Public Sector Carpet Mills : A Case Study Of An Ailing Industry

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The case study is limited to two carpet factories established under the public sector in 1980, namely, Baghdad-Dhaka Carpet Factory (BDCF) and Furat-Karnaphuli Carpet Factory (FKCF). It describes the background leading to the setring-up of the mills and their operational experience in the field of production, marketing and finance. Problems faced in each of these fields have been highlighted while noting BJMC's attempts at resolving these. The paper ends with a survey of the current management dilemma as to how to ensure profitability of the two carpet factories. **A** few steps have been suggested which may be considered for evolving a rescue package for the sick industry.

SCOPE AND METHOD

Due to different constraints, the paper has not dealt with the Amin Carpets under BJMC or the private carpet factories in Bangladesh.

Figures regarding production, employment, sale and profit were obtained from the factories while those on cost have been obtained from Directorate of Finance, BJMC. Personal interviews with factory managers, accountants and marketing personnel were also conducted. Consultations with members of the BJMC Board provided useful insight. Available documents like Consultants' Reports, PPs etc. have been estensively used as source material.

The case study is presented in **3** sections : Section II provides the background to the setting up of the two mills and describes the assumptions in the PPs underscoring their viability.

Section III describes the main features of the operational experience of the mills in the field of production, marketing and finance. The outstanding problems in each field is also identified while the achievements in

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resolving initial problems have been briefly noted. Section IV considers the various options to ensure profitability of the mills.

II. BACKGROUND

In this section it is proposed to discuss the background information relating to the setting up of new jute carpet factories and to identify the assumptions made of the viability of the two projects in the public sector.

Bangladesh inherited the experience of manufacturing jute carpets via the Amin Jute Mills which, among other jute products, had a carpet component. This unit was set up in 1959, with 8 looms and its total production was marketed within Pakistan. There was negligible or no export. As a result when Bangladesh came into being, Amin carpets faced problems of marketing—the local market was not big enough, while the product had no established export market. However, the position improved substantially with years. In 1977, the Government decided to establish four new jute carpet mills. It is relevant to note here that BJMC did not initiate any proposal for such investment. The draft PP prepared in 1978 for one of the new mills under BJMC refers to a direction (dated 16.8.77) from authority that "..priority be given to the setting up of four jute carpet mills.." It was decided to set up two of these new jute carpet mills in the public sector under BJMC. No feasibility report was prepared and no systematic market study made before setting up the mills. It is interesting to note that as per available record in 1976-77 Amin Jute Mills' carpet division had an unsold stock of over 16000 sq. mtr. of finished carpets and over 30,000 sq. mtr. of unfinished carpets. In 1977-78, the unsold stock was over 17000 sq. mtr. and over 20,000 sq. mtr. respectively. The unsold stock was between 17% to 18% of finished production for those years. The investment decision regarding the mills was taken without considering the lessons of experience. Iraqi credit on soft term was made available for meeting the foreign exchange requirements of the two mills under BJMC. The local currency component was supplied by G.O.B. Work on the mills was started in right earnest in 1978 and completed in 1980 when the mills—Baghdad-Dhaka Carpet Factory (BDCF) and Furat-Karnaphuli Carpet Factory (FKCF) went into trial production. Each of these mills were set up with 10 looms—brand new machines bought from a European company. So we have a situation where BJMC, when it was finding it difficult to sell approx. 1,00,000 sq. mtr. of (Amin) carpets annually, was saddled with the task of doing so for approx. 1 m. sq. mtrs. with no background preparation having been made for the purpose.

To add to the problems further, the Government allowed sanction for setting up four (or five) more jute carpet factories in the private sector. Three of these mills—namely M/s. Bengal Carpet Ltd., with 12 looms, M/s. Ismail Carpet Industries Ltd. with 10 looms and M/s. Saleh Carpet Mills Ltd. with 10 looms went into production in 1981. No market study was done before sanctioning these projects. DFIs and commercial banks which funded these projects arrived at investment decision on these projects without any systematic marketing study. So, in 1981-82 Bangladesh had vastly expanded manufacturing capacity (i.e. installed capacity) in jute carpets—1.5 m. sq. mtr. in the private sector and 1.00 m. sq. mtr. approx. in the public sector. Another carpet factory in the private sector M/s. Arjan Carpet Factory with 10 looms, imported the necessary machineryin 1981-82 and installed those reportedly in 1983. It has not yet come into production.

The private sector was a newcomer in the carpet industry. So it had neither experience in production nor in marketing. BJMC also had little marketing experience. It had no organisation or personnel with relevant experience or with even a general idea of carpet export market—the size of export demand in different countries, the taste and style in design and colour, marketing channels, market promotion techniques or export price. However, jute carpet was relatively an unknown product in the fiercely competitive carpet markets of the world. The idea that quality carpets of competitive value can be made of jute was yet to be introduced—far less, established. On the production side, the Amin experience was also not sufficient, since the new carpet mills adopted different product specifications and different methods of production relating to dyeing, weaving and finishing.

With this brief background to the investment decision leading to setting up of the new carpet factories in Bangladesh, it would be relevant to note some of the stated assumptions implying operational and economic viability of the two carpet factories under BJMC—BDCF and FKCF.

We would highlight the assumptions relating to production, marketing and financial arrangements as stated in the two Project Proformas (PP).

Production. It was assumed that 10 looms in each factory will operate 2 shifts a day for 300 days a year. Working at 40% efficiency, each factory would produce annually 5,65,000 sq. yds (i.e. equivalent to 4,72,408 sq.mtrs) of $\frac{1}{2}$ pile-high carpets. Emphasis was laid on the need for modern machinery for producing carpets—"What we require is most modern tools and plant/ machinery and skill." (PP for FKCF/BDCF, p 3). Cost advantage and market demand were taken for granted. Ensuring quality production or training of manpower at different levels of production and management found no consideration with the authors of the project.

Marketing. The total production of each mill was to be exported. The export price was expected to be $ 7.90 per sq. yd. (equivalent to $ 9.45 per sq mtr FOB in one P.P. prepared in 1978 for BDCF) and $8.25 per sq. yd (equivalent to $. 9.87 per sq. mtr) FOB in another PP. (revised PP. for FKCF prepared in 1980). Amin fetched £ 2.90 per sq. yd (in 1978-80) equivalent to £ 3.47 per sq. mtr. The revised PP. for FKCF ('80) stated that the sales price had been arrived at with 20% mark up on total operating cost to cover commission and profit (PP/FKCF, p.4), whereas PP/BDCF/78 (p,4) mentions 20% mark up on cost of production. It was presumed that the demand for jute carpet would be around 6.246 m. sq. yd. annually by 1980 and the BJMC production capacity would be able to meet only 20% of this demand, leaving a gap of 4.996 m. sq. ydannually. The only reason shown for this demand "estimate" mas the price advantage of jute carpets over those of woolen and synthetic and "other technical superiority" (PP. FKCF, p.4). It was felt "likely" that in the face of inflation in the western economies "..the small and middle income group and young married couples starting life would much prefer jute carpet.."(PP, FKCF & BDCF, p.4). Jute carpet was thus expected to erode the market share of other carpets and displace those to establish itself. There is no niention of any need for market promotion for a new product and no allocation of fund for the purpose. The crux of the issue appeared to be production of jute carpet in most modern machineries while the international market was only waiting to buy those up.

Finance. The following investment costs were estimated in the PPs.

		In lac Taka
	PP ('78)	Revised PP. ('80)
FKCF	1313.71	1461.03
BDCF	1333.73	1421.34

The foreign exchange component in the revised PP was approx. Taka 895.65 lacs for FKCF and Taka 837.00 lacs for BDCF. This foreign exchange need was to be met out of Iraqi credit, while the local currency was expected from GOB as interest-free loan or equity. Debt-equity ratio was to be 49:51. The Iraqi loan carried 2% interest and ½% service charge per annum and was repayable in 10 years, with 3 years grace. The principal amount was repayable in twenty equal instalments while the interest was to be repaid in ten equal instalments. Payment was to begin from September 1983. Benefit-cost ratio and internal rate of return were suitably worked out in line with the various assumptions on which the PPs were built. It was proposed to recover the cost of the two projects by selling their products. The cash flow statements in the two PPs showed comfortable cumulative cash surplus after meeting the requirements of loan payments, income tax and dividend.

III. OPERATING EXPERIENCE AND DEVELOPMENTS

In this Section, we will deal with the operating experience—mainly the problems faced and the responses of the two public enterprises during the last five years (80-85). We will also compare their performance with the assumptions mentioned in the preceding subsection. Our discussion will be restricted to illustrative reference to the following areas—production, marketing and financial operation of the two mills.

PRODUCTION

We propose to highlight only the following aspects of production of carpets : the social organisation of production and the technical process of production including quality control and product designing.

Social Organisation of Produstion. FKCF went into production in July 1980 and BDCF in September of the same year. At full capacity utilisation, it was predicted that BDCF will employ 610 people and FKCF 726. The following Table shows the number of looms in operation in each mill over the years and the number of employees (i.e. officers, staff and permanent workers).

TABLE 3.1

	1980-81		81-82		82-83		83-84		84-85	
	BDCF	FKCF	BDCF	FKCF	BDCF	FKCF	BDCF	FKCF	BDCF	FKCF
1. Operated Looms	8	6.5	6	4.68	4	3.80	2	2.13	2	2.46
2. No. of Employees	674	700	787	746	665	655	562	581	527	556

It is also apparent that at every point of time the mills had been paying for more people than planned or called for by the number of looms under operation. It is also apparent that while loom operation was being reduced contiuuously, it was not accompanied by either proportionate or reasonable reduction in manpower. This possibly reflects the socio-political environment in which public industrial enterprises have operated in our country. This was bound to adversely affect cost and profitability.

Some of the officers and technical hands from Amin Jute Mills were placed with the two new mills to help overcome the initial obstacles. However no systematic training programme was undertaken for technical or management cadre. A training centre was proposed to be built in BDCF (PP, BDCF, p. 14) but never came into being. However, thanks to a UNDP Project for promotion of jute carpet, two designers received systematic training abroad and their ability and confidence improved appreciably, as noted by follow-up reports from Design Consultants under that Project (Abrahams, '82-83). Two Managers were also sent for short trips abroad under the same Project. The company which supplied machineries did not provide any training. It sent one representative who supervised the erection of the two factories. Specialised training of quality control people and Production Managers were ignored even though carpet as a product has a demanding export market primarily sensitive to quality.

It appears that the assumptions made regarding demand for jute carpets in the export markets and the role of price in automatically establishing such demand help to explain the inadequate appreciation of training needs for ensuring production of quality carpets. Moreover, once the two new carpet factories were erected, these were left to themselves and did not receive the attention normally provided by supervisory production personnel at BJMC's regional offices at Chittagong or in Dhaka Hq. We will discuss about the reasons later.

These inadequacies of project conception and implementation influenced production efficiency and quality.

TECHNICAL PROCESS OF PRODUCTION

Loom Operation and Output

In the first year of production i.e. 1980-81, BDCF ran 8 looms (out of 10 installed looms), 2 shifts and managed a weaving production of over 69,000 sq. mtr. of carpet, out of which the finished production was only 38,000 sq. mtr. FKCF ran only 6.5 looms, 2 shifts and turned out weaving production of 63,000 sq. mtr., of which only 35,000 sq. mtr. were made into finished carpets. A number of things may be noticed ;

Though looms operation was about 72% of capacity, production efficiency was only a fraction of that assumed as achievable—about 14% instead of 40%. There was a wide gap between weaving production and finished production of carpets indicating, among other things, gross inadequacies at the finishing level. The concerned factory Manager of the time had blamed the absence of skilled people for this gap between weaving production and finished production.

The position in subsequent years may be seen below :

TABLE 3.2

	1981-82		1982-83		1983-84		1984-85 (July-March)	
	BDCF	FKCF	BDCF	FKCF	BDCF	FKCF	BDCF	FKCF
No. of looms operated	6	4.68	4	3.80	2	2.13	2	2.46
Weaving Production (in sq. mtr.)	1,18,547	99,430	94,351	78,234	46,492	36,094	33,231	29,930
Finished Production (in sq. mtr.)	1,27,190	99,757	1,13,667	93,490	47,754	38,221	31.27	26,122

It appears from above that both the factories could adequately resolve the problem of finishing carpets—at least in quantity after the first year. However, there is considerable difference in efficiency between the twofactories—BDCF giving more production loom than FKCF. However, difference in efficiency per loom between years for the same mill can also be noticed. More significant is the fact that only 20% of the installed capacity was utilised in 83-84 with finished production being less than 7% of the target. The position appears to have worsened in the current year.

Quality of Output. Bangladesh entered into an arrangement with UNDP for international jute carpet market study in May, '79 (Project No. BGD /79/019). Two market studies were conducted under that project—one between January and March 1981 in the UK, USA and three European countries, and the other, between third week of October and the first week of December 1983 in Singapore, New Zealand, Australia and Japan. The first market study which carried sample production from the two BJMC mills led the Marketing Adviser to conclude that "..from all the evidence Bangladesh has not got adequate carpet products at present. The mills are, of course, producing rolls of carpet, rugs and carpet squares and, indeed, small quantities have been sold in free market economies. However, it must be stated quite clearly, there is no possibility of developing stable markets in free economies unless and until the carpets are produced more efficiently, costed more accurately, finished to a higher standard, designed and coloured to the requirements of the market place" (Denvir,. . June, 1981, p.2). It is a measure of inexperience and callousness towards quality on BJMC's side that the special samples provided by it for the market survey contained serious faults. The pile-heights of the carpets varied widely beyond tolerable limits of labelled pile-height. The back finish on the carpet varied between unsatisfactory to poor. None of the sample colourways were considered satisfactory. There was apparent streakiness of yarn on the plain sample and one sample had so much latex "wicking" through the pile giving it a hard lumpy feel that a new sample had to be requested. However, the carpets evoked considerable surprise for their high standard of 'feel' and 'handle'. Some of the faults were the result of inherent weakness of the technique of production adopted in Bangladesh. Hence 'streakiness' could be traced to the inherent limitation of the 'yarn dyeing' system adopted in the Golden Tiger Carpet as coinpared to 'fibre dyeing' (used in Amin carpets). Moreover, jute yarn appears to ". .show a tendency to lose twist fairly easily" (Denvir, p.4 1981). Twist is an important factor in appearance retention andactual wear. But the other faults mentioned followed from inefficiency and lack of skill. The faults in finishing found during the first market survey like poor fringing, serging and tapeing were all amenable to improvement. In fact, once the problems were identified, these were considerably reduced so that nowadays these are not cause for customer complaint. Pile-height variations have also been brought under reasonable control as has been the 'wicking' through piles. Pile-height has been reduced in an attempt at controlling excessive fibre shedding. The problem thereby appears to have been partly reduced. When the second market survey was undertaken with Golden Tiger Carpets in late 83, the reaction to quality was found to be "quite remarkably good" (Denvir, 1984 p.2). Inspite of considerable improvements, some of the problems related to inherent limitations of jute as a fibre and of the specific type of production technology in use need to be seriously researched into. BJMC would stand to gain by appointing *a* carpet production expert to look at the whole production process with special reference to the remaining production problems.

Quality Control. Carpet is a fashion product and its users are sensitive even to minor flaws. So "factors other than cost and quality are crucial."

It is significant that Mr. Denvir found quality control function in the Bangladesh carpet mills as "very inadequate" (Denvir 1981 p. 8). He suggested that quality standard be set and control system be established to check out second quality carpets. Machineries for basic testing facilities were lying unused till very recently. These are yet to be fully operated. Properly trained inspectors and well-lit inspection facilities, as suggested by Mr. Denvir in 1981 are yet to be put in place.

Design. The initial designs were all borrowed from Belgium, but the colourways were not found appropriate to Western taste in the 1981 survey. Moreover, it was considered essential that Bangladesh carpets establish their own identity which could only be achieved with adequate design output (Denvir, 1981 p. 37). A Design Studio was set up in BDCF and two designers received carpet training abroad and benefitted from contacts with the Design Consultants of the UNDP Project who paid four visits to Bangladesh between 1981 and 1983. In late November 1982, they made the following comments: "It is gratifying to see that the studio can originate design and colourways of such good standard. ...The personnel of the studio appears to have developed in confidence and competence, the quality of their work being of good order." (Abrahams, Nov. '82. The comments are contained in their notes on visit to FKCF and the Design Studio at BDCF. The pages of the draft report are not numbered). A design policy was finalised in late 83 in response to the market reactions received through the 83 Market Study and through participation in two major international carpet fairs. A clear policy was formulated in favour of adopting six designs in place of dozens of designs under production. These were to be produced in 4 colourways and in 4 sizes (except one design which was to be produced in only 3 sizes). It was also proposed to add 2 new designs (may be as a replacement of 2 less popular ones) annually. Designers need to reflect the change of taste in colour and design-trend in the market but also have to take into account the reality of production process and its requirements of efficiency and cost. However, keeping abreast of market trends require presence in international fairs and visit to export markets, both of which have cost implications.

Marketing. We have already noted the quality problems of the carpets. BJMC tried to market in the major carpet markets such as UK., W. Germany and the USA. Moreover, there was such a multiplicity of designs being offered that it failed to build a distinct image as compared to those of established manufacturers. This was further compounded by the absence of a consistent marketing policy.

It appears that these difficulties can be traced to at least three limitations affecting BJMC's carpet marketing :

(a) As would be natural with a new product, BJMC lacked detailed knowledge of world carpet markets—their needs, their tastes and the specific way in which BJMC products could meet those. BJMC's counterpart to Mr. Denvir (the Marketing Adviser under the UNDP Project) got exposure of different markets during the Market Surveys in 1981 and 1983. As a result, BJMC's Carpet Marketing Section came to recognise the difference between (i) rugs, rolls and squares, (ii) tufted and woven carpets, (iii) machine made and hand-made carpets, (iv) woolen, synthetic carpets and those made from natural fibres—like jute, sisal and cocos (the last two do not compete with wool and synthetics and have developed their image as fashion items). Each of these categories have different size of market demand, different types of customers and specialised channels of marketing with which to reach them. On top of this, the first Market Survey (1981) came to the shocking conclusion that "....here is effectively no market for jute carpets" as such ; that "in the past jute did not perform satisfactorily in comparison to other carpet fibres with which it was directly competing"; and that "..jute carpets have an extremely bad name in particularly Sweden, the FRG and France .."(Denvir, 1981 p. 35).

(b) BJMC has considerable experience and expertise in selling jute goods but lacks skill snd experience in marketing consumer durables. Moreover, within the Marketing Division of BJMC which is overwhelmingly occupied in selling jute products like sacks and CBC etc., there remains an attitudinal limitation to marketing a fashion product—where customer preference for design, colour shades etc. continuously change, where quality rather than price is of primary consideration and where reasonable price stability over a period of time needs to be ensured.

(c) It may also be noted that BJMC (and Bangladesh) attempted to introduce the new carpets in the market economies at a time when those were going through one of the longest periods of recession of recent years. Slow recovery started from 1983 and is still continuing. To add further to the extremely difficult sales situation, there was substantial world-wide over-capacity of carpet production as noted by the consultants in 1981 and 1983. (Denvir, 1981 p. 36 and Abrahams, 83, para 7b).

Developments in the local market are also relevant here. Faced with similar or perhaps worse situation in export market, the private carpet manufacturers offloaded their goods aggressively in the local market. They offered liberal term credit to the local carpet dealers and padded them with attractive sales commission.

BJMC failed to match these measures and lost a portion of the remunerative local market to the private competitors.

However, in response to the market situation stated above and in line with its market experience, BJMC has been able to establish a distinct design and product policy. Plethora of designs have been replaced by standardisation of designs to six only, in four sizes and four colourways as mentioned earlier. Moreover, to establish a distinct image, all carpets of the new factories are now being sold in the market under one brand name—the Golden Tiger Carpets. Sole distributors have been appointed for Australia and Canada while a number of steady distributors have been developed for the USA, New Zealand and FRG markets. A lot still needs to be done to establish market presence in the main carpet markets. With quality improvements and the experience of the last few years, the time may be right for entering into determined sales promotion in target markets.

The following Table provides the sales performance of the Golden Tiger Carpets :

TABLE 3.3

Year	Finished Production Sq. Metres	Sales Foreign Sq. Metres	Local Sq. Metres	Total Sq. Metres
1980-81	72,710	13,261	37,488	50,749
1981-82	2,27,947	65,808	38,035	1,03,843
1982-83	2,07,157	2,16,098	50,040	2,66,138
1983-84	85,975	63,008	44,923	1,07,931
1984-85 (upto March '85)	58,049	40,495	28,079	68,574

Highest sales was obtained in '82-83 in export because there was a massive Russian order for over 1,17,000 sq. mtrs and in local sales there was a big order from the National Assembly. Russia has proved itself to be the biggest buyer of Golden Tiger Carpets. In 81-82, she bought 75,000 sq. mtr, and in '83-84, 32,900 sq. mtrs. Currently an order for over 80,000 sq. mtrs is under negotiation for '85-86. The fluctuating level of the Russian demand reflects the uncertainty of the official mechanisms which determine its volume i.e. the composition of barter trade and the debt repayment relation between Bangladesh and Russia. There is, therefore, a need for BJMC to broaden its sales base to obtain an even spread.

Countrywise sales figure show steady sales, apart from USSR, to Australia, Canada, USA and Germany in that order. Recently Nepal has been buying considerable quantity. Table 3.3. indicates more sales than production from '82-83 onwards. This has been done to bring down stock of unsold carpets which accumulated sharply in the first three years (i.e. '80-81 to '82-83). Capital blockage and interest on capital due to heavy stock aggravated the mounting loss of the BJMC carpet mills. As a defensive move, BJMC drastically cut down loom operation and consequent production from '83-84 to reduce loss through reduced sale. Since the sales price covers less than 50% of cost of production, the volume of loss can beminimised by lesser amount of sales. However, with lesser sale the unit cost of production rises, thereby further widening the gap between cost of production and income from sales. We will take up the issue a little later.

As for local sale, it seems to have stabilised around 45 lo 50 thousand sq. mtrs whereas Amin Carpets sell around-40,000 sq. mtrs. in the local market. In view of higher-priceobtained in the local market, BJMC now needs to review its local sales methods including those which can attract the local dealers. However, the local market is limited in size and Bangladeshi carpet manufacturers—in the public and private sector will have to expand export and establish steady export demand, if they hope to survive as an industry. The crucial problem now is not so much of demand but of costing and finance.

Finance. Financial analysis of the cost of production of Golden Tiger Carpets provides a critical dimension to the main problem of the carpet industry—its profitability. Therefore, in this subsection we propose to discuss the following issues—the cost of implementation of the project, an assessment of the profitability of the two concerned factories over time and an analysis of various components of cost so that it is possible to evaluate their relative roles.

Cost of Implementation. The following Table summarises the situation :

TABLE 3.4

(in lac Taka)

	Original Estimate			Actual Implementation		
	F.E.	Local C.	Total	F.E.	Local C.	Total
BDCF	837.00	496.73	1333.73	895.27	519.92	1415.19
FKCF	788.48	525.23	1313.71	873.05	648.49	1521.54
			2647.44			2936.73

The Table shows that the cost of actual implementation was approx. Tk. 3 crore more (11% higher) than the estimate. This cost escalation has obvious implication for product costing. We will discuss about the financing pattern of the two projects and their implication for loan liability a little later. Before that let us take a look at the profitability position of the two mills over the years.

Profitability Position. The picture has been very depressing, as the Table below indicates :

TABLE 3.5

(in lac Taka)

Year	BDCF	FKCF	Total
1980-81	44.41	68.68	113.09
1981-82	177.96	148.05	326.01
1982-83	223.55	201.85	425.40
1983-84	204.76	213.85	418.61
* 1984-85 (April)	153.57	118.82	272.39
	804.25	751.25	1555.50

* **Preliminary Estimate**

BJMC is now loaded with a loss liability of over Tk. 15 crore on an investment of around Tk. 30 crore, after operation of the two industries for five years. Such a situation contrasts sharply with the picture drawn in the concerned PPs of cumulative cash surplus for the period. It may be recalled that BJMC slashed down loom operation and production to reduce sales and losses since 83-84 and yet accumulated a loss of about Tk. 7 crore during the last two years.

This makes one wonder about the pattern of cost and its constituents.

Cost Analysis. Table 3.6 shows the average cost break-up, sales rate and loss per sq. mtr. of export from the mills.

TABLE 3.6

(per sq. mtr.)

	1983-84 (Taka)	%	1982-83 (Taka)	%
Material cost	97.99	19%	100.84	30%
Depreciation	141.09	27%	42.52	13%
Interest	172.43	34%	90.40	27%
Other cost	102.59	20%	102.28	30%
Total cost	514.10	100%	336.04	100%
Export Sales price	165.86	32%	159.27	47%
Loss per Sq. Metre	(318.28)	68%	(171.65)	53%

Payment of Iraqi loan (principal plus interest) started from 1983-84 after the grace period of 3 years. This contributed to the sharp rise in the proportion of interest to total cost. However, the depreciation burden also shows high variation between the two years. What is remarkable is the relatively limited role of material cost in the total cost structure. It may also be noticed from the figures of 1983-84 that more than 60% of the unit cost of carpets was completely outside the scope of intervention of the factory managers (accounted for by interest and depreciation).

Table 3.7 gives the cost breakdown of a sq. mtr. of carpet and loss on export and local sale for the current year for all the three carpet mills under BJMC. This is a provisional estimated average.

TABLE 3.7

	BDCF		FKCF AMIN			
Raw Jute	53.00		52.92			52.05
Other Direct Materials	68.98		66.91			69.81
Material cost		121.98		119.83		121.86
Depreciation		84.78		120.39		2.41
Interest.		265.83		184.43		30.68
Other cost		47.38		126.41		96.87
Total cost :		519.97		551.06		251.82
Esport Sales Price	194.00		194.00		88.67	
XPL on Export	29.10	223.10	29.10	223.10	27.40	210.07
Local Sales Price		282.00		282.00		149.00
Loss per Sq. Mtr. On Export Sale		296.87		327.96		41.75
Loss per Sq. Mtr. On Local Sale		237.97		269.06		102.82

The role of depreciation and interest is as prominent in the current year as in '83-84 for BDCF and FKCF. Amin being an old mill, the position is vastly different there as regards the relative role of cost of materials, interest and depreciation. However, a comparison of export price earnings for the last three years show a steady rise in value (in Taka) per sq. mtrs. Yet the local price remains more remunerative for BDCF and FKCF—about **26%** higher than export earning (i.e. export price + XPL). The most important point to note is that average income from sales does not even cover 50% of the cost of production. Given the limitation of recovering this income gap from sales price, the only option to closing down the mills lies in exploring possibility of restructuring cost as at present. As can be seen from Table *3.6* and Table **3.7,** the **two** principal components of cost are **interest** and depreciation on one side and materials cost, on the other, the former being predominantly critical. So no attempt at restructuring cost can be meaningful without intervention in the predominant component.

Financing Pattern and the Loan Burden. The financing pattern of the two mills set the nature and amount of their loan burden. As per cost of implementation, for example, FKCF required Tk. 873.05 lae in foreign exchange and Tk. 648.49 lac in local currency. The Government, however, converted

Tk. 638.59 lac into equity, leaving Tk. 9.90 lac as loan (bearing 9% interest p.a.). The project financing cost for FKCF was therefore as follows :

F.E. Loan (Iraqi credit)	Tk. 873.05 lac
Local C. Loan	9.90 lac
Local C. Equity	638.59 lac
	1521.54 lac

Recently, however, the Ministry of Finance has directed BJMC to enter into relending agreement for the amount of Iraqi credit. This has serious implications. Whereas under the terms of the Iraqi Credit Agreement, the involvement of FKCF (for principal and interest) is Tk. 1425.55 lacs, the involvement as per the proposed relending agreement will be Tk. 3298.53 lacs. In case of BDCF, the involvement will rise from Tk. 1465.96 lacs to Tk. 3392.02 lacs. BJMC obviously has shown little interest in the relending proposal. Ministry of Finance has, however, made the long-outstanding problem of converting local currency funding of BDCF into equity contingent upon signing the relending agreement.

We had noted at Table 3.5 that BJMC has already incurred a liability of over Tk. 15.50 crore from losses of the two carpet factories. Added to it is the cost of fund (as interest) on this amount as well as on account of operating funds. Unless some reasonable relief can be given, the combined burden of loan and loss is bound to lead to liquidation of the two carpet factories.

IV. WAY OUT

The grave problem of loan burden, high cost and loss in carpet mills is reportedly common to the private sector mills as well. The Planning Commission, in its anxiety to devise ways for strengthening export of non-traditional manufactures, included the study of the problems and prospects of jute carpet industry in the TIP project. Since the field study made by the Project Consultants more than six months back, BJMC has not heard from them. In the meanwhile, debates are raging within BJMC and also within the Ministry of Jute about what is to be done under the grim circumstances.

Production Options and Viability. BJMC is carrying out a costing exercise with four options of production to find out their comparative financial effects. The options relate to running the factories in each of the four ways : (i) for producing only export jute yarn and no carpet ; (ii) only carpets and no export yarn ; (iii) 5 looms, 3 spinning frames, 2 shifts of carpets combined with producing yarn .in 5 spinning frames in 3 shifts (iv) 5 looms, 2 spinning frames, 1 shift of carpet combined with yarn produced on 6 spinning frames in 3 shifts. The preliminary results of this exercise show that assuming 25% weaving efficiency (for carpets) and 85% spinning efficiency (for yarn), all the options result in massive loss, the lowest being the second option (i.e. production of 100% carpets). This option would result in a yearly loss of nearly Tk. 1 crore. But this option has assumed that the total quantity of carpets produced would find ready market and that 44% of the carpets would be sold in the local market. In the export market, the highest that Bangladesh ever exported was less than 2.6 lac sq. mtrs. This option would involve a steady export of 2.9 lac sq. mtrs. Moreover, the local carpet market would be most probably much smaller than this option assumes and the market share of Golden Tiger Carpets would yield a still smaller market. The most important point which this exercise suggests is that under assumptions of 25% efficiency and the present load of interest depreciation, the mills can only add to further loss. Such an option is obviously not acceptable.

Other responses. The debate in BJMC has brought to light two types of reactions to the problem. One tends to suggest that the carpet weaving sections be closed down, spinning be continued to produce export yarn, carpet looms and auxiliary machines be sold out except a couple for experimental production with blended fibre and that F.E. and local currency loan be converted to government equity. This line of argument has the obvious advantage of resolving the problem by eliminating carpet production itself. With no carpets to produce and to sell, there will be no further loss. It may obviously have implementational difficulties. But the burden of loan, operating losses and interest on credit will seriously distort the cost of export yarn proposed to be produced in the mill. The relationship between the resultant cost of production of yarn and expected export price need to be analysed for examining the merit of the suggestion. It may be noted here, however, that all the Bangladeshi carpet factories produced export yarn in their mills to cash in on the demand and price upsurge of jute yarn this year. The other suggestion of producing experimental carpets with blended yarn can be examined only if there is a realistic idea about actual market demand for such a product and export price vis-a-vis cost of production and marketing. It could be a better idea, instead, to concentrate energy on improving the quality of jute carpet and producing at higher efficiency. Given the experience of past five years, such an effort may be more fruitful and effective.

The second reaction which has surfaced in BJMC suggest the following : (i) that the government convert the foreign and local currency loans and the liability of the Nationalised Banks against cash credit account into equity, (ii) that the factories be allowed not to charge depreciation for at least the next 5 years, and (iii) that factories are run at full capacity at achievable efficiency and that the cost of production is realised through sales.

It may be noted that both the reactions have suggested similar methods of lessening the burden of interest. However, the second one refers also to the loan from the Banks and rescheduling of cost of depreciation. The second suggestion, however, holds the opposite view about continuing production of jute carpets. Moreover, it seems to leave room for intervention to determine the level of achievable production efficiency and to manipulate both cost and sales price. The merit of this suggestion is critically dependent on the progress that can be made in raising the level of production efficiency from the present low level, reducing cost of production and getting better sales price.

Faced with these two opposing views, BJMC has very recently decided to set up a committee to examine the varions issues involved and on the basis of its findings to submit proposals for information and action by the Government. The committe consists of a representative each from Directorates of Marketicg and Production to be co-ordinated by a representative of the Directorate of Finance.

Elements **of** a Rescue **Package.** Our review of the operation of the two carpet factories makes it evident that the crucial problem facing jute carpet industry is how to make it viable i.e. profitable. This can be ensured only if the carpet factories can reduce cost of production drastically and also obtain sales price high enough to cover cost.

In a situation of adequate supply of carpets in the international market-place and intense competition, jute carpets could be able to fetch higher price on the basis of quality and supply consistency. However, under the most optimistic conditions, the present export price cannot be raised enough to cover cost (the difference is between 60% to 50%). Therefore, if viability is aimed at, cost of production must be brought down to a level where the current sales price appears adequate. However, in view of the urgency of the situation a firm time-frame should be fixed within which this target would be achieved. Failure to reach the target within time could be interpreted to indicate the non-viability of the industry under existing circumstances.

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Determined attempts to bring down price has to be made at two levels simultaneously: one, internal to the factory, where improvements in production efficiency and quality are to be ensured ; second, external circumstances given to the factory manager which influence cost, like the burden of loan repayment and depreciation. It may be relevant to identify some of the areas under both these levels which may be considered for intervention. Following is a list, by no way exhaustive.

1. Areas of Internal Intervention

Production.

(a) Production efficiency must increase from the very poor current levels. Unit cost falls when production increases. All-out attempts should be made immediately to establish what could be the highest achievable level of efficiency under present technical (not socio-political) conditions. Time-bound steps may be taken for raising worker's skill and efficiency. Profitability of jute carpet manufacturing may not be ensured in the long run if 40% efficiency cannot be reached (Mr. Denvir considered this target too low and suggested that it should be doubled). If this level cannot be reached within next 2 years, then BJMC may take steps to liquidate the two Golden Tiger factories.

(b) Quality improvements and product consistency has to be ensured. Strict quality control measures need to be instituted—trained Q.C. Inspectors should be in place and enforce quality consistency. This is an achievable task, with little additional cost.

(c) Continuous research would be needed in order to make quality improvements, reduce wastage, increase production and economy in the production process. Presently, no systematic effort is being made in this direction.

(d) Quality of finishing needs to be improved. Attempts may also be made to replace the present machine-fringing by hand-fringing. This change, if properly executed, may help improve looks of carpets and fetch better prices.

(e) All avenues of reducing overhead and operating cost should be explored. Examples : The present over-staffing has to be rationalised in relation to loom operation ; Gas may be used as replacement of electric energy wherever possible.

(f) Greater control may be exercised in buying main material inputs—raw jute, dyes and cotton yarn at lesser price.

(g) Performance standards must be immediately set up for all processes of production. Unfortunately this is yet to be introduced. A system of monitoring performance in relation to these standards will also have to be enforced. In view of BJMC's wide experience in managing the production floor, this would be relatively easy to introduce.

Marketing.

(a) A product policy has to be developed for the factories which in addition to producing carpets will offer a range of diversified products also like jute yarn, tape, mats, felts etc. Research in the production and marketing side has to be continuously made for finding out a range of profitable products. This will provide greater flexibility of operation and greater opportunity for achieving viability of the factories.

(b) Packing and storing of finished carpets can be improved to ensure their unimpaired quality.

(c) Maintaining regularity of shipment as per contract is a must. Apart from buyer's satisfaction, this reflects on possibility of expansion of demand and efficiency of production.

(d) The absence of marketing skill in carpets needs to be offset initially by borrowing expert in ihe field. A programme of training up local talents for the purpose should be able to meet future needs.

(e) Greater effort may be made for target market promotion in the foreign markets and the local markets. Sale through local dealers may be encouraged ; instead of asking for payment in advance, they may be supplied carpets against bank guarantee of a fixed amount.

(f) Export sales to markets other than USSR has to be explored up in right earnest to provide even spread of export.

Areas of External Intervention.

(a) In view of the burden of repayment of foreign loan, negotiation may be taken up by the GOB with the Government of Iraq on the following alternatives : Converting the loan into an outright grant ; failing it, to obtain extension of repayment period with the same rate of interest and service charge—repayment to be made in jute goods, carpets or other jute products which Iraq buys in cash from BJMC in large quantity every year. Considering the present foreign exchange difficulty of Iraq, she may find the proposal acceptable.

(b) The burden of local currency loan has to be reduced by converting it to grant or equity or any other acceptable formula.

(c) Depreciation may not be reflected in cost of production for five years, as has been suggested.

(d) BJMC's top management must learn to view carpet not like the other jute products, but as a consumer durable where quality is of essence, not just price. It should adjust itself to the idea that it cannot influence market price, product range or quality of world market of carpet as it does in the field of traditional jute products. It has yet to prove itself a reliable supplier.

(e) Mechanism of organisational co-ordination within BJMC among Production, Marketing, ROC and Finance has to be devised for closer supervision of different aspects of the carpet industry. At present, no one really likes to own the industry.

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