qualified instructors (and from the incompetence of the present force). Instructors without industrial experience can lead to the deterioration of the quality of technical training, which, in turn, can discourage industries from hiring the "trained". The salary scale for government officials is most responsible for this shortage of training instructors; the average monthly salary of Tk375 according to the scale is too low to be able to attract high quality manpower. Also, the trait of Bangladesh people to place so-called blue-collar workers in a low status tends to discourage able people from becoming a TTC instructor.

(4) Shortage of Fund

Many of TTCs and VTIs were devastated during the 1971 Liberation War, and the repair of their buildings is being completed only at this time. With the exception of Bangladesh German Technical Training Centre and BITAC, obsolete and insufficient training equipment is a common phenomenon. In some cases, adequate training materials may not be procured. Another major problem is the large number of training hours are wasted due to frequent power blackouts.

While it will be necessary that larger government and external assistance (ILO/UNDP, SIDA) funds be obtained, it will be worthwhile to see if trainees can be engaged in production activities along with training activities, as done by Bangladesh German TTC and BITAC, in order that proceeds from the sale of the products be used to augment the inadequate training funds.

(5) Qualification System

Those who have been trained at TTC or VTI use the training as a justification for their claiming certain level of salary when finding employment with a private enterprise, while the salary of self-trained workers who have acquired a high level of skill through years of experience with a small scale industry is often held low despite their capabilities, in absence of a proof of the skill. Therefore, it should be worthwhile considering the establishment of a nationwide uniform technical qualification system by which all are allowed to compete on the same ground. When such a system is established, TTCs will be merely an institution which offers basis for taking the test and both TTC graduates and self-trained workers will be subjected to same tests and same opportunities for being recognized of their qualifications. For information, authorized technical and skill qualification system in Japan covers:

- Auto-engineering
- Electrician
- Radio electronics
- TV electronics

- Gas welding

- Boiler welding

These who wish to take up the above-mentioned profession must have the technical and skill qualifications.

There is another technical certificate system in Japan under the jurisdiction of the Vocational Training Law, in which the Ministry of Labour offers skills certificate for 74 professions in industry including foundry, forging, heat treatment, machining, sheet metal working, welding, electroplating, surface finishing, tool grinding and machinery inspection.

Applicants are requested to pass written tests and to demonstrate their specific skills to receive the certificate.

In contrast to the authorized qualification, the skill certificates are not prerequisite for entering these professions.

(6) Training Fee

In the case of BITAC, a discounted training fee is available for the employees of small scale industries, but the fee, which is Tk 500/3-month, is still very high and, therefore, small scale industries have not sent trainees to BITAC it is reported. Chittagong TTC charges low fees: Tk 5 for enrollment, and Tk 10 for monthly tuition and hostel charge. However, few small industry employees voluntarily apply for the training, despite the low training fee, because no support of their livelihood is available while they are away from work for training. It should not be wrong to assume that small scale industrial employers have only a limited financial capability to provide such efforts, and, therefore, it will be necessary for the government to establish a system for the provision of such support as an incentive, if technical training activities are to be promoted.

2.3 MANAGEMENT TRAINING

2.3.1 Necessity of Management Training

Prior to the 1971 Liberation, many enterprises in Bangladesh used to be managed by Pakistanis. After the Liberation, some 85% of modern industries were placed under government control by the 1972 Presidential Order of Nationalization and managers were hurriedly recruited from various sectors because of the lack of adequate management capabilities among the people of Bangladesh. An attempt was made starting in 1973 to train government officials and send them into public corporations as managers, and the Bangladesh Management Development Centre (BMDC) played a central role in giving training under the technical assistances from USSR, German Democratic Republic, Poland, and Bulgaria. A dual managemental structure has thus resulted and caused a substantial deterioration of morale and efficiency mostly in large public corporation, accompanied by the bureaucracy of socialistic management. The necessity of management training has become very urgent.

Small private enterprises, on the other hand, are often operated by owner-managers without formal management training. Some owner-managers do not even have a minimum level of education and maintains no business records. Thus, small scale industries also have very urgent needs for management training, but of a different nature.

A survey conducted by BMDC in 1977 revealed the sources of small scale industries management as presented in Table 2.3.1, which shows that owners and

Table 2.3.1 Management of Small Scale Enterprises

Types of Managers	%
Owner-Managers	52.2
Managing Partners or Board of Directors	21.7
Professional Managers Employed	26.1

Source: BMDC

partners represented as much as 74% of all managers and, therefore, that the separation of capital and management had not yet developed. By educational background, 47.6% of these managers were graduates or of a higher education, 7.2% had technical diplomas, and 45.2% below highschool certificate. It was revealed that graduates (or higher) were engaged in the management of accounting and general affairs, while those with a lower education, of store-keeping and purchasing department.

Few managers had management training background; only 9.3% of those managers had management training and 2.9% only technical training for a total of 12.2%--the remainder having no training background whatsoever. The highest incidence of management training occurred in the field of marketing, and the lowest incidence, in the field of purchase and store (see Table 2 3.2). It is a noteworthy finding of this survey that production managers represented the largest group (19.8%) of all but none of them had management training and few (1.9%) of them had only a technical training.

Table 2.3.2 Training Background of Small Scale Industry Managers

(Unit: %)

	Management Training	Technical Training	No Training	Sub-Total
Owner Managers and Managing Partners	0.5	-	15.0	15.5
General and Administrative Management	2.4	0.5	7.3	10.2
Production Management	-	1.9	17.9	19.8
Purchase and Store	0.5	-	7.8	8.3
Marketing and Sales	2.9	0.5	7.8	11.2
Accounting	1.5	-	15.0	16.5
Technical	1.5	-	14.1	15.6
Others	-	-	2.9	2.9
Total	9.3	2.9	87.8	100.0

Source: BMDC

Distribution of management training needs by function and management level is presented in Table 2.3.3. It is interesting to note that the highest needs were found in the area of production. It would be very difficult to send small scale industries' workers out for training, due to the need of defraying the training fees and expenses, supporting of the trainee's livelihood during the training period, and the substitution for the trainee in his absence from the shop. It is hardly believable that training can be offered to such workers, overcoming all of these difficulties.

Table 2.3.3 Training Needs by Function and Types of Managers

(Unit: %)

	Manager	Manage-rial Staff	Technical experts	Foreman and Supervisor
Small Enterprises Management	6.9	12.5	11.8	8.6
General Management	23.6	-	-	-
Production Management	26.4	16.7	-	55.6
Storekeeping and Inventory	2.8	20.8	23.5	5.6
Purchase	6.9	12.5	35.3	-
Export Marketing	12.5	-	4.2	-
Domestic Marketing and Sales	2.8	-	4.2	-
Labour Relations and Welfare	5.6	-	8.4	-
Human Relations	1.4	-	-	5.5
Bookkeeping and Accountancy	2.8	-	4.1	-
Costing and Budgeting	4.2	-	8.3	-
Supervision Technique	1.4	-	8.3	22.2
Safety Management	2.7	-	-	-
Total	100.0	100.0	100.0	100.0

Source: BMDC

Following are possible solutions of the above-mentioned problems:

- Establishment of a management training program designed for small scale industries, as suggested by BMDC and BSCIC.
- Offering of a course emphasizing on production management as a part of such training program.
- Establishment of a mechanism for the partial or total subsidy for the cost of training (technical and management) for small scale industries' trainees and of a mechanism for a partial livelihood support for the trainees.

2 3.2 Training Institutions

Two management training institutions are available in Bangladesh: the Institute of Business Administration (IBA) of University of Dacca and BMDC under the jurisdiction of MOI. IBA trains both students without industrial experience and those experienced in industries, while MBDC trains only those with industrial experience.

(1) Institute of Business Administration (IBA)

IBA, a part of University of Dacca, offers post-graduate courses for students and executive development courses for those with industrial experience. Two executive development programs are available at IBA:

a) IBA Program

- Business Behavior and Management
- Marketing Management
- Financial/Accounting Management
- Systems Analysis/Operations Research
- Production Management
- Small Business Management

b) Non-Academic Programs (offered by public and private corporations and public service institutions such as the Jute Mill Corporation, Banks, Water Board, and Power Development Board; each program designed to meet the particular need of the organization)

The capacity of IBA is about 150 trainees in daytime (MBA) courses and about 50 trainees in evening courses. These courses are very popular, but the training staff and facilities are inadequate and short of meeting the demand.

(2) Bangladesh Management Development Centre (BMDC)

This Centre was established under MMDL&SW in 1961, acquired autonomous status in 1970 and offered training in the fields of commerce and industry, was transferred from MMDL&SW jurisdiction to MOI in 1976, and is engaged in the training of managers of nationalized industries and the improvement of business efficiency as its major activities. Since 1961, it has trained a cumulative total of more than 10,300 including those of small business management course. BMDC has a subcenter in Chittagong, where similar training is offered as in Dacca.

Since 1977, BMDC has carried out National Management Development Program under the assistance of ILO/UNDP. BMDC plans to expand this program and thereby become a Bangladesh Management Development Institute. In addition to said training, BMDC has management research and consulting departments, and plans to establish a post-graduate course in the management research department. BMDC covers the following fields:

- General Management
- Labour/Personnel Management
- IE/OR
- Production Management
- Marketing Management
- Financial/Accounting Management
- Supervisory Training

The training of public and other large corporation management represents a large portion of these training programs, while a special program entitled "the Entrepreneurship Development Training Program for Self-Employment of Educated Unemployed Youths" represents about the only program organized for small scale industries. This special program is an experimental program offered in cooperation with the Bangladesh Bank, commercial banks, and BSCIC. Five educated but unemployed youths of not over 18 years of age are selected from each Thana, and finally a total of 30 youths are trained for five weeks. The feature of this program is:

- Training expenses are paid for and the trainees' livelihood supported while under training with the fund raised jointly by the Bangladesh Bank and commercial banks.
- The participants are required to prepare a concrete project profile.
- The Bangladesh Bank selects appropriate projects among these profiles for financing up to Tk 100,000 per project via a commercial bank, guaranteeing 30% of the loan.

About 300 unemployed youths have already been trained under this program, 60 to 70 of them have started dairy farm, poultry raising, weaving, printing, rice mill or pisciculture, and 25 of them are making profits, it is reported. The Bangladesh Bank is placing an emphasis on this program, expecting a yearly profit of Tk 10 million and the employment of 2,150 under total investment estimated at Tk 21 million.

The problems of this program are:

- Unemployed youths usually have no particular technical capability and, therefore, tend to select such ordinary projects as listed in the above.
- For the same reason, project profiles tend to remain short of in-depth research particularly into technology and market.
- About three months is required from the time the Bangladesh Bank appraises and selects a project until the time loan is provided for the project.

Despite these problems, this program is interesting in that it aims to foster entrepreneurs for small scale industries in rural areas and, therefore, should be further encouraged in the future. The training of, and the provision of loans to, technically trained youths--not limited to those who are unemployed--may be a likely answer for the fosterage of more modern small industries.