

**MAKING BETTER USE OF BANGLADEH'S
PRODUCTIVE CAPACITIES**

Paper 1

- *Revival of BMTF: The Need for Public Discussion*
- *The Chittagong Steel Mills: The Need for Bold Decision*

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The Centre for Policy Dialogue (CPD), established in 1993, is an innovative initiative to promote an ongoing process of dialogue between the principal partners in the decision making and implementing process. The dialogues are designed to address important policy issues and to seek constructive solutions to these problems. The Centre has already organised a series of such major dialogues at local, regional and national levels. These dialogues have brought together ministers, opposition front benchers, MPs, business leaders, NGOs, donors, professionals and other functional groups in civil society within a non-confrontational environment to promote focused discussions. The expectation of the CPD is to create a national policy consciousness where members of civil society will be made aware of critical policy issues affecting their lives and will come together in support of particular policy agendas which they feel are conducive to the well being of the country. The CPD has also organised a number of South Asian bilateral and regional dialogues as well as some international dialogues.

In support of the dialogue process the Centre is engaged in research programmes which are both serviced by and are intended to serve as inputs for particular dialogues organised by the Centre throughout the year. Some of the major research programmes of CPD include **The Independent Review of Bangladesh's Development (IRBD), Governance and Development, Population and Sustainable Development, Trade Policy Analysis and Multilateral Trading System** and **Leadership Programme for the Youth**. The CPD also carries out periodic public perception surveys on policy issues and developmental concerns.

Dissemination of information and knowledge on critical developmental issues continues to remain an important component of CPD's activities. Pursuant to this CPD maintains an active publication programme, both in Bangla and in English. As part of its dissemination programme, CPD has decided to bring out **CPD Occasional Paper Series** on a regular basis. Dialogue background papers, investigative reports and results of perception surveys which relate to issues of high public interest will be published under its cover. The Occasional Paper Series will also include draft research papers and reports which may be subsequently published by the CPD. The present paper published under the CPD Occasional Paper Series is entitled **Making Better Use of Bangladesh's Productive Capacities** and been prepared by Nazrul Islam, Vice Chairman, BIT and former Chairman, BSEC and A.F. Mujtahid, former Managing Director, National Tubes. The two annexed papers were presented at the national dialogue organised by the Centre on the theme of National Policy on the Future of the Bangladesh Machine Tools Factory and the Chittagong Steel Mills held on June 5, 1997.

Assistant Editor: *Ayesha Banu*, Coordinator (Dialogue & Communication), CPD

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PREFACE

Bangladesh has over the years accumulated a large number of development projects involving massive public investment, mostly financed by foreign loans and grants, which are operating at well below their productive capacity. In most sectors such development projects of a significant scale have been put in place, after many years of preparatory work, based on the expectation that they would make significant contributions to the growth and diversification of the Bangladesh economy. Much time and energy, often dating back to the period of Pakistani rule, was invested in mobilising external funding for these projects. Yet once these projects were commissioned little attention was paid by successive governments to ensure that these projects performed according to the promises spelt out in their feasibility studies. In many cases such projects operated at well below their capacities and even ceased to operate.

Such an underutilisation of major public assets is enormously wasteful for a resource poor country such as Bangladesh which needs to obtain the highest possible returns from every taka it invests. Failure to extract adequate returns from our sunk investments contributes to the perpetuation of Bangladesh's aid dependence and signifies a crisis of governance in our development process. What is of particular concern is the lack of serious concern by successive government's of Bangladesh (GOB) that their vital public resources are being misused or underused. This reflects a most serious failure in the system of a transparency and accountability in our system of governance.

This lack of awareness about the deterioration in the utilisation of such public assets to the point where closure of a project is then deemed to be the only available option to avoid an ongoing drain on public resources, exposes the GOB to pressure from aid donors to close down such public projects. Such decisions, often taken under such external influence, to close down major projects are usually based on administrative decisions taken without debate either at the cabinet level or in Parliament. In most cases the people of Bangladesh are kept in complete ignorance of such decisions and remain uninformed as to why vital public assets are underused and then abandoned.

It is the objective of this programme initiated by the **Centre for Policy Dialogue (CPD)** to focus public attention on **Making Better Use of Bangladesh's Productive Capacities**. Our goal at CPD is to both promote public awareness as well as debate on what is happening to the economy and within it, to some of Bangladesh's major productive assets. This process is designed to encourage action by the GOB to more effectively discharge its responsibilities in making better use of resources under its disposal and to also promote greater self-reliance

for Bangladesh by drawing upon our indigenous resources before we so freely seek external assistance. The central assumption underlying the work of CPD is that a reservoir of unused resources lies at the disposal of the Bangladesh economy in the form under-performing public projects as well as private assets and in the form of underused professional skills.

The CPD plans, within the framework of its programme on **Making Better Use of Bangladesh's Productive Capacities**, to investigate the fate of a number of major public projects to examine what has happened to them and to thereby offer constructive suggestions on how to ensure more effective use of such assets. In this task it hopes to draw upon a wide range of expertise from within Bangladesh from professionals who have experience about the management of such projects and share CPD's concern over making better use of our indigenous resources and talents. The two annexed working papers on (i) *The Bangladesh Machine Tools Factory* and (2) *The Chittagong Steel Mills* are the first such efforts by CPD in this area. The papers were prepared for CPD by Dr. Nazrul Islam, Vice Chairman, BIT and former Chairman, BSEC and Mr. A.F. Mujtahid, former Managing Director, National Tubes Ltd., under the BSEC. Both authors are Research Fellows at CPD.

Further such working papers on other major public projects will be prepared at CPD in the near future for public discussion.

Prof. Rehman Sobhan
Executive Chairman
Centre for Policy Dialogue

Revival of BMTF : The Need for Public Discussion

Introduction

Bangladesh Machine Tools Factory (BMTF), has been closed down since July 14, 1994. To consider BMTF only as one of the government units will be a gross oversimplification. It is a National Enterprise. Therefore to bury a National Enterprise it is mandatory to take such a decision at a forum where such issues should be discussed i.e., the Jatiya Sangsad. No formal debate is known to have ever been held on the floor of the Parliament to decide the fate of the BMTF. That one of the single largest manufacturing enterprises in Bangladesh, with an accumulated investment of Tk. 172.40 crores, employing 1537 people could be closed down on an executive order of the government is a reflection of the low priority which is accorded to industrial activity

in Bangladesh today.

Birth of an Idea

The idea of exploring the possibility of the revival of the BMTF came from Professor Rehman Sobhan, Executive Chairman, Centre for Policy Dialogue (CPD). This was discussed at a meeting held on April 9, 1996 at the CPD which was attended by Dr. Nazrul Islam (former - Member of Planning Commission and Chairman, BSEC); Mr. Nurul Haq, Director, CPD and A.F. Mujtahid (former Senior General Manager, BSEC). It was *inter alia* decided to :

- Prepare an Action Plan to conduct an Independent Study on the BMTF
- Submit a time frame and budget for the study
- Constitute an on-going Task Force of which Dr. Nazrul Islam and Mr. A.F. Mujtahid will form the Core
- Hold dialogues with the leading specialists on BMTF including those who were once connected with the BMTF in the past.
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Accordingly a draft proposal was prepared and submitted to CPD and a formal dialogue was held at CPD on April 20, 1996 with Professor Rehman Sobhan in the chair which was participated in by the following :

Mr. S.M. Al-Husainy (former Member, Planning Commission and Secretary to the Government); Mr. Hasnat Abdul Hye, Secretary, Government of Bangladesh; Dr. Nazrul Islam (former - Member, Planning Commission and Chairman, BSEC); Dr. Rafiquddin Ahmed (former - Chairman, BSEC and Director ICTVTR); Mr. Nefaur Rahman (former Chairman, BSEC); Mr. Nurul Haq (CPD), Dr. M.I. Talukder, Divisional Chief, Planning Commission and A.F. Mujtahid. A draft approach paper was circulated amongst the participants to facilitate discussion.

At the above mentioned meeting Professor Rehman Sobhan briefly spelt out his broader ideas on the need to investigate the fate of a number of public projects involving massive investment of public funds which are closed or operating at far below their original targets to see if these assets could be more productively used in the service of the country. The approach would be to assemble a team of experts to examine the possibilities inherent in a selection of such projects.

Prof. Sobhan suggested that a beginning, in this exercise may be made by looking at the BMTF - an unique enterprise inherited from the historic past founded on a dream to create an industrial base for the country.

He felt that the BMTF had been neglected by successive governments in the past who had made little attempt to carefully diagnose its many problems or to make a serious effort to reduce its operating losses. Now on the assumption that such losses are uncorrectable and hence constitute a permanent drain on the budget, the donors have pressurised the GOB, in the name of restructuring, to close down the BMTF. The government appears to have succumbed to this pressure and closed down the BMTF without either taking a serious look as to why such enterprises are not functioning efficiently or explaining to either parliament or the nation, the reasons for such a major decision.

Prof. Sobhan suggested that, in the absence of any government initiative it was our duty as citizens to see if anything could be done to restore the BMTF and other such public projects to a productive and profitable status. Such an enterprise to review the viability of such projects as the BMTF should not be treated as an academic exercise but could be used as basis for initiating programmes for revival of such units which could be submitted to the government, the elected representatives of the people i.e. Members of the Parliament and presented before the public. Such a

document could be used for creating public awareness and provoking public debate on the policy of closure of such enterprises at the dictation of the donors as well as inspiring a search for alternative policy options to administer these enterprises.

The participants unanimously endorsed the views of Professor Rehman Sobhan. Mr. S.M. Al-Husainy, Mr. Hasnat Abdul Hye, Dr. Rafiquddin, Dr. Hasan Siddiq, Dr. M.I. Talukder and Mr. Nefaur Rahman took part in the deliberations. While Mr. Hasnat Abdul Hye narrated the background of the closure of BMTF during his tenure as the Secretary, Ministry of Industry. Others dealt with the technical aspects of the revival programme of the BMTF and suggested that all issues relating to production, marketing and management etc. should be taken into consideration in the preparation of this document. On completion of the work such a document, should be presented both to the Minister for Industries, and for public discussion. It was suggested by the group that Dr. Nazrul Islam and Mr. A.F. Mujtahid assume the responsibility of preparing the paper on the BMTF but that all others present at the meeting would make available their inputs whenever it was requested. Prof. Sobhan offered the full logistical support of the Centre for Policy Dialogue (CPD) in the preparation of the report as well his editorial input in finalising the report. The authors consulted a number of experts in and outside BSEC in finalising the report.

Background : Story of the BMTF (1963 - 1971)

BMTF owes its origin as a project to a policy of promoting a structurally diversified pattern of industrial development in what was the then East Pakistan, now Bangladesh. The goal was to move the industrialisation process beyond the processing of primary products and to lay the foundation for an intermediate and capital goods industry. With this objective in mind, in 1963, the East Pakistan Industrial Development Corporation invited, M/S Saltzgitter of West Germany to conduct a feasibility study for setting up a machine tools factory. The project in principle had received Government approval subject to a detailed Market Survey and Technical Feasibility Study. Accordingly, SERI Renault Engineering of France was engaged to undertake the detailed feasibility study. Based on their report the then EC/NEC finally approved the project in May 9, 1967 at an

estimated investment outlay of Rs (Pak) 18.09 crores of which roughly about Rs 9.06 crores was to be in Foreign Exchange. The annual sales turn over of the BMTF, as originally conceived, was estimated at Rs 6.5 crore. The project was expected to go into production by fiscal year 1973. It was designed to be completed in 3 phases. In its Technical Feasibility Report SERI Renault recommended the total implementation of the project in 3 phases:

Phase I To be completed by 1972

Phase II To be completed by 1976

Phase III To be completed by 1980

The first phase covered manufacturing of essential workshop machinery and equipment such as Lathes, Drilling Machine, Power Hacksaw, Universal Wood Working Machine, Shears and Grinders, Cutting Tools, Hand Tools, Agricultural implements, Centrifugal Pumps, Plough and Spades, Spares for Textile and Sugar Mills. All the above equipment was already in use in the economy of East Pakistan, largely through imports.

The 2nd and 3rd phase were not detailed in order to provide flexibility with relation to the completion of the first phase. The proposed production programme of the unit prepared based on the Market Study conducted by SERI was as follows :

Original Production Programme

	ITEMS	QTY	Turnover (Tk. in lac)
A.	Machine Tools		
	<u>Lathes</u>		
	i. Celtic - 14	370 Nos. }	138.60
	ii. Celtic - 17	120 Nos. }	
	iii. Celtic - 20	40 Nos. }	
	<u>Drilling Machine</u>		
	i. Radial Drill	60 Nos. }	35.40
	ii. Column Drill	120 " }	
	iii. Bench Drill	200 " }	
	Hacksaw	100 "	4.70
	Shears & Grinders	100 "	2.40
	Universal wood working machine	100 "	13.30
B.	Cutting Tools	219 tons }	175.53
C.	Hand Tools	625 tons }	
D.	Textile & Jute Spares	1000 tons	70.00
E.	Sugar Mill Spares	78 "	5.16
F.	Diesel Engine Spares	244 "	13.60
G.	Railway Sleepers	5000 "	85.00
H.	Propellers	40 "	6.00
I.	Rice Hander Parts	300 "	4.50
J.	Ploughs	30,000 units	3.60
K.	Hand Pumps (Tube wells)	20,000 units	8.60
L.	Centrifugal Pumps	22,000 units	86.00

			Total: 652.39 lacs

The construction work on the project started in 1966 at a slow pace and was abandoned in 1971 during

the War of liberation when the project also suffered major damages. At the time of Liberation, approximately 33 percent of the project, as originally conceived, was completed in terms of investment outlay but the major productive units such as the Foundry, Forge, Heat Treatment shops were at this time nowhere near the construction stage.

Post Liberation Phase : 1972-1975

Bangladesh emerged as an independent state in December 1971 with its infrastructures and industry, transport and communication network severely damaged. It took quite a while for the new administration to make a reappraisal of its inherited on-going projects. The reasons for this delay may be attributed to the massive task of reconstruction, setting of new priorities of organizing the administration, restoring law and order, arranging food and shelter for the millions of people who were affected by the war. As and when the Government of Bangladesh (GOB) moved its attention to address issues of industrial strategy, the first Planning Commission of Bangladesh directed, the concerned sector corporation - Bangladesh Engineering & Shipbuilding Corporation, (BESC) under which the BMTF was placed, to submit a revised programme on the project to enable the new government to take a decision on the future development of the BMTF. Considering the tremendous potential of the BMTF in realising the developmental goals of the new born country it was considered as a core sector project. Accordingly, keeping in mind the new circumstances prevailing in Bangladesh, a revised production programme for the BMTF was prepared jointly by the executing Agency for review by the Planning Commission. The plant was designed in such manner so that it could very easily switch over from one product to the other with very little difficulty and addition of equipment.

The production programme for the BMTF prepared jointly by the executing agency and the Planning Commission was as follows :

Revised Production Programme prepared after the liberation

SLNo	item	proposed programme	
		Nos.	Tons
A)	<u>Machine Tools</u>		
1.	BMTF Lathe - 10	90	54
2.	* BMTF Celtic Lathe - 14	45	40
3.	* BMTF Celtic Lathe - 17	25	38
4.	* BMTF Celtic Lathe - 20	40	100
5.	* BMTF GSP Radial Drill M/C	10	-
6.	* BMTF ADM Column Drill M/C	25	11
7.	* BMTF ADM Bench Drill M/C	45	4
8.	* BMTF Demurgent Hacksaw M/C	30	8
9.	* BMTF Guliet Wood Working M/C	10	-
10.	* Sharping M/C	30	30
11.	Power Press	30	30

		Sub-Total:	315
B.	<u>Cutting Tools</u>		
1.	* Turning tools HSS	50,000	25
2.	Carbide tipped	50,000	25
3.	Dies & Taps	10,000 sets	1
4.	* Drills	300,000	20

			71
C.	<u>Irrigation Pumps of Agriculture Implements</u>		
1.	* Deep Well Turbine Pumps	3600	3000
2.	* Centrifugal Pump	3000	240
3.	Sewrage Pump	25	20
4.	Fractional Pump	3000	60
5.	* Trolley for Pump	5000	200
6.	Water Valves	5000	40
7.	Rice Ata Hauler	3000	300
8.	Plough	30,000	120
9.	Spades	100,000	150

			4,130
D.	<u>Cast & Forged Parts</u>		
1.	Inject Moulds	-	1500

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2.	C.I. Casting & Machining	-		3000
3.	C.I. Casting & Machining	-		1200
4.	Non-Ferrous Casting & Machining	-		60
5.	Forging	-	850	
6.	Forging & Machining (Spares)			500

				7110
E.	<u>Hand Tools</u>			
1.	Mechanical Hand Tools			220
2.	Hacksaw Blades	200,000	10	

				230
F.	<u>Miscellaneous</u>			
1.	Sugar Mill Spares			100
2.	Brake Drums for Trucks & Buses	2000 units	80	
3.	Front & Rear axle for Trucks & Buses	2000		180
4.	<u>Gear Box</u>			
i.	Trucks & Buses Main Gear Boxes	2000		100
ii.	Trucks & Buses Differentials	2000		100
iii.	Motor Cycle	6000 Nos.		66
iv.	Small Marine Gear Boxes	300 "		25
v.	Three Wheeler	2000 "		25
vi.	Right Angle Driver for Deep Well Turbine Pump	2000 "		125

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G. Equipment for Irrigation, Control etc.

1.	Sluice/Locks & Gates Double Wing Hinges Type	5 Nos.	50
2.	Sluice Radial Locks and Gates Vertically Rising Ttype	25 "	20
3.	Hoisting Machineries for Sluice Gates (2x5 ton)	10 "	50
*4.	Pontoon Type Dredger (12" section) (Vessel to be Fabricated in Dockyard, Narayangonj)	2 "	2

H. Material Handling Equipment

1.	Electric Overhead Travelling Cranes	5	25
2.	Jib Cranes	30	10
3.	Truck Mounted Crane	5	20
4.	Marine Crane	5	250
5.	Construction Elevator	5	10
6.	Hand Operated Trucking Crane	25	5
7.	Hand Crabs	25	5
8.	Pulley Blocks	100	4

			229

I. Food Processing Plants

1.	Complete Automatic Rice Mills	2	150
2.	Complete Cold Storage Plants	5	100
3.	Fruit & Fish caning Plants	2	50

			300

Grand total : A+B+C+D+E+F+G+H+I = 13,302 tons

* BMTF acquired technical know-how for these items.

This production programme was not prepared based on any market survey by any competent engineering consulting organization but was essentially a document defining the new directions for the development of a

Apart from its own catalytic role in the development of an engineering industry in Bangladesh, BMTF was foreseen as a major domestic source of the supply of :

- (1) Fractional Cusec Pumps, Centrifugal Pumps, Deep Well Turbine Pumps and Agricultural Equipment for the agricultural sector.
- (2) All Cast and Forged parts for supply to other enterprises which were included in the First Five Year Plan e.g., Bangladesh Diesel Plant, GEM Plant, Three-Wheeler Factory, Small Tractor Plant, Power Sprayer Factory, Atlas Bangladesh etc.

Despite its severe resource limitations the government decided to complete the BMTF project at a revised cost of Tk. 105 crore with an estimated annual sales turnover of Tk. 60 crore. The project implementation at the BMTF restarted with all seriousness in 1975 with a target for completion set for fiscal year 1978 i.e., the terminal year of the First Five Year Plan (FFYP). Accordingly the government started looking for the necessary foreign exchange needed for the project as well as for a reputed company for : (a) completion of the remaining works of the BMTF and (b) providing know how and technical assistance.

This effort by the government to line up external assistance for the BMTF resulted in (a) the provisions of several credits and grants for financing the BMTF such as (i) Revalidation of the original Swiss credit under an aid protocol which had financed the early phase of the BMTF during the Pakistan period (ii) A new loan from the Government of Abu Dhabi (1974) (iii) A French Grant (iv) A French Treasury Loan (1974) (v) Belgian Loans (vii) French credits in 1974 for import of CKD equipment from France and a French grant (1974) for import of CKD and (b) signing of a semi turn-key contract between the Bangladesh Engineering & Shipbuilding Corporation and the ABR-France of France in July 1975 to become effective on February 15, 1976.

With a view to attaining a self reliant economy the First Five Year Plan of Bangladesh (1973-1978) made substantial allocations for the agriculture and the industrial sectors respectively to be used, inter alia, for the mechanization of the agricultural sector and for development of basic industries for manufacture of investment goods so that a large portion of capital goods and machinery could eventually be produced from within the country. The Machine Tools Factory was thus designed to produce such goods for industry and agriculture.

The changed political circumstances after August 15, 1975 left an indelible mark on the development process both in terms of direction as well as philosophy. The Planning Commission set up to steer the development of the economy was marginalised and the FFYP (1973-78) was abandoned. Annual Development Programmes, not to speak of the new projects, or the ongoing projects were, if not discarded, drastically reduced in size in the name of pruning of the development budget. As a result BMTF's development activities were also seriously affected. The project was recast and new targets were set for completion of the project along with a revision of the cost estimates. The project was eventually completed and commissioned in the middle of 1980 with an eventual investment outlay of Tk. 135 crores. The project was given a separate corporate identity with the name of BMTF Ltd. in August 1979 and the new company assumed the assets and liabilities of the project under terms defined in a Vendors Agreement with BMTF.

The Production Capabilities of the BMTF

We present below the production capabilities of BMTF Ltd at the point where it emerged as a distinct corporate entity:

1.	<u>Physical Area of the Enterprise</u>		<u>166.97</u> Acre
	a.	Factory Covered Area :	19.81 Acre
	b.	Factory Area :	69.33 Acre
	c.	Residential Area :	77.83 Acre
2.	<u>Factory Covered Area</u>		
	-	Technical Training Centre :	40,000 sft.
	-	Technical Training School :	42,000 sft.
	-	Machine Shop :	216,000 sft.
	-	Assembly Shop :	121,000 sft.
	-	Central Tooling Dept. :	38,400 sft.
	-	Pattern Shop :	25,560 sft.
	-	Foundry III Shop :	30,400 sft.
	-	Forge Shop :	35,861 sft.
	-	Maintenance Shop :	25,600 sft.
	-	Foundry -1 Shop :	54,000 sft.
	-	Forge Heat Treatment Shop :	19,680 sft.
	-	Administrative Building :	10,680 sft.
	-	Medical Centre :	3,072 sft.
	-	Canteen :	5,400 sft.
	-	Others :	195,270 sft.

		Total	862,923 sft.
3.	Number of M/C	:	940

4. Potential Capacity

- Casting : 12,000 tons per year (TPY) in 2 shifts
- Forging : 2,500 TPY in 1 shift
- Machining : 945,000 Hours/Year in 2 shifts
- Assembly : 130,000 Hours/Year in 2 shifts

5. Facilities for Production

- Pattern Making Jigs, Fixtures & Gauges
- Casting (Heavy/Light) Gear Cutting
- Die Making Heat Treatment
- Machining (Heavy/Precision) Surface Treatment
- Forging Hand & Cutting Tools
- Assembly of Machines

6. Production Items

A. Machine & Engines

- Lathe Machine - Wood working machine
- Bench Drill - Diesel Engine
- Column Drill - Deep Well Turbine Pump
- Power Hacksaw - Centrifugal Pump
- Reeling Machine - Pedestal Grinding Machine
- Power Tiller - Ring Spinning Frame (New/Modernization)

B. Tools

- Twist Drill - Boring Tools
- Hand Taps & Machine Taps - Spanner
- Turning Tools - Chisel
- Hammer - Screw Driver

C. Other Products

- Jute Mills Spares
- Chemical Industries Spares
- Railway Spares
- Fan Industries Spares
- Forged Parts
- Diesel Auto Tempo
- Casting Parts

7. Training Facilities

- Quality control
- Engineering technology
- Trade Course
- Manpower Development
- Computer

8. Facility for Quality Control

- Chemical Analysis
- Mechanical Testing
- Micro-Structure Findings
- Magniflex Crack Detection
- Pump Test Bench
- Inspection of Incoming Materials-
- Hydraulic Dynamometer for Testing Small Engines
- Swear Use of Precision
- Measuring Instrument at all Stages of Production
- Facility for Pre-delivery Quality Control

Acquisition of Technical Know-how

Acquisition of technical know-how and training of man power were given priority from the very beginning of the project. Accordingly licenses were acquired for manufacturing different products such as:

(a) Machine Tools:

- (i) Lathe (10 different specifications)
- (ii) Column Drill
- (iii) Bench Drill
- (iv) Power Hacksaw
- (v) Radial Drill Machines

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- (vi) Wood Working Machine

- (b) Deep Well Turbine Pump
 - (i) 2 cusec 50' head
 - (ii) 2 cusec 70' head

- (c) Hand Tools
 - (i) Double Ended Flag Spanners
 - (ii) Screw Drivers

- (d) Cutting Tools
 - (i) Drills
 - (ii) Taps

- (e) Diesel Engines
 - (i) MHI NM 75
 - (ii) MHI NM 90
 - (iii) MHI NM 110

However, transfer of know-how for all the above licensed products could not, for various reasons, be properly utilized.

In addition to producing the above listed equipment BMTF was also possessed of the capability to successfully develop the manufacturing technology for certain engineering items in the Textile, Machine Tools, Cutting Tools, Jute, Chemicals and Tobacco, Fan and Wood products

industries, as well as for the Railways. BMTF could also turn out Cast Parts, Forged Parts etc., with the assistance of UNDP experts who had been working in the BMTF during the 1979-1984 period. In 1980 a Technical Collaboration Agreement (TCA) was signed with Mitsubishi Heavy Engineering for manufacture of small diesel engines required for shallow tube wells. This TCA in fact led to the assembly of Mitsubishi

Engines, to the detriment of the Diesel Plant's production programme.

Management Problems

Notwithstanding the heavy investments made by the GOB in BMTF through deployment of aid funds significant doubts persisted amongst some aid donors about the management of the enterprise. In 1980/81 a study was carried by the Commonwealth Fund for Development Assistance on the Management of the BMTF. Prior to this, in 1979 the World Bank Mission conducted a study on the operational aspects of the BMTF and their recommendations were as follows:

- (1) To close down the factory and recover whatsoever part of the investment was possible by selling the Capital Machinery.
- (2) To lease out the Company to any internationally reputed firm. They however expressed doubts about finding any company for this purpose.
- (3) To hand over the management of the company to any reputed Foreign Firm.

The last recommendation of the World Bank was however accepted by the Government and the BMTF entered into a Management Contract Agreement and Technical Assistance Agreement with *Fabrique National Company* (FN) of Belgium in December 1984. For the Management Contract Agreement, IDA in the World Bank provided a loan of US\$ 4.40 million and for the Technical Assistance needed for the BMTF the Belgian Government provided BF 125 million.

The performance of the Belgian management contractor was however largely unsatisfactory and left BMTF in a situation which was far worse than it was before the contractors assumed charge.

The Management contractor could only achieve 25% of the production target and 22% of the sales target that it had committed in their management contract. The production and sales performance during the tenure of the management contract also included the diesel engines which were produced under a separate TCA with MHI where the Management Contractor was in no way associated, which further devalues the performance of the contractor. The Management Contractor's failure in management was directly responsible for adding to the losses

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of BMTF to the tune of Tk. 55 crores.

After the termination of the Management Contract Agreement the GOB/BSEC tried out various measures which did not yield satisfactory results in the way of improved performance by the BMTF. In the interregnum two studies were conducted for the evaluation of the net worth of the BMTF. One was carried out by Rahman Rahman Huq & Co., Chartered Accountants and its report was submitted on June 30, 1988. The other one was carried out by IBTCI/RICA/RRH who submitted their report on June 12, 1995. The net worth calculated by both the companies was very low and the reports challenged by the BSEC on several counts.

Management Contractor/F.N's Failure:

- F.N. may have been qualified in other areas, but they had hardly any experience in running a Machine Tools Factory. The selection of F.N. as the management contractor was thus imposed on BMTF and was quite inappropriate to their needs.
- The qualifications of the experts fielded by F.N. were not in conformity with the contract/requirements of the BMTF. Most of the actual manpower fielded by F.N. had practically no experience in their respective fields. Therefore they totally failed to produce goods according to the production programme committed under the management contract nor did they manage to transfer any know-how to their counterparts at the BMTF.

Attainable Capacity

BMTF is a complex enterprise due mainly to its sheer size and diversity of productive capacity. BMTF is a facility oriented unit and not a product oriented one. In general facilities for producing engineering products are available in the enterprise. These capabilities have already been identified above. The BMTF is not a consumer goods industry but a complex engineering enterprise. It has 940 machines, in total, of which 265 are production machines (M/C), 300 are service m/cs and 365 are Auxiliary m/cs whilst 10 units are stand-by m/cs. All these m/cs were installed as part of phase - I, as recommended by SERI. But such production related m/cs were not in conformity even with the original production programmes and overall production capacity of BMTF thus remained unbalanced.

BMTF conducted a study of its installed capacity, production capacity and attainable capacity of all the

machines. Production capacity was calculated at 75 per cent of the installed capacity and 25 per cent was considered as production loss due to power failure, breakdown, maintenance etc. On the other hand, the attainable capacity was calculated at 70 per cent of the production capacity which comes to 52.5 per cent of the installed capacity. Thus the loss of production at BMTF in relating to its attainable production capacity has been considered to be 47.5 per cent, the value of which has been calculated at Tk. 29.36 crores.

Major Reasons for Accumulated Loss

- BMTF was not geared to produce goods as indicated in the production programme envisaged at its inception and was not designed to produce goods on a mass production basis except in the foundry and forging shops. This mismatch in its production capacities resulted in very low capital productivity. There was not even a production line for any product.
- Very low utilization of production capacity (about 20 per cent) due, in part, to reasons beyond the control of BMTF. Many potential customers in the public sector

were pre-empted by aid projects which provided prospective users of BMTF services with aid funded imports of products which could have been supplied by BMTF often at competitive prices. Thus goods produced by BMTF according to the joint decisions of the Ministry of Agriculture and Ministry of Industries were not lifted by the user agencies in the Ministry of Agriculture resulting in financial loss for the BMTF. Even where BMTF was the lowest bidder in international tenders, it could not obtain purchase orders from Public Sector Corporation, which for undisclosed reasons, opted to use aid funded imports.
- Government Policies and aid programmes mostly tended to be import oriented. Fiscal Policies were not conducive to encourage local production for backward linkage in their production processes. Intermediate inputs used in the engineering sector often carried import duties which were no less than those on finished products fabricated by BMTF.
- Most of the trained/qualified personnel gradually left the BMTF so that many of the Sections/machines could not be put to productive use and some of the machines were never used at all.
- Countries such as Pakistan and India started their Machine Tools Factory under joint collaboration with world renowned foreign companies who organised their production

programme/production line, made provisions for on the job training on the actual production process and arranged for transfer of know-how. These enterprises in our neighboring countries reached their break-even stage after 6-8 years. No such provisions for external support were made in the case of BMTF.

Scenario as on 30.6.1994

The BMTF had incurred an accumulated loss of Tk. 150.97 crores as of 30.6.94. Government investment, including interest, debenture etc. in the BMTF at that point had amounted to Tk. 172.40. Thus at the time of its closure on July 14, 1994, the total liability of the BMTF stood at (Tk. 150.97 + 172.40) Tk. 323.37 crores.

Notwithstanding its accumulating losses the BMTF, at that time of its closure, continued to supply goods and services to the BADC, Power Development Board, Railways, Textile Mills, Jute Mills, Chemical Industries, Diesel Plant, Chittagong Steel Mills, Rural Electrification Board, etc. BMTF supported these sectors to keep them going. In other words BMTF served the entire economy in spite of the difficulties it faced ever since its birth. Yet BMTF has been closed down and we are made to believe that BMTF has failed to live up to the expectations of the nation and thus has become unviable as a productive entity.

The Political Economy of De-industrialisation

At the time that it was decided to close the BMTF no independent study by any reputed consulting organisation was attempted to determine whether the Machine Tools Factory had become terminally unviable under the interplay of market forces or it had been made unviable for a variety of other reasons outside its management control. Some such exogenous reasons for BMTF's crisis have been identified as :- Import Policy, Industrial Policy, Fiscal Policy, attitudes of donor countries and aid agencies to public sector industry, the role of political forces in Bangladesh.

The pressures from a politically well-connected class of aid intermediaries were also quite effective in persuading public agencies to meet their needs through aided imports rather than through patronisation of local industry. The decisions to opt for imports were rarely made on either market driven principles or based on any scientific economic analysis. Thus, rent-seeking behavior became the prerogative not of import-substituting producers but of rent-seeking intermediaries. Rent-seeking is defined here as the privileged access of particular

people to political patronage which becomes the main variable in accessing public resources and intermediating aid resources. This change in the balance of power in Bangladesh towards a class of rent-seeking intermediaries progressively undermined the viability not only of the BMTF but other engineering enterprises in both the public and private sector which were exposed to *unfair* competition from aid funded imports.

It is to be noted that the comparative advantage of Bangladesh in developing a local engineering industry, as recommended by the HIID in its report on Industrial Policy, undertaken in the early 1980s, was rarely given the chance to be exploited. The necessary policy support and commitment of resources for the development of an engineering industry, as was attempted by particular governments in some fast industrialising East Asian countries, was totally neglected by successive governments in Bangladesh over the last two decades. Thus policies which could build a more self reliant economy through both accelerating and diversifying Bangladesh's industrial base were never considered as a development option. This neglect contributed to the demise of not just the BMTF but also of the Diesel Plant, GEM plant, Chittagong Steel Mill and the closure of a number of engineering units in the private sector. Thus a multinational, GEC, has closed down its plant in Bangladesh producing engineering equipment and is focussing on indenting and importing engineering goods from its external affiliates.

This reluctance by the GOB, under donor advice, to support investment in capital and intermediates goods industry in Bangladesh has set in motion a process of de-industrialisation, where a variety of industrial sectors in Bangladesh have atrophied. The increasing concentration of Bangladesh's exports as well as manufacturing growth on a ready made garments (RMG) industry with negligible backward linkage is hardly a substitute for an industrialisation strategy based on Bangladesh's dynamic comparative advantage. Indeed, the lack of backward linkage and industrial diversification could well lead to a major crisis in Bangladesh's RMG export sector once the protection of the Multi Fibre Agreement (MFA) is withdrawn in the year 2005. Even today the European Union is threatening to withdraw the privilege of duty free entry into their markets on offer to least developed countries, unless Bangladesh's knitwear exports are based on a three as opposed to two stage local manufacturing process. This means we have to now produce yarn locally rather than import it from India. By 2005 our main yarn and fabric suppliers will be processing their exportables to Bangladesh into RMG produced by them at home for export so Bangladesh will have to rely on competitive local manufacture of such products. It should also be explored as to whether

some of the machines used in the RMG sector can be produced under license in Bangladesh. The demand for such equipment will be large enough to generate the external economies needed for competitive local manufacture.

Recommendations

1. At the time of its closure no objective attempt had been made to either diagnose the factors responsible for the non-viability of the BMTF or to review the various options for deciding its future. As a result, a major public facility was closed down with no consideration for the social, economic and technological externalities implicit in such a decision. At the very least, the Ministry of Industries should today, commission an independent Task Force to review the closure decision through a substantive investigation of both the background and prospects of this enterprise. This Task Force's report, to be made ready in 6 months, should be placed on the floor of the parliament for discussion on the future of the BMTF. The GOB should recognise that decisions to close major production entities have political implications where decisions should be made by political consensus reached in parliament. Some of the issues which may be considered by the proposed Task Force, are summarised below:

1. Whether BMTF may be re-opened on an experimental basis, with a small work force and limited product range to ensure that its production facilities do not physically deteriorate. The final decision may await the response of the GOB to the report of the Task Force and its response in Parliament.
2. The Task Force may review the possibility of a time-bound detailed Market Survey being carried out to identify the product mix for supplying both local and external markets along with a techno-economic study of the scope for Balancing and Modernization of the BMTF. This could identify the technology and know how needed for the task by inviting local and/or internationally reputed engineering consultancy organizations with an outstanding track record and experience in the field, to undertake such a study. Based on this feasibility

study future programmes for BMTF may be drawn up on a priority basis. The Task Force may draw up the terms of reference of such a technical consultancy report.

3. The scope for running BMTF as a commercial enterprise, driven by market principles and paying

market wages to its management and workers.

4. The appropriate management structure of a commercially oriented enterprises such as BMTF. This may include a Board to be drawn from amongst the user organizations in the public and the private sector.
5. The scope for recruiting a Managing Director (MD) in the open market on the same lines as the recruitment of the M.D. of KAFCO.
6. The scope for leaving the management free to decide, on commercial grounds, to enter into Joint-Venture agreements/sub-contracting agreements, licensing and other agreements with any national, international or regional enterprise.
7. What to do with the current liabilities of BMTF, seemingly the single most important reason for its closure. This may explore the option of writing off the liability of BMTF or alternatively freezing it for a period of 10 years where no interest should be charged and accrued during the frozen period. Alternatively the BMTF debt could be converted into equity and off-loaded, in part, on the share-hungry stock market of Bangladesh where the market may decide whether they will support the BMTF's revival.
8. In addition to the invocation of the equity market, the Task Force may explore whether the GOB should make a fresh dose of equity investment in the BMTF out of the budget of the user organizations who could use the BMTF service to augment their capability and to facilitate their programmes. Such an investment should be treated as public equity, to be eventually off-loaded in the stock market. A further part of the equity may be underwritten by a syndicate of banks who could be members of the Board of BMTF. The equity of these Bank's could also eventually be off-loaded on the market. The scope for bringing in a reputed foreign equity partner for CSM, with management responsibilities as well as a capacity for technology upgrading, may also be explored.
9. The scope for market guarantees from prospective user agencies in the public sector whereby the BMTF management will initially enter into agreements with each user organizations (say for a period of 5 years) for supplying their requirements at negotiated prices which should be internationally competitive.
10. In case of International Competitive Bidding, BMTF should be given a price advantage of 25 per cent over its competitors. This will take account of the uneven international playing field in the global engineering industry today.
11. The scope for BMTF management entering into a legally enforceable agreement with its Workers Union (there shall be only one union ?) that if the enterprise earns a profit a certain percentage (say 10 per cent

- of the profit) will be distributed amongst the workers. Conversely, if the enterprise incurs loss the workers will also share the burden along with the management. A variant to this profit share arrangement may be to give the workers a share in the equity of the BMTF.
12. The scope for exempting BMTF from the VAT net in consideration of the services it renders to the national economy as a whole. All machinery, spares and raw materials to be imported for BMTF should also be exempted from any duty on the same principle of removal of duties on capital imports to encourage domestic investment.
 13. The scope for BMTF being integrated with some 'selected' industries such as Textiles, Ready-made Garments etc. whereby conscious policy decisions will have to be made to promote a policy of backward linkage of local industry. Thus the Government may possibly consider subsidising these user industries to the extent of 50 per cent of the imported price of these 'selected' industries if they buy their entire requirement of machineries from the BMTF. This agreement could be time bound for upto 10 years with a progressive cut in the subsidy in the last 5 years of its life.
 14. Small engineering industries, workshop etc. buying BMTF produced goods may be provided with bank loans at a subsidized rate of interest.
 15. The Task Force should explore the scope for sub-contracting tasks from the BMTF to the small engineering sector. These local customers may also be offered an equity stake in BMTF which would be underwritten by the commercial banks under a GOB guarantee.
 16. The terms of reference of the Task Force may take into account a variety of other issues of the relevance to the future of the BMTF which have not been considered in the above agenda. These alternatives could include the drastic decision to permanently close the BMTF, if in the view of the Task Force, there is simply no way that the BMTF can be made economically viable. Such a decision would need to spell out what to do with the installed capacity and properties of BMTF. Any closure decision should also take account of the political implications of such a decision as well as the scope for building a political consensus in support of the closure decision, given the national importance of the BMTF.

BANGLADESH MACHINE TOOLS FACTORY LTD.

IOYDEVPUR, GAZIPUR :

IMPORT SUBSTITUTE ITEMS PRODUCED BY BMTF LTD. as on 30.06.1994

Sl. No.	Name of the items	Present Selling price in Taka	Foreign Manufacturer	Import Price in Taka	Main Consumer
1	2	3	4	5	6
1.	Salt Iodation Plant	5,00,000/-	India	12,00,000/-	UNICEF
2.	Feed Mills	6,00,000/-	Germany	27,00,000/-	Live Stock Directorate
3.	Ring Spinning Frame Modernisation	98,000/-	India	1,15,000/-	BTMB
4.	New Ring Spinning Frame	12,00,000/-	Switzerland/India	15,00,000 to 20,00,000/-	Meghna Textile Mills (BTMC)
5.	Faller Bar (Different Model)	350/- to 500/-	U.K./Germany/India	800/- to 1200/-	BJMC
6.	Faller Screw (Different Model)	17,500/-	-do-	25,000/-	BJMC
7.	Drawing Roller (Front Roller)	20,000 to 23,000/-	-do-	30,000/-	BJMC
8.	Drawing Roller (Bottom Roller)	57,000/- to 65,000/-	-do-	1,00,000/-	BJMC
9.	Crank Throw.	3,500/-	-do-	7,000/-	BJMC
10.	HSS Hand Taps (Diff. Sizes)	75/- to 288/-	England/Japan	100/- to 300/-	Hardware Market
11.	HSS Taper Shank Drill (Diff. Sizes)	86/- to 288/-	China/India	100/- to 300/-	-do-
12.	HSS St. Shank Drill (Diff. Sizes)	10/- to 51/-	-do-	10/- to 75/-	-do-
13.	Tongue Rail (Diff. Size)	7,000/- to 18,000/-	Germany/India	25,000/- to 40,000/-	Bangladesh Railway
14.	Crossing Body	61,000/-	-do-	1,15,000/-	-do-
15.	Points & Crossing	1,05,000/-	-do-	5,00,000/-	-do-
16.	Diamond Crossing	2,90,000 to 3,61,100/-	-do-	9,00,000/- to 12,00,000/-	-do-
17.	Buffer Coupling Hooks	1,050/-	-do-	3,500/-	-do-
18.	Coupling Drawbar	2,075/-	-do-	7,000/-	-do-
19.	Fusion Pot	14,00,000/-	Japan	30,00,000/-	Chittagong Chemical Complex
20.	Hardware Materials	-	USA/South Korea/India	2 to 3 times	REB
21.	Paper Mills Knife (Diff. Sizes)	14,000 to 20,000/-	UK/Germany	15,000/- to 25,000/-	K.P.M. & S.P.P.M.
22.	Electric Line Hardware	-	USA/S.K.	2 to 3 times	BPDB
23.	Plunger (Reconditioning)	50,000/-	Germany	1,00,000/-	UFF
24.	Auto-Tempo	1,50,000/-	Italy/India	1,50,000/- to 2,00,000/-	Individual Customer
25.	Centrifugal Pump (Diff. Sizes)	1,800/- to 3,000/-	Italy/India/China	3,000/- to 10,000/-	BADC/BKB/Barind
26.	Deep Well Turbine Pump (Diff. Cap)	60,000/- to 1,40,000/-	-do-	80,000/- to 1,75,000/-	-do-
27.	Gear Box (1:1 & 3:2)	15,000/-	U.K/China	12,000/- to 25,000/-	-do-

Chittagong Steel Mills Ltd. : The Need for Bold Decisions

Introduction

Chittagong Steel Mills Ltd (CSM), administered by Bangladesh Steel & Engineering Corporation (BSEC), is the only significant steel producer of the country. The performance of this unit has remained unsatisfactory since the beginning of its operation in February 1967. Over its lifetime it has an accumulated losses of Tk. 434.23 crores which add up to a total debt of 771.97 crores made up of foreign loans, government and commercial bank loans. Its balance sheet shows a negative Debt Equity Ratio (DER) 213:(113). The enterprise conceived and commissioned three decades ago, was set up to meet the growing demand for iron and steel in the then East Pakistan in the form of corrugated galvanized sheets for roofing. Today the CSM is in poor shape and faces closure as was done with the Bangladesh Machine Tools Factory (BMTF), unless some drastic action is taken to salvage the unit out of its present crisis. The problems faced by the CSM are not new and reflect the cost for both its initial bad planning as well as persistent neglect over the years by successive governments to take corrective measures to make the enterprise a more viable entity.

This paper attempts to identify the causes responsible for this lingering crisis within one of Bangladesh's largest public enterprises with a view to initiating a discussion on whether anything can be done to reverse the decline in the fortunes of the CSM. The idea to undertake such an exercise on the future of the CSM originated in the initiative taken by the *Centre for Policy Dialogue (CPD)* in a meeting convened there on April 20, 1996. In that meeting the Executive Chairman, CPD, Professor Rehman Sobhan identified the need to investigate the fate of a number of major public projects involving massive investments of public funds, which are today closed down or remain operating at far below their original potential targets, with a view to see if these assets could be more productively used in the service of the country.

The proposition to investigate the condition of the CSM followed on the original decision taken at this meeting to investigate the fate of the BMTF which has been reviewed in a companion CPD report.

The above mentioned meeting was attended by S.M. Al-Husainy (former - Member, Planning

Commission & Secretary to the Govt.); Dr. Nazrul Islam (Former - Member, Planning Commission and Chairman, BSEC); Mr. Hasnat Abdul Hye, Secretary Govt. of Bangladesh; Dr. Rafiquddin Ahmed (Former - Chairman, BSEC and Director (ICTVTR); Mr. Nefaur Rahman, (former Chairman, BSEC); Dr. M.I. Talukder, Division Chief, Planning Commission; Dr. Hasan Siddiq (ICTVTR) Mr. Nurul Haq, Director, CPD; and Mr. A.F. Mujtahid (CPD). The review of the CSM was carried out for CPD under the direction of Dr. Nazrul Islam working in collaboration with Mr. A.F. Mujtahid.

A Brief History of the Chittagong Steel Mills (CSM)

Chittagong Steel Mills was set up in 1967 by Kobe Steel Ltd. of Japan on a turnkey basis under a Japanese EXIM Bank loan and was designed to produce 1,50,000 tons of steel consisting of the following facilities:

- Ingot casting facilities
- One Blooming Mill
- One Bar Mill
- One sheet and thin plate Mill
- One three line galvanizing shop

The total investment outlay was Rs. 56.70 crores of which Rs. 16.67 crores was in Foreign currency.

Subsequently another 60 ton Open Hearth Furnace (OHF) was added and it was claimed by the plant supplier that the rated capacity will be increased from 150,000 tons to 250,000 tons of steel ingot. In addition one Heavy Plate Mill was also installed in 1970. But the Melting Shop with 4 OHFs could never achieve the designated target of 250,000 tons. The highest output ever achieved by CSM had been round 1,35,000 tons of ingot which is equivalent to 1,44,000 tons of liquid steel i.e. 54% of the rated capacity. Paradoxically enough it was never explained by the plant supplier how a mill designed to produce, 1,50,000 tons of ingot with three 60 ton OHF could produce 2,50,000 tons of ingot with the addition of just another 60 ton OHF.

Thus the actual production of steel ingot in CSM remained far below the rated capacity from the very inception of this nationally important enterprise. A measure of the performance of the Mill may be seen from the table below :

Table 1

Trends in steel production at CSM

<u>Year</u>	<u>Production/tons</u>	<u>% of Capacity</u>
1967/68	68,000	27%
1968/69	61,000	24%
1969/70	54,000	22%
1970/71	40,000	16%
1971/72	41,000	16%
1972/73	68,000	27%
1973/74	74,000	30%
1974/75	76,000	30%
1975/76	90,000	36%
1976/77	102,000	40%
1977/78	110,000	44%
1978/79	121,000	48%
1979/80	133,000	53%
1980/81	135,000	54%
1981/82	107,000	43%
1982/83	47,000	19%
1983/84	78,000	31%
1984/85	95,000	38%
1985/86	95,514	38%
1986/87	82,081	32%
1987/88	70,036	28%
1988/89	86,274	34.5%
1989/90	75,026	30%
1990/91*	57,615	23%
1991/92	36,384	14.5%
1992/93	7,045	3%
1993/94	6,085	2.4%
1994/95	5,364	10%
1995/96	21,898	9%

		20,57,237

* Year of cyclone and tidal upsurge.

Maximum production during the pre-liberation period was attained in the year 1967/68 with 68,000 tons which was only 27% of the rated capacity. The production record of the CSM after Liberation demonstrated

some clear improvement because of efforts initiated by the post-liberation government to ensure more effective use of its output and to initiate some attempts at balancing and modernisation (BSM) of its capacity. Notwithstanding some improvement in the performance of CSM, even in its best years it continued to perform below its potential. At its realised level of performance the CSM could not meet the intermediate demand of the 26 re-rolling mills in the country so that billets had to be imported to meet the gap between their demand and supply from the CSM.

During the 1950s and '60s there was an ongoing debate in the developing world over the economic wisdom of investment in steel production particularly in smaller economies such as the then Pakistan. Aid Donors were not sympathetic towards such projects and had long opposed the setting up of a mill in Pakistan. Donors had in the 1960s even opposed setting up a steel mill in the Republic of Korea. Expansion of steel making capacity thus became part of an agenda of national self-assertion for the developing economies where Peoples Republic of China, India, Brazil, Mexico, Taiwan, ROK and eventually Pakistan went ahead with public sector projects to produce steel inspite of the reservation of the donors and particularly the World Bank. Usually bilateral donors tended to support such projects as was the case in India in the 1950s where the West German government financed the Rourkela steel plant, the British funded the Durgapur steel mill and the USSR funded the Bhilai steel mill. In other cases as in ROK and in Pakistan, Japanese suppliers credits were used whilst in Pakistan the USSR, in the late 1960s, agreed to finance the Karachi Steel Mill.

The main economic argument over a steel mill was centered around the need for realising economies of scale in a steel plant and the problem of absorption of the output of a large scale steel plant in the economies with limited domestic demand. In those days not one of these steel mills from the developing countries emerged as globally competitive exporters of steel where the world market was dominated by Western Europe and the United States. Even Japan had not emerged as a major steel exporter.

In the industrialized countries the operation of steel making industries is considered wasteful if it runs below 100% of the rated capacity even if modern technology is employed for production. Today with the emergence of technologies for setting up electric arc furnaces smaller capacity units can now be economically viable. But in the 1960s this technology was not readily available.

As conceived, the Chittagong Steel Mill, by any standard of comparison even with the plants in other developing countries, was a very small one and could hardly be termed as ambitious if it could be operated at least at 90% of its capacity. However even at that time there was some doubt if a plant of such limited capacity could be viable. The fact that the CSM operated at below 50% of its rather low capacity thus further compromised its efficiency, which had, in part, originated from its earlier design flaws. The CSM's low capacity operation owed in part to insufficiency of working capital to ensure an adequate supply of raw materials. But even when capital could be provided the CSM could not produce anything more 12,000 tons a month. Thus it could be noted that the excuse of shortage of raw materials and funds were not always tenable on the occasions where raw materials were no longer a binding constraint.

Post Liberation Scenario

Technical Study by Lengipromez

In view of the very poor performance of CSM prior to liberation, the first Planning Commission of Bangladesh requested the then Soviet Government to support a technical study to identify the problems of CSM and give ideas for its BMR. Accordingly, the Leningrad State Institute for Designing Iron and Steel works, *Lengipromez*, submitted a technical proposal in 1973 for reconstruction of the Steelmaking Plant of the CSM. The technical proposal, inter alia, observed : “..... *It seems that the difficulties in increasing the steel output (68,000 ton. at that time) arise from the organization of operations in the shop and suggested To reach the rated capacity of the shop, i.e., 250,000 tons of steel per year ... it will evidently be necessary to reconstruct certain process sections connected with the preparation and delivery of charge materials to the shop as well as with the teeming of steel.*”

Other experts consulted by the Planning Commission and Steel Mills Corporation corroborated the conclusions of *Lengipromez* and also pointed to the need for both introducing a continuous casting process into the CSM as well as the introduction of electric arc furnaces.

It was made abundantly clear in all these reports that CSM was commissioned with a built-in design deficiency which constrained it from operating at its rated capacity unless the plant was re-modelled. Until this

was carried out the viability of the CSM would remain compromised.

Study by Kobe

No follow-up action appears to have been taken on the basis of the recommendations made by *Lengipomez* by the successive governments which succeeded the first GOB which had originally initiated the review. Instead the new GOB turned to the Japanese firm which had originally designed and erected, the CSM, M/S. Kobe Steel who were invited in March 1976 to conduct a technical study to find out the fundamental reasons and bottlenecks standing in the way of attaining CSM's rated production capacity. Kobe submitted its reports in August 1976 which were styled as part of a BMR project of Chittagong Steel Mills Ltd. The report, without considering such fundamental issues as the gross under-utilization of capacities of the plant supplied by them, submitted a totally new proposal to re-model the CSM, to be executed in three phases. The Kobe proposal is summarised below:

Phase I: Immediate Top Priority

Items	Cost
1. Construction of Jetty for CSM	Tk. 17.32 crores
2. Billet Mill (1,80,000 tons)	Tk. 34.32 "
3. Welded Carbon Steel Pipe Plant	Tk. 14.10 "
4. Maintenance Facility	Tk. 1.70 "

Total	Tk. 67.74

2nd Phase : (after 5 years)

One Electric Arc Furnace Continuous Casting Machine (CCM) for 100,000 t/year for 150m Sq. Billets	Tk. 17.00 crores
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3rd Phase (after 10 year)

Another Electric Arc Furnace (EAF) - CCM	Tk. 22.00 "

Grand Total	Tk.106.74 crores

It is noticeable that the proposals made by Kobe were not much different from those which had already been suggested to the first GOB by *Lengipomez* and other experts. Nor did the Kobe report examine the reasons

behind the technical and operational problems of the CSM nor were any solutions suggested to resolve its inherited design problems. Instead Kobe submitted a totally new investment proposal to cover up the inherent difficulties of the original plant designed and supplied by them to CSM in the 1960s.

Table 2
Shopwise Rated Capacity of CSM with 4 OHFs Supplied by Kobe Steel, Japan

Production Unit	Product	Capacity
Melting Shop	Steel ingot	250,000 t/y
Blooming Mill Shop	Billets (110/85 mm sq), shapes, sheet bars	1,80,000 t/y
Bar Mill Shop	Bars, Shapes	72,000 t/y
Sheet & them Plate Mill Shop	B.P. sheets, their plates	62,000 t/y
Galvanizing Shop	G.P. Sheets, CGI Sheets	47,000 t/y
Heavy Plate Mill Shop	Thick Plate	57,000 t/y
Casting & Forging Shop	Ferrous and non-ferrous casting, ingot molds, etc.	

BSEC Committee Report

Again no action appears to have been taken by the GOB to initiate some follow-up action based on the Kobe report. Instead, the problems of CSM were again reviewed by a committee constituted by the Bangladesh Steel & Engineering Corporation (BSEC) in 1977 whose views were submitted in a report in February 1977. After examining all the existing production facilities and layout of the various shops at CSM the BSEC committee noted that there were two possible alternative ways to re-model the plant so as to increase the production of billets to the desired level and to cater to the immediate and near future demand of the country. The alternative proposals of the BSEC committee are summarised below.

Alternative I

Using the installed system of making steel ingots through ingot moulds, total production could be increased by introducing the following modifications in the plant:

- (a) The fault in the design in the process of steel making in the melting shop was identified in subsequent operations such as handling, cooling, stripping, removal of cast ingots and resetting of mould, all of

which were carried out inside the pit where the melting operations were also carried out. At a production level beyond 1,25,000 tons of ingots the facilities in the pit side proved completely inadequate and created a mess in the movement of the ladle and the materials in the pit. This problem could be overcome by the shifting of subsequent operations away from the pit-side after the molten material was poured into ingot moulds, leaving the pit-side free for the purpose of the pouring operation. To achieve this spatial readjustment in operations required that the pit-side space be extended and provided with additional handling equipment i.e., two units of 30 ton cranes.

- (b) Purchase of equipment consisting of Boggy casting equipment and other allied equipment.
- (c) Establishment of a Billet Mill of around 150,000 tons capacity per year.
- (d) Ancillary facilities to cater to the handling of an increased amount of output after casting into ingot moulds and upto the production of 110 sq. mm blooms in the Blooming Mill.
- (e) Ancillary handling of transportation facilities for an increased amount of raw materials needed for the increased production level. These proposed new facilities would however be common to *alternative two*, proposed by the committee.

The implementation of *Alternative I* was estimated to cost about Tk. 43.50 crores. In addition, recurring annual expenditure to the tune of taka 2 crore would be required for the refractories.

- Additional manpower needed to operate the new facilities would cost a further Tk. 30 lac per year.

- The conversion cost of the Blooming Mill @ Tk. 200 per ton for producing blooms of 110/85 mm sq. would involve Tk. 4 crore annually.

It may be concluded from the BSEC committee proposal that to correct the inherited design fault and process layout of the CSM plant would require an expenditure of more than Tk. 43.00 crores plus another taka 6-7 crores of related expenditures.

Alternative 2

It was proposed to instal a Continuous Casting Machine (CCM) of suitable design for producing cast billets of appropriate sizes, utilizing the existing melting capacity/process of the CSM.

After threadbare discussion the Committee unanimously agreed that it was technically quite possible to introduce a continuous casting system within the existing framework of the CSM and recommended the following :

1. Purchase of a Continuous Casting Machine of a designed capacity of 2,50,000 ton.
2. Probable expansion of the pit-side of the melting shop to accommodate the CCM.
3. Investment in ancillary buildings and transportation facilities for handling of the prospective increased production following the re-design of the CSM.

The investment cost estimated for the *second alternative* was estimated to be Tk. 9.25 crores. Compared to the *first alternative* a very low investment cost was involved for introduction of a CCM for achieving the same objective of raising the production capacity of the CSM. It is again noticeable that the committee reaffirmed the need for a CCM as had a number of experts who had earlier reviewed the problems of the CSM. The committee had however, in *alternative two* made an internal assessment of the value of a CCM.

The decisions for choosing the CCM route for billet making were taken by the committee on the basis of the following considerations:

- (i) The cost of the equipment is lower than that of the corresponding conventional casting facility including the *roughing mill*.
- ii) Continuous casting requires fewer production steps. The cast billets are ready for further processing into final products, whereas the stripping and transportation of conventional cast ingots need much more handling.
- iii) Fewer operations per shift are required. Besides work is carried out under more comfortable

conditions than at the conventional ingot casting pits. Fatigue and the possibility of accidents can thereby be reduced.

- iv) With continuous casting, the liquid steel/billet yield reaches 95-97% compared with 87-91% for the conventional facilities already installed. This means that the Steel Mill can increase its production without changing furnaces.
- v) Continuously cast billets exhibit greater homogeneity over the length of the cast, resulting in more uniform technological properties. The mechanical characteristics are improved in both resistance and resilience, and the surface of the finished product is better.

The report of the committee was approved by the BSEC Board on February 22nd 1977 and a project for the Balancing, Modernization and Reconstruction (BMR) of the CSM was submitted to the Government on February 24, 1977 based on the report.

The salient features of the BMR project were :

- Setting up of a CCM to increase the output of billets from 60,000 tons to 190,000 tons (110 mm sq billets and 185 mm sq blooms to be processed into smaller sized i.e., 50 mm sq/65 mm sq billets in the existing Bar and Blooming Mills with little modification.
- The investment outlay was estimated at Tk. 9.70 crore (1 US \$ = Tk. 15.50).
- The annual turnover derived from the BMR was estimated at Tk. 61.11 crores
- Foreign Exchange saving: Tk. 15.25 crores.

While the BSEC was preparing the International Competitive Bidding document, to be floated, once the BMR Project was approved by the government, Kobe Steel Ltd made a proposal to the BSEC for "*despatching a Mission to Bangladesh to discuss about their process regarding C-C including other items of BMR for Chittagong Steel Mills*". Curiously enough Kobe's visit went ahead as scheduled and contributed to forestalling the Corporation's BMR project for setting up of a CC machine which was prepared in contradiction to the phased

programme of BMR prepared in 1976 by Kobe for CSM. The new initiative succeeded in frustrating the Corporation's attempt to implement the project as recommended by its committee and incorporated in its BMR project. The problems inherited by the CSM due to the faulty design work of Kobe Steel thus remained unresolved as no further action was taken by the GOB to implement BSEC's BMR proposal.

During the time that BSEC's BMR proposal was under review, the GOB sent a 3 - member delegation consisting of Mr. R. Hasan, DG, Dept. of Industries, Mr. Nazemuddin Ahmed, Director, BSEC and Dr. M.I. Talukder of the Planning Commission to visit India, between 3-12 March, 1977, for studying the Mini Steel Mills in India. This team, however, did not make any recommendations to the GOB based on its visit to India. The BMR project's fate continued to remain very uncertain as its consideration by the government was being persistently deferred.

Study by Atkins Planning of U.K.

Meanwhile a new project had been initiated to undertake a *Master Plan Study of the Steel Sector*. In 1981, M/S Atkins Planning of the U.K. had been invited to undertake a study on the **Iron and Steel Sector of Bangladesh** under UNDP assistance. The consultants submitted their report in 1982 on a *Master Plan for the Steel Industry* in Bangladesh. In their report the consultant included an overview of CSM's production achievements and analysed the plant's rated capacity. According to the assessment of the consultant, CSM's rated capacity was overstated (see Table 2). Atkins had estimated that the maximum attainable steelmaking capacity after Balancing, Modernization and Replacements of the existing facilities of CSM could at best be raised to 2,00,000 tons per year. Atkins pointed out that the major problem in the melting shop was at the pit-side which was too congested for smooth operation of the series of activities to be performed there. The findings of the Atkin's study occasioned some rethinking amongst the policy makers of Bangladesh and proved something of an embarrassment for Kobe Steel whose own estimates of the potential capacity of the CSM had been exposed to question.

Given the manifest influence of Kobe Steel in policymaking in Bangladesh, they started lobbying through their local operatives to down play the Atkins report. Kobe had been sending out feelers to the GOB that they could arrange an OECF loans for the BMR project and prepared a study report on behalf of BSEC for submission to the Japanese government in 1984 against which such a loan could be provided to the GOB.

Although the Kobe report was questionable on many counts, OECF agreed to finance the BMR project and literally dictated the appointment of the Japanese consultant, NKK, without allowing Bangladesh to go for international bidding for seeking such consultancy services to implement the BMR under the OECF loan. Once the Japanese consultant was appointed they started openly advocating for the CSM to enter into a *lump sum turnkey* (LSTK) contract with Kobe as the General Contractor on the basis of direct negotiations. Again the GOB was not allowed by OECF to go for any competitive bidding to appoint the General Contractor and to select the most competitive suppliers of equipment under the BMR. The Japanese consultants suggested that a CCM be installed in the CSM in order to improve operational efficiency and to remove the bottlenecks in attaining full capacity operation.

In order to give effect to the recommendations of M/S Atkins Planning they had designed a BMR proposal which was estimated to cost Tk. 54 crores, including a foreign currency component of Tk. 38.81 crores. This proposal was submitted by BSEC to the GOB for approval in September 1985. The Atkins designed BMR project involved installation of using the Open Hearth Furnace - Laddle Furnace - Continuous Casting Machine (OHF-LF-CCM) technology. The PEC of the Planning Commission, however, deferred approval of both the Atkins and Kobe proposals and a team was sent abroad for further study on the most appropriate technology for CSM. On the basis of the recommendation of the new study team, the Atkins scheme was modified and revised for introduction of EAF-CCM technology in lieu of the OHF-LF-CCM technology. The ECNEC approved the revised project on 20.8.89 at a total cost of Tk. 124.50 crores, including a Foreign Exchange Component of Tk. 80.91 crores.

The financial proposal submitted by Kobe, as the LSTK contractor was seriously at variance with the project approved by the ECNEC based on the Atkins (revised) proposal both in terms of the investment cost and the technical components of the project. When the Kobe proposal was questioned by the GOB, Kobe submitted a revised proposal to complete the job at an estimated cost of Tk. 175 crore. However, in the meanwhile, Kobe's revised estimates for the BMR and their past performance were being questioned by the Bangladesh media which appears to have contributed to the GOB's deferment of the approval of the project. Eventually no decision appears to have been taken by the GOB either on the BMR proposal of Kobe or that of Atkins not to mention the earlier BSEC designed proposal.

Subsequently the ECNEC in a meeting held on 25.11.1992 discussed various aspects of the CSM project and decided, inter alia, that BSEC/MOI would undertake a fresh feasibility study and submit a new project proposal for the BMR of CSM to ECNEC for its consideration.

BSEC continued its efforts to effect a BMR for the CSM and had been exploring the possibility of a joint venture with some foreign investors but without any success. In the backdrop of the above initiative, M/S Metallurgical & Engineering Consultant (MECON) India Ltd, a prestigious public sector consultancy organisation - known all over the world, had shown interest in the revamping/modernization of the CSM and submitted a "Concept Note" on the optimization of the CSM facilities. The Ministry of Industry has requested the Foreign Ministry to include the CSM's BMR project in the Agenda of the *Indo-Bangladesh JEC* to be held in the near future and for seeking financial assistance for the implementation of the project.

Beginning of the Ordeal

The original objectives underlying the commissioning of CSM was to provide certain steel end products, primarily comprising of bars and sections, thick plates, thin plates, sheets and galvanized sheets based on the projected demand for such projects in both the then East and West Pakistan. After the liberation of Bangladesh in 1971 CSM's market was reduced to that of Bangladesh. This reduced product demand had also been limited primarily to the need for construction material.

This transformation in its market regime after liberation compelled CSM to change its designed role from "producing different products in a small lot" to a billet supply centre for 26 rerolling mills whose demand grew rapidly in post liberation Bangladesh. The drastic change in the product mix, owing mainly to the change in the demand pattern, left other shops at the CSM's grossly underutilized. This adjustment from Bangladesh's steel demand profile, coupled with the CSM production constraints originating in the design and operation of CSM, persisted for nearly 30 years after its construction. The operation loss, decreasing productivity and yield as well as the increasing maintenance expenses originated in both the inherited supply side constraints of the CSM as well as the change in its demand matrix. Neither of these problems could, strictly speaking, be attributed to the managerial limitations of the CSM. If to this we add the persistent refusal of the GOB to take decisions affecting the BMR for the CSM, inspire of a plethora of evidence for its need, the problems of the CSM remain largely

exogenous in their origin.

Under such conditions as discussed above, there was little reason to expect a satisfactory operational performance from the CSM. However, these CSM specific supply and demand side problems were compounded by further factors exogenous to the CSM. These may be summarised as follows:

- Low economic level of activities in the country which impacts on the overall demand for steel products.
- Reduction of the custom duties on imported mild steel billets and on ship scrap as well as the high tariffs on the imported raw materials consumed by the CSM.
- Increased use by the local re-rolling mills of ship scrap and re-rollable scrap in place of billets produced by the CSM, notwithstanding the fact that this use of scrap tends to invite production of inferior quality MS rods for supply, at lower prices, in the local market.
- Out-moded technology for producing billets
- Shortage of working capital since the inception of the CSM and a disproportionate DER

A combination of the above factors seriously impacted on the cash flow of the CSM and compelled the CSM to borrow heavily from the Commercial Banks for meeting its increasing working capital needs at a higher rate of interest. This process compounded its financial liabilities at a time when its operating losses were also increasing thereby further contributing to the mounting losses of the CSM. Furthermore, extensive damage had been inflicted on the facilities of the CSM by the cyclone in 1991 which had severe adverse effects on its production and sales. Under the circumstances of its inheritance, neglect by the GOB and faced with a series of supply and demand driven problems of exogenous origin has led the CSM to the point where it may be facing a terminal crisis.

As it stands today the CSM is living with the following ongoing problems. Its accrued financial losses have now reached Tk. 434 crores as on 30.6.96. The unit had to resort to bank borrowing to keep its production going and has to adjust its earlier bank overdrafts which compounds its debt liability.

The costs of maintenance of the aging equipment has been increasing at an exponential rate.

With the increase of the down-time of much of its machinery production losses and cost of production have increased.

Overhead costs had increased due to the non-utilization and under utilization of capacity.

Operational efficiency of the aging equipment has thus touched near bottom in the absence of any replacements or BMR.

CSM is now trapped in the *vicious circle* of bank borrowing - higher cost of production - higher selling price - reduced sale - stock piling of finished product - inability to repay its bank loan, leading to further borrowing leading to further debt etc.

This catalogue of problems is the direct result of the non-execution of the BMR programme designed for CSM in the '70s. So it is evident that it was the government's policy that was largely responsible for the current state of affairs of CSM and not a result of the BSEC or the CSM management. Successive studies of the problems of the CSM made a variety of recommendations which were never implemented by successive governments. To this extent the inaction by the GOB has created the situation whereby the closure of the CSM is now being considered. A decision to close down a major public facility is setting the stage for the closure of a large number of other state activities because of the failures of governance by the GOB itself. Is the GOB prepared for such closures of other big projects in different sectors? The answer appears to lie in improving the quality of governance of the GOB rather than a policy of closing down valuable productive capacity in a resource

constrained economy, while attempting to correct the misgovernance which lies at the root of CSM's problems.

What is to be Done Now?

Even in spite of all these accumulated problems it will be a serious abdication of responsibility by the GOB to leave the matter of CSM as it is and to allow its problems to drift any further. It must either be closed or a major effort has to be made to revive this major facility.

Taking account of the sad history of faulty planning and official neglect of the problems of the CSM which have taken it to the point of no return, is closure the only option? It is argued below that even today, if the GOB seriously commits itself to salvage this major national asset, the CSM can be turned around and made into a productive national asset. But this will require a total restructuring of the CSM i.e., a technical restructuring, financial restructuring and administrative restructuring to run it as a viable unit. We summarise below for further discussion some of the measures which may be contemplated as part of such a restructuring exercise:

Technical Restructuring :

An immediate plan of action should be designed for urgent implementation to save this basic industry and correct the anomalies accumulated ever since its inception in 1967. It will require a planned and bold initiative to take this unit out of the vicious circle of problems with a view to put it back on the path of revival. Such a Technical Restructuring should be undertaken in two phases with a short-term and a long-term perspective.

Phase I: Short Term Planning

The immediate measures required for a revival of the CSM should be considered in this phase. The production programme and product mix of the plant should be rationalized in this phase so that more semi finished products could be converted for direct end use.

CSM is incurring yield and energy loss through the continuation of the present system of ingot casting for billet and slab production. Therefore serious consideration should be given to immediately introducing provisions for a move to a continuous casting process.

Thus the **Phase I** plan should be envisaged primarily to achieve the following :

- Production of value added products such as Micro-alloyed (MA) steel grade, weather resistant steel grade, spring steel grade, low carbon, medium carbon and micro-alloyed grades for rebars.
- Adoption of the Continuous casting (CC) route for ingot casting in place of the prevailing liquid steel production process.
- To redesign the bar mill and blooming mill to produce market oriented products.
- Adoption of a secondary refining unit.

No immediate restructuring in the flat products are envisaged as this line could be sustained with imported slabs and Cold Rolled (CR) coils/sheets. However, elaborate plans for the implementation of the **Phase - II** should be drawn up during the period of the **Phase I** programmes where the revised product mix should be firmed up after a detailed study.

Phase II : Long Term Planning

Once the short term growth plan is achieved, action could be initiated for the long term restructuring and growth of the plant. Presently the OHFs are being operated with cold pig iron and scrap which is a costly process. The major energy input to the furnace is natural gas. In order to economise on energy use the operations of the CSM can judiciously utilize the available natural gas for production of *Hot Briquetted Iron (HBI)* popularly known as sponge iron, as a feedstock for the steel making units. Countries with a good reserve and supply system of natural gas, such as Venezuela, Mexico, Iran, Indonesia, Malaysia are producing HBI and using the same for their steel making where, in lieu of importing scrap and pig iron, these countries are exporting HBI to scrap deficient countries for the production of steel.

Therefore in **Phase II**, CSM should undertake plans to produce gas based HBI. Since such facilities are

available in modular form, the module for producing 400,000 ton/year of sponge iron may be re-activated with or without external collaboration. CSM can use HBI as a metallic source for its own steel making and export the excess quantity, if any, to India, as originally planned and/or to the world market for which there is a great demand for this product.

The OHF steel making process is becoming obsolete all over the world and accounts for less than 10% of total world steel production. This is because the OHF steel making process contributes to low productivity, high energy consumption, high manpower absorption, and a high degree of environmental pollution compared to more current steel making processes such as Basic Oxygen Furnace (BOF), Electric Arc Furnace (EAF) etc.

The OHF's of CSM have been in service for nearly 30 years. Thus, as part of a gradual replacement of obsolete technology, it would be worthwhile to replace the OHF process of steel making with a more efficient technology. Earlier reviews of the CSM have already pointed to the value of production of HBI steel making based on the EAF process. This idea could be suitably revived, with a view to either replace or supplement the OHF process.

As regards forward integration within the CSM, some thought should be given to set up a Mini Cold Rolling Mill of 50,000 tons capacity since the demand for flat products and Galvanized Plain/Galvanized Corrugated (GP/GC) sheets has been increasing rapidly within Bangladesh. Since the local construction sector remains robust one single strand wire rod mill capable of producing 250,000 tons per year should also be considered for incorporation at the CSM. The new facilities which should thus be considered in the **Phase II** plan of the CSM are itemised below :

1. Facility for production of Hot Briquetted Iron (HBI)
2. Facility for liquid steel production
3. Facility for conversion from Hot-Rolled (HR) to Cold Rolled (CR) coils and for producing coated products
4. Facility for production of wire rods.

A Sponge Iron Plant

Some consideration should be given to setting up a sponge iron plant either as part of the CSM complex or as an independent productive enterprise. The question of setting up a gas-based Sponge Iron plant is not new. The idea was first mooted in 1974 and a preliminary study was jointly conducted by the Steel Corporation of India and the BSMC to set up a Sponge Iron plant at Madangonj near Dhaka. The plant was planned so as to use imported iron ore from India to be reduced to sponge iron by using Bangladesh's natural gas. The sponge iron so produced at the Madanganj plant was to be partly re-exported to India and partly used in the CSM. This project was one of three joint venture projects which were approved, in principle, at the summit meeting of the Prime Minister's of India and Bangladesh in 1974, as part of a programme to enhance and diversify Bangladesh's export capability in order to reduce our trade imbalance with India. However none of these original projects got off the ground for a variety of reasons including that of finance. The sponge-iron project proposal was revived in 1979/80 and a Memorandum of Understanding (MOU) was initiated to set up a 400,000 ton of Sponge Iron plant in collaboration with an Austrian company. This company promised to line up funds for the proposed project but failed to do so as a result of which the MOU lapsed in 1983.

In the middle of the 1980s, the Metallurgical and Engineering Consultants (MECON), a Government of India enterprise, was commissioned to conduct another study of the Sponge Iron project. The study was duly completed and MECON submitted its reports to the Ministry of Industry whence a two-member Bangladesh delegation also visited India to discuss the project. But this venture also came to naught. The sponge-iron project again came to the fore in 1986 when two Letters of Invitation were sent to a Mexico-India-Japan consortium and also an Austrian company for submission of bids, including finance, for a 600,000 ton Sponge Iron plant. The bids were duly evaluated and recommendations were sent to the Ministry of Industry. But the GOB could again take no decision on this major project and after a long lapse of time the project idea was abandoned.

This long-standing sponge-iron project should today, once again be seriously considered, particularly at a time when the demand-supply gap for steel in India is continuously widening. In India's Ninth Five Year Plan, the demand for steel, including Sponge Iron, has been estimated at 37 million tons whereas India can only produce 20-25 million tons. In the East Coast of India there is no gas so that only coal based Sponge Iron plants are coming up which is far from cost-effective as the price of coal is also steadily rising. Besides the coal based plant

has potential environmental hazards. Considering all these factors, it is most likely that a gas-based Sponge Iron plant will be economically and financially a very attractive proposition to investors with its guaranteed export market in India so it is high time that a serious effort is made to reactivate the sponge-iron project particularly at a time when Bangladesh's bilateral payments imbalance with India is approaching two billion dollars. However, a firm decision should be arrived at after a detailed study of the proposal. The output of such a project would have to be taken into account in the re-structuring plans of the CSM.

Financial Restructuring

The GOB must accept its share on responsibilities for the financial losses caused to the CSM due to currency fluctuations, devaluation and abrupt government policy changes for which CSM was in no way responsible. Losses were also accrued due to the built-in technical deficiencies of the design of the unit by the plant supplier and for the inaction of the successive governments to correct the deficiencies recommended by various technical studies. The GOB should also re-consider the recommendations of the Ministry of Finance communicated to the Ministry of Industry vide their letter dated 5-12-95. The recommendations are summarised below.

Rescheduling of the Liability with the Commercial Bank

- To transfer the original loan amount of Tk. 47 crore with the Sonali Bank and Tk. 66.45 crore with the Janata Bank into a *blocked account*.
- Rate of interest of the *blocked account* will be 9% per annum.
- Moratorium for repayment of the *blocked loan* will be 3 years and will be repaid in 20 half yearly installments in 10 years.
- To write off 50 per cent of the accrued interest that is Tk. 62.91 crores by Sonali and Janata Bank with the rest of the 50 per cent i.e., Tk. 62.91 crores to be repaid by the GOB in cash or through interest bearing Bonds.

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- GOB to repay the interest accrued during the period of the Moratorium of the *blocked account* either in cash or through interest bearing Bonds.
- Rate of Interest of the Government Bond will be determined at 7 per cent and will be repaid after 5 years.

The CSM's liability with the Pubali Bank is Tk. 36.61 crores (of which the Principal amount is Tk. 12.98 crore and interest amounts to Tk. 23.72 crore). Pubali Bank will write off 50 per cent of the interest i.e., Tk. 11.86 crore and the balance (interest and the principal loan amount) of Tk. 24.84 crores to be repaid to the Bank in the form of Treasury Bonds with a 7% rate of interest, repayable at the end of 5 years.

Capital Restructuring

- GOB is to pay CSM an amount of Tk. 40 crores as Equity in the form of Convertible Treasury Bonds.
- Interest on the Treasury Bond will be 5% and repayable at the end of 5 years.
- To convert the government loan and accrued interest amounting to Tk. 54.98 crores into Equity.
- To write off the accumulated debt burden due to exchange rate fluctuations on the foreign loan amounting to Tk. 270.91 crores and to adjust it with the fixed assets of the CSM.
- To write off the interest on foreign loans amounting to Tk. 12.30 crores and to adjust it with the accumulated loss of the unit.

Administrative Restructuring

- CSM should be delinked from the administrative control of the Bangladesh Steel and Engineering Corporation (BSEC). It should be run as an autonomous enterprise of the GOB.

- CSM should have an independent management board with such power and authorities and a market determined pay package as may be determined to turn the enterprise around.
- Managing Director to be recruited should not necessarily be from the Public Sector and compensated as market principles.
- The management should be free to enter into Joint Venture Agreements/Sub-Contracting agreements with any national, regional and international enterprise.

Recommended Action by GOB

A high powered *Task Force* should be set up by the Ministry of Industries to review the future of the CSM. This note by CPD may be used as an input into the work of the *Task Force* which should submit its recommendations, within three months of its inception to the Minister for Industries for necessary action. Any further delay in addressing the problems of the CSM could be fatal for its viable survival.