Proposal for
Expansion & Modernisation
of BRAC Printers

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Bangladesh Rural
Advancement Committee
Dacca

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1. INTRODUCTION:

The Bangladesh Rural Advancement Committee (BRAC) is a non-governmental organisation involved in various activities with the objective of contributing to the economic and social development of rural Bangladesh. Founded and run by Bangladeshi nationals it is registered under the Societies Registration Act 1860.

Begun in a small way in February 1972, to rehabilitate refugees of the 1971 liberation war returning to Sulla Thana in the district of Sylhet, BRAC has grown into an organisation with projects and activities in several other districts. The scope of operations has evolved from rehabilitation to integrated rural development, human and institutional development, and the design, testing and implementation of innovative approaches, techniques and methodologies for rural development. The focus of development has shifted from community approach to mobilisation and organisation of the poor and disadvantaged sector of the population. In addition to the physical and operational growth of the organisation, eight years of practical experience in the planning and implementation of rural devdopment programmes has enabled BRAC to foster the development of people and institutions so necessary for long-term and self-sustaining growth of rural Bangladesh. All the sectoral programmes such as agriculture, horticulture, pisciculture, animal husbandry, duck and poultry raising, nutrition, health care, family planning services, and functional education are inititated and controlled by cooperative groups of disadvantaged people. In support of self-sustained growth of the group activities BRAC provides training, extension, credit and logistics assistance. Linkages among the village level groups are being promoted through local and project level associations.

The present annual operational cost of approximately $500,000 is met by project grants from overseas non-profit organisations and international agencies.

2. PROJECT PROPOSAL:

BRAC Printers, which was set up by BRAC in 1977, is located at Mohakhali in the suburbs of Dacca. Consisting of offset and letter press printing facilities, the press is housed on the ground floor of the recently finished 5 storied head office building of BRAC. A total project cost involvement of US $210,000 was funded by OXFAM-Canada, OXFAM-U.K. and NOVIB.

Present physical assets, other than the building & land, basically include two single-colour offset and two letter press machines with allied camera, processing, composition, casting, cutting and other equipment and material plus a substantial volume of stocks and stores.

It is now proposed to install an additional two colour offset printing machine to the existing facilities. In view of the increasing percentage of two and more colour jobs, this would be more economical than two single colour machines. To cope with the increase in the handling of paper and finished printed materials, an additional cutting machine will be required. The existing camera unit is also not sufficient to handle the diversity in offset products. For this a horizontal camera with densitometer and enlarger will have to be added. The existing building space in the printing press will be sufficient to accomodate the additional equipment. However, minor civil constructional expenses would be incurred for foundation of the offset machine and the cutting machine and for installing the horizontal camera. Some additional space would also be required which can be made available from adjacent space in BRAC's Head Office building. Power and water connections are already existent and no additional fixed costs will be necessary on this account. Technical knowhow for operating the new machinery will not be a problem since the production personnel in the press have experience in this line. Only initial guidance will be required from the suppliers. Additional production personnel to be required can be recruited locally.

Installation of the additional facilities will almost double the output of the printing press likewise increasing the consumption of inputs. Sufficient additional working capital would be required to fund stocks and stores and to finance credit sales.

The expansion project, which would, including additional wor-

3. RATIONALE OF THE PROJECT:

A continuous process of expansion in BRAC's rural development activities have led to corresponding increases in operational expenditure. The figure for 1979 was Tk.12 million, which is expented to double by 1982 when projects currently at pre-operating stages become operational.

BRAC's operations have so far been funded by International agencies and non-government organisations. Although no difficulties have thus far been encountered on having projects funded, uncertainty of a continuous flow of funds saps staff morale. BRAC therefore felt as a matter of policy, that the dependence on foreign sources for project funds should be reduced and a measure of control established over its own future.

Thus with a view to generating funds domestically and creating stable and long-term sources, BRAC decided to set up a number of income generating projects consistent with BRAC's overall development goal.

BRAC Printers was set up in 1977 to operate commercially after meeting BRAC's own printing needs, which are considerable. This has started making profits, and till December 1979 has been able to contribute to BRAC's development funds a total of Tk.464,000 (eqv. to US $31,000) from its profits (see semi-annual operating statement in Appendix). During 1980, it is expected that with its present facilities the press would be able to contribute Tk.1.3 million (about US $86,000) to BRAC. With the proposed expansion, the press would be able to generate an estimated annual profit and subsequent contribution to BRAC of about Tk.3 million (i.e. about US $ 200,000) by 1983.

An assessment of the primary viability of the printing press and the intrinsic potential and capability to expand are major considerations in preferring the investment of presently sought finances into expansion of the printing press rather than into alternative income generating projects.

After the initial take-off period during 1977-78, the increase in profitability has been quite rapid. Both management and operating efficiency appear to have risen through experience. Quality of production continues to improve while the proportion of wastages has been reduced considerably. Over the last two years, the monthly sales volume has increased to more than twice; as a result capacity utilisation has also gone up. The types of orders from customers have continued to increase and good prospects exist of more diversification. From mostly single and two-colour line jobs, the present production takes care of multi coloured jobs of both line and half-tone categories. Evaluation of present sales trends and market prospects also indicate that earnings can be increased considerably if the existing facilities were expanded.

4. MARKET PROSPECTS:

The last decade (1970-79) has seen a relatively substantial growth in national development expenditure and in industrial and commercial activity in Bangladesh. This has been a result of independence in 1971 and the persuance of an accelerated economic development policy especially after 1974 by the government. Demand for printing facilities has therefore also increased proportionately. Although quite a number of prigting presses have been set up after 1971, the availability of printing facilities does not appear to be adequate in relation to the demand for this, particularly for quality printing. Because of a great diversity in ranges of machinery dimensions and output capacity of printing machinery and because of the diversity in product types it is difficult to identify a standard consumer unit for measuring production and demand. For statistical purposes, therefore, some researchers use one square inch of printed material as a standard of quantification.

In a market profile prepared by the "Economic Department" of the "Bangladesh Industrial Bank" the effective printing capacity existing in the country in 1972-73 was estimated to be 2,092 billion sq. inches. For 1978-79 the total effective capacity was estimated at 2228 billion sq. inches. For 1978-79 the industrial bank has estimated 3420 billion sq. inches to be the potential demand for printed material. On this basis they have estimated a demand gap of 1,192 billion

Their forecasts for the next five years of the demand gap is as follows:-

Year	Demand gap (in billion sq. inch)
1978-79	1,192
1979-80	1,363
1980-81	1,542
1981-82	1,731
1982-83	1,929
1983-84	2,137

The above demand gap forecasts were based on the growth of investment in printing capacity for these years estimated by the bank. The proposed expansion by BRAC Printers will add an estimated effective offset printing capacity of 12 billion sq. inches in terms of single colour impressions per year.

On the above basis the existing capacity of BRAC Printers comprises 0.7% of the national effective existing capacity for 1978-79 and will compose 0.5% of the same in 1981-82. With the proposed expansion the capacity will be 1.2% of the national demand gap in 1981-1982.

5. COST OF THE PROJECT:

The additional requirements of fixed assets and working capital are stated below:-

Additional Project Costs	(Tk. in '000's)
Machinery (C & F) Chittagong	
1 bicolour offset rebuilt machine	1890
1 cutting machine	405
1 horizontal camera	225
1 densitometer	37
1 enlarger	405
	2962
Contingency 10%	296
	3258
Import duty 20%	652
Clearing, forwarding, internal freight etc. 5%	163
Octroi 1%	33
Installation	50
	4156
Civil Construction	100
Other assets	100
	4356
Additional working capital requirements	1200

The working capital required additinally has been assessed in proportion to additional sales in the 1st operating year after expansion.

The total project cost after proposed expansion in 1981 including cost of existing assets is given below:-

Total Project Costs After Expansion:

	Existing	Additional	Total
Total Fixed Assets:			
Land & Building	1285	100	1385
Machinery & Equipment	1201	4156	5357
Vehicles, furniture and Fixtures	600	100	700
	3086	4356	7442
Net Working Capital	1276	1200	2476
	4362	5556	9918

6. FORECAST OF EARNINGS:

The existing printing press facilities are expected to generate a sales of about Tk.6.5 million in 1980 based on the operating statement available for the period Jan. - June, 1980. With the present sales force and production efficiency an additional increase of about 30% in sales value can be safely assumed for 1981 with the existing facilities. The planned expansion will in terms of machine capacity be able to roughly double the offset impression output. However with the increase in the proportion of quality work volume and an expected delay in take-off in sales volume and sales force efficiency, the net proposed expansion may not be able to add more than an additional 40% ofthe present sales volume in the first operating year after expansion. The total turn-over for that year may therefore be assumed at 170% of 1980's corresponding figure. Doubling of the sales figure may be expected in the second projected year after expansion which means an increase of nearly 20% over the first projected year. For the third year it is expected that a higher degree of sales efforts, an improved operating efficiency and inflationary effects will increase the sales billing by about another 20% over the second year.

Cost's of production can be assumed for the present analysis to increase in the same proportions. Selling and general administrative expenses are expected to increase by about 60% in the first year after expansion over the present year with 15% per annum subsequent raise.

Depreciation for additional machinery can be assumed to vary on the basis of one shift work in the 1st year, 2 shifts in the 2nd year and 2 shifts plus some overtime in the 3rd year after expansion. Presently 2 shits/day are maintained. Thus, the annual allocation of depreciation for 1st, 2nd and 3rd year of operation can be taken at 15%, 20% and 25% respectively for the new offset machine and at 10%, 15% and 20% respectively for other new equipment. For other new assets depreciation can be allocated at a straight 10% per annum.

A summary of forecasted earnings on the above basis is tabulated below:-

		After Expansion		
	Const.yr.	Yr.-1	Yr.-2	Yr.-3
		(Tk. in '000's)		
Sales	6,300	10,710	12,600	15,120
Cost of Production	4.092	6,956	8,184	9,820
Gross Profit before Dep.	2,208	3,754	4,416	5,300
Depreciation	445	1,015	1,222	1,429
Gross Profit	1,763	2,739	3,194	3,871
Gen. Admn. and Selling Expenses	419	670	771	887
Net Profit B.T.	1,344	2,069	2,423	2,984

The profitability of the Project can be assessed from the ratio of annual profits to the total capital employed over the year, the calculations of which are as below:-

		After Expansion		
	Const.yr.	Yr.-1	Yr.-2	Yr.-3
		(Taka in '000's)		
Total Fixed Cost of Project	3,086	7,442	7,442	7,442
Less: Average Depreciation	-	730	1,119	1,325
Net Fixed Cost of Project	3,086	6,712	6,323	6,117
Add: Working Capital	1,276	2,476	2,912	3,494
Total Capital Employed	4,362	9,188	9,235	9,611

Return on Total

APPENDIX
SEMI-ANNUAL OPERATING STATEMENTS

	1977	1978		1979		1980
	Sept.-Dec.	Jan.-Jun.	Jul.-Dec.	Jan.-Jun.	Jul.-Dec.	Jan.-Jun.
Sales:	2,25,176	9,45,816	18,56,586	23,84,193	21,79,449	31,49,914
Cost of Sales:						
Cost of Production	3,10,960	6,85,795	13,86,431	16,27,270	15,92,427	20,46,055
Depreciation	-	1,71,129	2,07,559	2,05,078	1,96,800	2,22,500
Gen. Adm. & Selling Expenses	79,948	1,07,683	1,66,766	1,34,325	1,82,781	2,09,643
	3,90,908	9,64,607	17,60,756	19,66,673	19,72,008	24,78,198
Net Profit/(Loss) Before Tax	(1,65,732)	(18,791)	95,830	4,17,520	2,07,441	6,71,716