

The Sixth Five Year Plan of Bangladesh and
Performance Evaluation of Public Sector Enterprises:
A Case Study of Kushtia Sugar Mills Limited

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Abstract

The present government has given due importance to public sector enterprises. In this paper we have discussed the problems of public sector enterprises especially Kushtia Sugar Mills Limited (KSML). In doing so, in the first part of the paper, we have given an account of aims, objectives, methodology and limitations of the paper. In the second part of the paper, we have made an attempt to analyze the performance indicators of KSML. In this part, we also tried to find out the problems faced by KSML. In the final part of the paper we have tried to make some policy suggestions for improving performance of this vital public enterprise.

Part I

Introduction

After the tragic events of 1975, the public sector was severely undermined by the military rulers and this process continued during the nineties of the last century and at the beginning of this century. The present government has given proper attention to the public sector. It has abandoned PRSP and switched over towards Five Year Planning again. In the Sixth Five Year Plan 2011-2015 and also Vision 2021 the

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prime objective of making Bangladesh a middle income country has been set. In order to achieve this objective, public sector enterprises have a very important role to play, but to our utter surprise we do not see any specific chapter on the public sector in the Sixth Five Year Plan documents. That is why in this paper we have tried to throw some light on the problems and prospects of public sector enterprises. The economic development of any country depends upon the harmonious development of industry and agriculture sectors. The development of these two sectors has a complementary character, the growth of the one being a pre-condition and cause for the other and these complementarities speed up economic development. Now the sugar industry is the second largest agro-based industry of our country and most of the sugar industry is controlled by the government. A lot of manpower has also been employed in these enterprises. Sugarcane growers also employ a huge number of labourers in every plantation season. In addition, a large number of persons are employed in carrying sugarcane from mill zones to factories. Owing to the establishment of sugar industries in rural areas, certain trade and business organizations have developed where a sizeable number of persons are employed. The sugar industry is contributing a large sum of revenue every year to the national exchequer in the form of excise duty, customs duty, sales tax, vat, dividend to the government, surcharges and miscellaneous taxes. The climate and soil of Bangladesh are conducive to sugarcane cultivation. In fact, Bangladesh is being considered as the original home for sugarcane cultivation. The sugar industry can be broadly divided into two sub-sectors, such as the organized sector producing white sugar and the household unorganized sector producing “gur”. In this paper, we consider the organized sector, which has a total production capacity of 2,10,000 metric tons of white sugar per year.

Statement of the Problem

The specific problem that has been investigated in this study is the profit-loss situation of the Kushtia Sugar Mills Limited (KSML) over a period of time. For this purpose, this study seeks answers to the following questions:

- i. Has the organization been running profitably?
- ii. Is the organization in a position to meet its current obligations?

Aims and Objectives of the Study

The main objective of the paper is to analyze and evaluate the profitability performance of KSML along with other factors affecting it. The broad objectives of the study are:

- i. To analyze the managerial capabilities in utilizing the assets of the enterprise;

- ii. To examine the overall profitability performance of KSML;
- iii. To suggest some measures for improvement of the profitability position of KSML.

Justification of the Study

KSML has been subjected to criticism from various quarters for its major shortfalls. The general feeling is that the enterprise is a drain on the country's the economy like other public sector industrial units. The most important weakness of the mill is its mounting losses year after year. The total accumulated loss of the mill increased to Tk. 2600.8 lakh by the year 1995-1996. Long term capital represented by net fixed assets no doubt increased considerably from a mere Tk. 817.4 lakh in 1986-87 to as high as Tk. 2620.8 lakh by the year 1995-96, but net working capital witnessed a marked decline from Tk.1599.2 lakh to a negative figure of Tk. 2622 lakh over the same period. Thus, the financial position of KSML has been in a miserable shape. In fact, the enterprise became technically insolvent long ago. The enterprise would have gone into liquidation if it had not been supported by the government. The time is ripe now to make a serious thinking about removing the operational bottlenecks of KSML. This requires a thorough investigation of the causes behind its negative profitability performance. With this view in mind the present study has been undertaken.

Methodology

Both primary and secondary data have been collected for purpose of the study. Two sets of questionnaire were prepared for two types of respondents for conducting interview. The respondents were interviewed at their own workplace and village, respectively. The primary data have been collected from July to November in 2009 and from January to February in 2010. The secondary data have been collected from various national and international publications. Moreover, reports of research seminars, workshop, conference, five-year plans, and relevant journals, have been studied to elicit relevant research materials. Special emphasis has been given to the publications of Bangladesh Bureau of Statistics, Economic reviews, and Annual Development Programs. The reports of World Bank, Asian Development Bank and some other organizations have been taken into account as the source of certain secondary data.

Limitations of the Study

The researchers have identified the following unavoidable limitations of this study. First, it is a case study of only one unit. Apparently, it seems that the sample

size in relation to the universe is inadequate, but we believe that the study has successfully highlighted the profitability position of KSML. Second, the availability of adequate qualitative and quantitative information is the precondition of a good research work. To get the required data, the researchers have visited KSML several times during the study period, yet, the collected information was not adequate.

Part II

Performance Indicators

Performance indicates overall evaluation of all economic activities of an enterprise. In this paper we have made an attempt to analyze the following performance indicators of KSML.

Cane Crushing Capacity Utilization

Sugar cane has been cultivated in Bangladesh, especially in the southern districts including Kushtia, from thousands of years ago, and then it was utilized mainly for *gur* making and chewing. But after the establishment of KSML the major portion of produced cane has been used at the sugar mills for sugar production. Crushing capacity of KSML was 1000 m.t. total crushing per day (TCD) when it was established. The cane crushing capacity of KSM was expanded in 1968-69 when it rose to 1524 m.t. TCD for the first time. Its crushing capacity was further increased through BMRE (Balancing Modernizing, Reconstruction and Expansion) in 1968-69. If the mill authority fails to ensure regular and adequate supply of quality cane, utilization of full production capacity may not be possible in the one hand, and the recovery rate may be low on the other. . But cane cultivating area in the KSML zone is quite sufficient to produce adequate quantity of quality cane to utilize its full capacity.

It may be mentioned that *gur* making has long been associated with the cultural values of the farmers of this country. Moreover, consumption of *gur* adds valuable nutrients in the diet of poor farmers. It is evident from Table 1 that sugarcane produced in KSML zone is sufficient to utilize its full capacity. Even a mentionable amount of cane becomes surplus after meeting the total requirement of the mill. But its a matter of great regret that the factory has been facing acute shortage of cane since its inception.

In most of the years, the mill could procure less than 50 percent of produced cane. In all the years under review, a large amount of produced cane was diverted to *gur* making. For example, the diversion was 55.2 percent in the 2001-2002 crushing

Table 1 : Utilization of sugarcane in various purposes during 1990-2009

Year	Cane production in KSML zone (in 000 M.T.)	Utilization of cane in various purposes			
		Sugar production (in 000 M. T.)	Gur Production (in 000M.T.)	As seed (in 000M.T.)	As Chewing (in 000M.T.)
1999-00	524.21	243.51 (46.51)	176.30 (33.63)	58.20 (11.10)	46.20 (8.82)
2000-01	516.82	161.71 (31.29)	215.13 (41.63)	51.29 (9.92)	88.69 (12.16)
2001-02	322.70	63.29 (19.61)	177.95 (55.15)	92.30 (13.11)	39.15 (12.13)
2002-03	420.00	171.71 (40.88)	158.08 (37.64)	47.00 (11.19)	45.21 (10.29)
2003-04	480.85	244.36 (50.82)	140.10 (29.13)	44.60 (9.28)	51.79 (10.77)
2004-05	461.61	169.27 (36.73)	199.09 (43.13)	46.30 (10.03)	46.95 (10.17)
2005-06	441.49	166.59 (37.73)	190.97 (43.25)	45.00 (10.19)	38.95 (8.83)
2006-07	445.88	243.07 (52.50)	132.32 (29.68)	45.00 (10.09)	34.49 (7.73)
2007-08	491.02	292.93 (59.65)	105.48 (21.48)	47.77 (9.73)	44.84 (7.73)
2008-09	460.50	205.93 (44.71)	173.08 (37.56)	45.87 (9.92)	36.58 (7.91)

Source: Data supplied by KSML. Figures in the brackets indicate percentage utilization of cane in different purposes.

season. The table also shows that only in 3 out of 10 years the mill could procure 50 percent or more of the produced cane. After using the produced cane as seeds, chewing and *gur* making, the rest was not sufficient to fully utilize its crushing capacity. Due to low utilization of crushing capacity, the mill has never been able to operate profitably during the period under review.

Sugarcane Crushing Activities of KSML

Table 2 shows several aspects of cane crushing activities from which we can get an idea about the utilization of the cane crushing capacity of KSML. It reveals that the duration of the crushing period ranged between 64 days and 174 days, which in hours was 1519 and 4157.

But due to different constraints the mill could not operate continuously. Actual crushing hours ranged between 1367 and 3478 with a high fluctuating trend.

Further if we consider it in relative term then the actual crushing hour as percentage of hours available was between 77.44 percent and 93.10 percent. The

Table 2 : Capacity utilization of KSML during 1999-2009

Cane crushing activities (in m. tons)	Actual cane crushed (in m. tons)	Target achieved (in %)	Daily crushing capacity (in m. tons)	Daily average cane crushed (in m. tons)	Target achieved (in %)	Maximum crushing at specific day (in m. tons)	Excess crushing capacity at specific day (in m. tons)	Shortage of cane crushed per season (in m. tons)
150000	120085	80	1524	1188	77.95	1713	189	1863
124000	82694	67	1524	1109	72.76	1677	153	731
170000	203958	120	1524	1228	80.57	1768	244	3052
170000	198583	117	1524	1146	75.19	1662	138	1454
135000	74881	56	1524	1031	67.65	1686	162	463
138000	82658	60	1524	1305	85.62	1620	96	480
140000	135375	97	1524	1270	83.33	1660	136	1022
135000	167712	124	1524	1146	75.06	1625	101	1632
155000	159553	102	1524	1144	75.19	1578	54	967
165000	79730	48	1524	1063	69.75	1530	6	394

Source: Data supplied by KSML

table further shows that stoppage hour was between 105 and 678. “Sugar mills have been established in Bangladesh assuming a 135 days crushing season from November, 15 to March, 31 of which 120 days are effective crushing days (Sugar Commission, 1977-78: 98). In this context, 11.1 percent stoppage time may be tolerable in the sugar industry of Bangladesh. But, in the case of KSML during the study period, stoppage hours as percentage of hours available was between 6.9 percent and 22.50 percent. Only in two years out of 10 years of study period it was in tolerable limit and in the rest years it was abnormally high. Segregation of stoppage time based on the causes responsible is discussed latter on.

Sugar Production Activities of KSML

Table 3 reveals that, except stoppage time average crushing per day was below its capacity during the whole period and ranged between 67.65 percent and 89.3

percent in relative measure and in absolute figure it ranged between 1131 m.t. TCD and 1336 m.t. TCD. It was above 80 percent only four years (98-99, 2000-02, 2004-05 and 2005-06) which was 89.3 percent, 80.5 percent, 85.6 percent and 83.3 percent respectively. While in another five years (2000-01, 2001-02, 02-03, 06-07, 07-08) it was below 80 percent but above 70 percent. But in the remaining 2 years it was below 70 percent. Table also reveals that minimum crushing at specific day in every year was remarkably higher than that of its daily crushing capacity. Even it was 16.0 percent higher in 2001-2002. So it is reasonable to think, if raw material supply is regular and adequate machinery operate in sound condition and other factors support the situation, the capacity of KSML may be utilized at 10 to 25 percent higher than the normal level of activities. But we have shown in the same table that KSML was not able to utilize its full crushing capacity in any of the years during the study period. Only in four years it was able to utilize 80 percent and above capacity and in the remaining years it operated below 80 percent. Moreover, it had high fluctuating trend. So, due to under utilization of daily cane crushing capacity throughout the study period, the mill's profitability had been adversely affected. The capacity utilization of the mill mainly depends on the availability of raw material. Table 5 reveals that a large portion of produced cane in the mills zone was diversion of cane to *gur* making instead of sugar making, KSML faced an acute problem to utilize its full capacity in most of the years. *Gur* making is more profitable than cane supply to sugar mill. This is because it is possible to make 4 kg *gur* from 40 kg sugarcane and the market price of the produced *gur* is Tk. 55 per kg, while, price of 40 kg cane at the mill is only Tk.80.00. So after meeting the production cost *gur* making is yet more profitable (Daily *Ittafaq*, 2009:11). For that reason *gur* making activities is increasing day by day. But, such a huge amount of *gur* is not needed to the consumer of this locality. "Excess amount of *gur* is smuggled to the neighbouring country India and returned back to Bangladesh as alcohol after reprocessing there. Every day thousands of maunds of *gur* are smuggled. Smuggler *gur* makers purchased quality cane at Tk.100 per maund from the growers providing advance payment to them (Daily *Inqilab*, 2009:11)", while the mill authority pays only Tk.80-85 per maund for good quality of sugarcane. Moreover, the mill authorities take time to make their payment to the growers.

Table 3 : Sugar recovery rates of KSML during 1999-2009

Year	Total Working Days/Hours	Total Actual Crushing Hours	Actual Crushing Hour as % of Hours Available	Sugar Production (in m.tons)		Target Achieved in %	Sugar Recovery rate in %	Utilization of Production Capacity in %
				Target	Actual			
1999-00	102/2425	1884	77.73	11850	9372	79.09	7.81	80.06
2000-01	75/1789	1386	77.44	9920	5640	56.86	6.82	66.69
2001-02	167/3983	3435	86.81	12920	14878	115.00	7.29	120
2002-03	174/4157	3478	83.69	13345	12685	95.00	6.39	117
2003-04	73/1743	1367	78.44	12000	5412	45.10	7.21	46.80
2004-05	64/1519	1414	93.10	10488	5960	56.83	7.21	59.89
2005-06	107/2557	2329	91.10	10780	9664	89.65	7.14	96.70
2006-07	147/3508	3031	86.36	9620	12012	122.86	7.17	128.82
2007-08	140/3344	2967	88.73	11480	12130	102.44	7.60	99.72
2008-09	76/1799	1518	84.38	13200	5302	40.17	6.65	84.72

Source: Data supplied by KSML

Since, smuggler *gur* makers paid in advance to the growers at high rate than the mill, maximum amount of quality cane has been diverted to *gur* making and as such the mill has been getting inferior quality cane. For that reason, KSML miserably failed to utilize its full capacity during the study period and the recovery rate was also very low and unsatisfactory.

Production Capacity Utilization

It is stated earlier that, the sugar production capacity of KSML was 1524 Metric tons in the 10 years of study period. Table 3 reveals that only in three years the mill achieved its predetermined target and in the remaining seven years it failed to achieve its target. Even in five out of 10 years, it was below 80 percent of the target. In Bangladesh, it is normally accepted that sugar recovery rate of the sugar mills should be 8.5 percent. But, KSML was not able to achieve this rate in the study period. In 1999-2000 crushing season, recovery rate was 7.81 percent. In 1992-93 crushing season, recovery rate was 8.5 percent which is the highest rate throughout the life of the mill. Nevertheless, in the remaining five years it was below 7.5 percent. The most remarkable point is that the recovery rate declined continuously from 2000 -01 to 2008-09 crushing season.

Table 3 also reveals that the utilization position of production capacity of KSML was above 100 percent in three out of 10 years of the study period and in the remaining five years it was below 90 percent. Not only that. The capacity utilization was highly fluctuating in nature, which indicates the unsound and imbalanced operational activities of the mill. Several types of constraints are responsible for this improper capacity utilizations such as, irregular and inadequate cane supply, inferior quality of cane, stoppage time, lengthy crushing season, etc. As stated earlier, the main reason for inadequate and inferior quality of sugarcane is the diversion of cane towards *gur* making, causing shortage of cane in the mill. General cleaning and oiling, mechanical disturbance etc. are liable for stoppage time and complexity of transportation and lack of sound crushing activities are liable for lengthy crushing season.

Stoppage Hours

Table 4 gives a picture of stoppage time, which indicates that the cane deficiency was a major factor responsible for stoppage time during first five years of study. In the remaining five years cane deficiency was less responsible than two other major factors like general cleaning and oiling and mechanical disturbance. In most of the years non-availability of cane was not a major factor, but irregular cane supply and low quality of supplied cane were the major factors for non-utilization of normal capacity, which adversely affected the mill's profitability. We have discussed earlier that sugarcane production in the mill zone was adequate to meet the necessity of KSML. If it is possible to procure 55 percent of the produced cane (good quality) of the mill zone, then, it is possible to operate the factory in full capacity.

Moreover, if the supply of quality cane is regular and other constraints can be removed, then KSML can crush 2.6 lakh M. tons of cane and produce 22,100 metric tons of sugar. In that case, capacity would be fully utilized and the mill's overall profitability performance would not be affected.

Profitability

Profitability is the most important issue in financial management. Therefore, the authority should pay due attention to this subject with a view to maximizing profit. Profit is the ultimate output of a company and it will have no future if it fails to make sufficient profit (Panday, 1988:518). Every business concern wants to earn adequate profit to survive and grow over a long period of time. If a company is not able to generate sufficient profit, it would be very difficult for that

Table 4 : Analysis of stoppage time during 1999-2009

Year	Total Stoppage Hours	Cane De- ficiency	General Oiling & Clearing	Mechanical Dis- turbance	Electrical Dis- turbance	Weather	Misce- llaneous	Political strike
1999-00	540	203.92	122.25	88.07	6.33	53.33	62.00	-
2000-01	403	194.07	57.75	41.82	32.58	-	77.12	-
2001-02	550	31.75	209.00	122.00	25.58	88.50	60.58	-
2002-03	678	73.67	176.00	240.16	12.00	111.50	58.25	-
2003-04	375	117.50	53.00	144.00	5.00	-	56.33	-
2004-05	104	36.00	24.00	18.80	11.00	13.00	2.00	-
2005-06	227	8.00	80.50	94.50	10.00	-	34.50	-
2006-07	477	38.17	123.17	219.59	9.33	37.50	49.99	-
2007-08	377	19.09	119.50	147.67	24.91	39.50	26.33	-
2008-09	281	29.75	28.00	161.50	2.00	-	59.75	-

Source: Data supplied by KSML

company to cover operating expenses and interest charges and as a result the owner does not get anything from his investment. Besides, it is a fact that sufficient profits must be earned to sustain the operations of the business to be able to obtain funds from investors for expansion and to contribute towards the social overheads for the welfare of the society.

Table 5 reveals statistics of Production, profit, and loss of KSML during the period 1989-2009. According to the production capacity of the mill, the percentage of sugar production was high in 1990-91. It was 88 percent and recovery rate was 7.65 percent. The percentage of sugar production was low in 2998-09 crushing season and it was 34.80 percent and crops day was only 75. Table 5 also reveals that KSML earned profit only four years among 20 years, and in the rest 16 years they earned loss/negative profit.

KSML was established in 1961-62 and went into trial production in the 1965-66 crushing season. From the beginning, most of the time it failed to earn profit. It gives loss/negative profit. Every year, expenditure of KSML is greater than income and the mill authority is facing negative profit every year.

Table 5 : Statistics of production, profit, and loss of KSML during 1989-

Sl. No.	Season	Crops Day	Cane Crush (M. Tons)	Sugar Production (M. Tons)	Percent of Sugar Production	Profit (Loss) (in Lakh taka)
1	1989-90	133	178261	14790	74.32	215.99
2	1990-91	197	262516	20069	88.24	(281.97)
3	1991-92	152	188959	15458	59.25	(434.26)
4	1992-93	102	127599	10866	39.87	(513.37)
5	1993-94	130	162324	13500	45.68	(151.73)
6	1994-95	191	247810	19631	78.62	206.22
7	1995-96	171	213149	17350	76.22	126.17
8	1996-97	102	135425	10238	68.22	(226.46)
9	1997-98	102	128418	9567	70.24	(308.59)
10	1998-99	123	163147	11124	72.99	(143.15)
11	1999-00	102	120084	9372	61.50	(709.27)
12	2000-01	75	82694	5640	37.01	(301.38)
13	2001-02	167	203958	14878	97.63	(1002.25)
14	2002-03	174	198583	12685	83.23	(826.60)
15	2003-04	73	74881	5412	54.14	(754.16)
16	2004-05	64	82658	5960	39.11	(387.84)
17	2005-06	107	135372	9664	63.41	93.08
18	2006-07	147	167512	12012	78.82	(1249.69)
19	2007-08	140	159553	12130	79.59	(900.67)
20	2008-09	76	7973	5302	34.80	(1741.48)

Source: Calculated from secondary data supplied by KSML

Note: Figures in the brackets indicate losses

Part III

Policy Suggestions and Conclusion

From our above discussions and analyses we would now like to put forward some suggestions in order to improve the performance indicators of KSML.

1. Sugar industry is the largest agro-based industry of our country. At present there are 15 sugar mills in operation under the direct control of Bangladesh Sugar and Food Industries Corporation (BSFIC). It has created direct and indirect employment opportunities for a large number of people and has been contributing a remarkable amount of revenue to the national exchequer every year in the form of VAT, sales tax, surcharge, road development fund tax, customs duty, income tax, dividend, etc. It saves a sizeable amount of foreign exchange. Its by-products were profitably used for different purposes. Many forward and backward linkage industries may

be established by using its by-products. But the low capacity utilization is one of the reasons for poor assets as well as negative profitability. Overall environment such as soil nature, climatic condition, rainfall, moisture, temperature humidity, fertility of land, flow of wind, etc. are very favourable for cane cultivation in Kushtia district from time immemorial. To utilize its full crushing capacity of 1524 m.t.TCD, the factory needs on an average 51 percent of the produced canes in the mill zone. But the mill could not procure the required amount of cane because cane supply was very poor. Besides, a mentionable amount of cane deficit due to defective weighing machines, dryness during transportation, etc. affected the sugar production activities.

2. The rate of sugar extraction from canes is a very important indicator of performance of a sugar mill. In countries like Brazil, Cuba, India, Thailand and even Pakistan, sugar extraction rates are in the double digits while in Bangladesh it is in single digit. So there is scope for enhancing the extraction rate by modernization or using modern machineries in our sugar mills. We do believe that replacement of present old machineries by new very productive ones will increase the rate of sugar extraction from raw canes. In addition to this, HYV varieties of canes may be imported from Brazil and Cuba with more sugar contents.
3. For Bangladesh land is a very scarce resource. Every day Bangladesh is losing nearly 300 hectors of land. So instead of cultivating canes inside our country we should better import raw sugar from Brazil and Cuba. We can also use sugar beets by importing from beet producing countries like India, Russia, Thailand and several other countries. Because of scarce land resource, today or tomorrow we will have to go for this option if we want to continue producing sugar in our country. The sooner, the better. We believe that it is possible to make our sugar industry profitable by using imported raw sugar from the above-mentioned countries.
4. Farmers are switching over to seasonal agricultural activities like vegetables, rice, wheat etc. which compete with cane production. In a year they are getting 3 crops of vegetables while the cane grower grows only once a year, and the former make more profit than cane growers.
5. Lack of efficient management personnel and workers is a big constraint for better performance of public enterprises. Therefore, employment of efficient management persons and workers in a transparent and competitive basis may lead to better performance of KSML.

6. Economic use of all available extra land, ponds, etc. may also increase the profitability of public enterprises and for that matter KSML as well.

It is matter of great regret that in our Sixth Five Year Plan and even in Vision 2021 we do not find any reference to this vital issue. We hope our planners and political leaders shall give due importance to public sector enterprises if they want to achieve targets of the Sixth Five Year Plan as well as Vision 2021.

Finally, the Sixth Five Year Plan, we believe, should address the issues analyzed above in our paper and take our suggestions into consideration.

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