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COST TREND for Indian Public Enterprises

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The specialization large scale production, international marketing and increasing competition make it necessary not only to keep the cost under control but to reduce the cost to the maximum possible extent. To stand in the keen competition in the international markets makes it very important that the costs of exports are kept at the minimum and uninterrupted and efforts are made to locate new areas of cost Control and reduction. At present when the world is moving at. a fast rate only those concerns can survive who are continuously striving for improving their efficiency and effectiveness, and adding the value through cost reduction and bettering the product.

COST TRENDS IN PUBLIC ENTERPRISES IN INDIA

SAIL, BALCO and HZL are three public enterprises selected for the present study. All the selected public enterprises engaged in the production elf metal. SAIL is produces Iron, BALCD is producing aluminium while HZL is producing zinc as the basic product. Besides producing the basic product, all these companies are producing a variety of diversified products.

In the published financial statements of all the three public enterprises engaged in the metal sector, the details relating to the cost of production of different products have not been given and merely the details of total expenses incurred on all the products produced by the enterprises have been shown.

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RAW MATERIALS

The average proportion of raw materials in SAIL was 33.58 per cent which varied from 30.29 per cent in 1988-89 to 37.18 per cent in·1982-83 forming a range of 6.89 per cent. The proportion on the whole marked a varied trend. Compared to 1~81-82 the proportion significantly increased during 1982-83 from 33.26 per cent to 37.18 per cent. One of the reasons for this increase was steady deterioration in the quality of cooking coal. The directors of the company mentioned this fact in Annual Reports from time to time. Input constraints and interruptions in the supply of power also adversely affected the proportion of raw materials. The directors of the company mentioned in the company's 1982-83 annual report and accounts that "Input constraints continued to affect production of integrated plants this year as well.

Explaining the cause of loss in production due to shortage of power, the directors further stated that, "The loss of production of saleable steel suffered by steel plants on account of shortage of power amounted to 430 thousand tonnes, equivalent to 8.3 per cent the total saleable steel production during the year. Rourkela Steel Plant with 239 thousand tonnes alone accounted for 56 per cent of this loss. Bokaro Steel Plant also suffered a production loss of 100 thousand tonnes representing 23 per cent of production loss in SAIL on this account.

The high ash content in the coal was also an important factor high partly increased the proportion of raw materials. The directors of the company in this regard stated that, "The average ash content continued" to be 2 to 3 per cent above the promised level of 20.5 per cent with a high degree of day to day fluctuations.

During the year 1983-84 the proportion of raw material significantly decreased to. 34.71 per cent as" compared 37.18 per cent in 1982-83. The proportion during 1984--85 again increased slightly as compared to 1983-84 and it was 35.88 per cent. The proportion during 1985-85 slightly decreased ad it was 34.20 per cent the 1988-89. The decrease in the proportion was due to improvement in the quality of cooking coal. Regarding the techno-economic parameters the directors of the company stated that , "The company including the

Burnpur Works achieved significant improvements in techno-economic-parameters during the year.

The overall coke consumption rate in blast furnaces has been brought down by 4 per cent during 1985-85, thereby effecting a saving in coking coal consumption.

There was an improvement of about 5 per cent in the specific consumption of electricity per tonne of saleable steel during 1985-86 over 1984-85.

The overall energy consumption per tonne of crude steel in SAIL plants has been improved by 6 per cent 1985-86.

There has been a general improvement in blast productivity over 1984-85.

Overall consumption of raw materials has been brought down.

The purchase of raw material has been contained at the same level as in 1984-85 in spite of the increase in the production of hot metal and the crude steel by 11 per cent and 12 per cent respectively.

However, the proportion of raw material during the year 1985-86 was high due to some constraints in production. The directors of the company reported in the annual report of 1985-86 that, "The hot metal production at the SAIL Plants was affected mainly due to:

- The 38 days long illegal strike at the blast furnace department of BSL during April-May, 1985.
- Borkaro's four blast furnaces operation against the plant of five blast furnaces operation till 22nd December, 1985.
- Three blast furnaces operation at DSP against the plan for four blast furnaces operation due to delay in the commissioning of blast furnace No. 1 which was down from 6th January, 1984 and was blown in on 17th September, 1985. The proportion of raw materials further decreased to 32.52 per cent in 1986-87, 30.83 per cent in 1987-

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88 and 30.29 per cent in 1988-89. This was due to improved technology adopted by the company.

It is suggested that the coaking coal used should be of a good quality. The Government should try to supply adequate electricity to iron and steel companies. The company should continue to make research in order to improve the production performance.

In BALCO the proportion of raw materials was on the whole constant. The average proportion was 21.35 per cent which varied in a very small range of 0.94 per cent. The highest proportion was in 1987-88 being 21.90 per cent which decreased t6 20.96 per cent in 1988-89 which was the lowest for the period of the study. The Directors of the Company mentioned that "Despite the major constraint of inadequate and erratic power supply, concerted efforts were made by your company to improve the consumption and operating parameters, especially during the productivity year 1982-83

During 1883-84 the proportion increased to 21.58 per cent as compared to 20.84 per cent in 1982-83. However, the proportion during 1984-85 and 1985-86 was 21.54 per cent and 21.55 per cent respectively. It decreased to 20.52 per cent in 1886-87 but sharply increased to 21.90 per cent in 1987-88. It came down to 20.96 per cent in 1988-89. It is suggested that the company should keep up the efforts to improve productivity.

Consumption of Various Raw Materials per Tonne of

Aluminum produced

(1981-82 and 1982-83)

S.No.	Item	Unit	Consumption		
			Norm	**1982-83**	**1981-82**
	Alumina Plant				
1.	Fauxite	Tonnes	2.50	2.52	2.52

2.	Caustic Soda	kg.	98.00	112.10	114.00
3.	Furnace Oil	Lit.	133.00	132.00	133.00
	Smelter plant				
1.	Power (DC)	Kwh.	16020.00	16826.00	17768.00
2.	Anode Paste	Kg.	565.00	582.00	622.00
3.	Cryolite	Kg.	42.00	42.00	48.00
4.	Aluminium Alumia	Kg.	40.00	41.00	45.00
5.	Calcined Alumina	Tonnes	1925.00	1962.00	1962.00
6.	Current Efficiency	%	85.00	80.00	77.75
7.	Production/Cell/Day	Kg.	683.00	610.00	56.00

Source : Annual Report & Accounts, BALCO, 1982-83, p. 7.

The proportion of raw materials in Hindustan Zinc Limited marked a fluctuating trend throughout the period of the study from 1981-82 to 1988-89. The average proportion was 32.37 per cent. The proportion during 1981-82 was 38.66 per cent which sharply increased in 1982-83 to 39.62 per cent, the highest for the period of the study. During 1983-84 to 1985-86 the proportion continuously decreased and was 34.68 per cent, 30.99 per cent and 29.01 per cent respectively. The decrease in the proportion of raw materials was due to improvement in technology. The chairman of the company mentioned that "The Company is conscious of the role of technology for increasing productivity and, therefore, is taking steps towards up-dating the same.

The improvement in the position of power supply also helped in decreasing the proportion of raw materials. It is suggested that the company should continue the efforts to improve productivity. The proportion during 1986-87 increased to 33.54 per cent but

decreased to 28.33 percent in 1987-88 and 24.15 per cent in 1988-89. The company should try to keep up the efforts to reduce the proportion of raw materials.

An inter–firm comparison of the proportion of raw materials in the three metal companies in the public sector showed that the coefficient of range as shown in table 3.1 in the proportion of this expense as the lowest in BALCO followed by HZL and SAIL material decreased in all the companies but the rate of decrease was slow in case of SAIL and BALCO while it was faster in case of HZL. It is therefore, suggested that SAIL and BALCO should also take technological measures to improve the productivity and decrease the proportion of raw materials.

Table 3.1

Percentage of Raw Materials Consumed to Total Cost of Production 1981-82 to 1988-89

(Per cent)

Year	SAIL	BALCO	HZL
1981-82	33.26	21.80	38.66
1982-83	37.18	20.99	39.62
1983-84	34.71	21.59	34.68
1984-85	35.88	21.54	30.99
1985-86	34.20	21.55	29.01
1986-87	32.52	20.52	33.54
1987-88	30.83	21.90	28.33
1988-89	30.29	20.96	24.15
Average	33.58	21.35	32.37
Range	6.89	1.38	15.47
Coefficient of Range	0.10	0.03	0.24

Source: Annual Report and Accounts of Respective Companies from 1981-82 to 1988-89.

Excise Duty

The proportion of excise duty in SAIL during the period of the study from 1981-82 to 1988-89 marked a declining trend except in 1984-85 and 1988-89. It formed arrange of 3.30 per cent.The highest proportion was 9.37 per cent in 1981-82 while the lowest was 6.67 per cent in 1987-88. The average proportion for the period of the study was 7.01 percent.

The proportion of excise duty in BALCO was around 14.10 per cent except in 1988-89. Where it was 15.16 per cent and 17.43 per cent respectively. The proportion varied in a range of 5.76 per cent, the and highest being 17.43 per cent 1988-89 while the lowest being 11.67 per cent in 1986-87.

The excise duty in case of HZL marked an increasing trend. It was 0.20 per cent in 1981-82 which increased to 0.21 in 1982-83, 0.33 in 1984-85 0.24 per cent in 1983-84, finally to 0.39 per cent in 1985-86 during 1986-87 to 1988-89 was constant to 0.03 per cent. the average proportion was 0.18 percent. During the period of the study it formed a range of 0.36 per cent.

The coefficient of range of excise duty was the highest in case of HZL followed by SAIL and BALCO. On the whole BALCO contributed the highest per cent of excise duty. It shows that the burden of excise duty on aluminium is the highest. It is, therefore, suggested that the Government should try to reduce the burden of excise duty on aluminium. It will help improve the production and sales performance of aluminium companies.

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Table 3.2

Percentage of Excise Duty to Total Cost of Production

From 1981-82 to 1988-89

Year	SAIL	BALCO	HZL
1	2	3	4
1981-82	9.37	13.66	0.20
1982-83	7.80	13.95	0.21
1983-84	7.24	13.12	0.24
1984-85	6.67	15.16	0.33
1985-86	5.25	13.31	0.39
1986-87	6.20	11.67	0.03
1987-88	6.07	14.52	0.03
1988-89	6.52	17.43	0.03
Average	7.01	14.10	0.18
Range	3.30	5.76	0.36
Coefficient of Range	0.21	0.19	0.85

Source : Annual Report and Accounts of Respective Companies from 1981-82 to 1988-89.

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SALARIES AND WAGES

In SAIL the proportion of salaries and wages marked a fluctuating trend during the period of the study. It was 13.61 per cent in 1981-1982 which increased to 14.06 per cent during 1982-83 and 15.41 per cent during directors of the company mentionable that, There were some problems, however, due to politically motivated bands in the plants situated in the state of West Bengal. The loss of mandays this year due to the problems related to industrial relations was insignificant as in the previous year but further as many as 18,674 mandays were lost due to political bandhs. During 1984-85 and 1985-86 the proportion continuously decreased and it was 14.01 per cent and 13.13 per cent respectively. This was due to managements efforts to increase labour productivity. The directors stated that, "Considerable success has been achieved in controlling demurrage, overtime and eliminating shift change-over delays from key areas. Discipline has be tightened and step taken to control absenteeism and improve work practies. SAIL introduced new ways and means to manage personnel problems. The directors mentioned that, "There was a changed approach in the management of industrial relations. Instead of monitoring indices of mandays/salable steel losses, focus was on building a new work culture by obtaining the participation of large groups of employees/ association and trade unions. Attention was focused on Systems of collective bargaining and conflict resolution. There was a greater and more fruitful interaction with the trade unions at the NJCS and production and Productivity Forum.

The proportion of salaries and wages in BALCO during period of the study from 1981-82 to 1988-89 marked a declining trend except in 1985-86. The portion was 9.28 in 1981-82 which decreased to 9.24 per cent in 1982-83 the company maintain good industrial relations with workers and motivated them to improve productivity. The directors of the company mentioned that. The industrial relations during the year under review remained cordial and peaceful. With a view to improving productivity, a motivational incentive scheme based on Industrial Engineering Studies has been introduced at Korba Complex from November, 1984 after the approval from the government with the government and agreement with the Representative Union.

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The Proportion during 1985-86 increased as compound to 1984-85 but still it was lower than what it was in 1981-82 and 1982-83. The directors of the company mentioned that, "With the cooperation of the workmen, about 96.5% capacity utilization could be achieved during this year. The proportion during 1986-87 to 1988-89 marked an Increasing trend and was 8.42 per cent in 1988-89.

In HZL the proportion of salaries and wages continuously marked an increasing trend throughout the period of the study from 1981-82 to 1988-89. It was 16.25 per cent in 1981-82 which increased to 17.66 per cent in 1982-83, 17.67 per cent in 1983-84, 18.77 per cent in 1984-85 and finally to 19.00 per cent in 1985-86/ The proportion during 1986-87 was 18.60 per cent which increased to 21.71 per cent in 1987-88 which it decreased to 18.38 per cent in 1988-89. The average proportion was 18.69 per cent. The increase in the proportion was due to good facilities and higher emoluments paid to employees. The number of employee in the company also increased. The directors mentioned that, "The manpower employed in your Company at the end of 1985-86 as compared to stood at 11,568 at compared to 11,358 at the same time last year.

The industrial relations in this concern throughout the study period were cordial. The directors of the company mentioned that, "Healthy and hermonious industrial relations are essential for optimum organisations performance. Company's industrial relations approach is characterized by :

Participative management whereby tasks are sought to be accomplished on the basis of shared responsibility and mutual co-operation;

- A air and enlightened collective bargaining system;
- A sensitive and prompt grievance redressal system;
- Progressive personnel policies and their fair, just and objective implementation.

As a result of the above integrated systems approach, your company has been able to maintain stable industrial relations and industrial peace in most of its eight mining and smelting units.

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A comparison of coefficient of range showed that the proportion was the lowest in case of BALCO followed by SAIL and HZL. However, the proportion was the highest in case of HZL.

Table 3.3

Percentage of Salaries and Wages the Total Cost of Production

1981-82 to 1988-89

(Per cent)

Year	SAIL	BALCO	HZL
1981-82	13.61	9.28	16.25
1982-83	14.06	9.24	17.66
1983-84	14.41	7.06	17.67
1984-85	14.01	6.81	18.77
1985-86	13.13	7.31	19.00
1986-87	13.79	7.59	18.60
1987-88	14.23	8.29	21.71
1988-89	12.51	8.42	19.38
Average	13.84	8.00	18.63
Range	2.90	2.47	3.13
Coefficient of Range	0.10	0.15	0.08

Source : Annual Reports and Accounts of Respective Companies from 1981-82 to 1988-89.

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In 1984-85 the proportion decreased slightly and was 15.95 per cent. Still this was higher than what it was in 1981-82 and 1982-83. In the annual report of the company the director mentioned that, "The Power availability in Rajasthan State vis-a-vis demand was less than that of the preceding year. However, with the intensive follow up by the Company, assistance from the Ministry of Steel, Mines and Coal, Government of India, and co-operative attitude of state Government/Electricity Board, the company's Rajasthan based units did get priority in allocation-still the power during the year was lower than the preceding year as reflected in table.

Unit	**Power Availability as Against Requirement**		**Capacity Utillsation**	
	1984-85	1983-84	1985-85	1983-84
Debar i	70	82	60	72
Zawar	62.4	82	79.5	91

Tat Tundoo Lead Smelter, Bihar, the power position continued to be irregular with 1833 power interruptions of about 1245 hours duration. D.G. Sets were operated almost throughout the year to offset the harmful effect on operations due to erratic power.

At Sargipali Mine, power confirmed to be erratic with 375 interruptions of about 250 hours' duration and restrictions, particularly during peak hours in the evening since February, 1985, affecting stabilisation of the newly commissioned mines and beneficiation plant.

The proportion during 1985-86 increased sharply as it was 19-09 per cent, study. It was 18.01 per cent in 1986-87, 18.75 \per cent in 1987-88 and 21.16 per cent in 1988-89. The director mentioned that, " At director mentioned that,

"At Tundoo Lead Smelter, the power supply position continued to be erratic with 1,760 interruptions of about 400 hours' duration, necessitating the operation of DG Sets throughout the year to maintain the higher level of production. During the year, an extra feeder- has been taken from Ganeshpur substation of BSEB to improve availability of power from the grid. Its effect is likely to be felt during the current year.

The power supply was erratic at Sargipali Mine with 387 interruptions of about 196 hours' duration affecting mining and beneficiation operations. The company has installed a DG set to set to partially overcome the problem created by erratic power supply.

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