CHAPTER XII

CONCLUSIONS AND SUGGESTIONS
CHAPTER - XII

SUMMARY AND CONCLUSIONS

This Chapter is devoted for taking together the various observations made in the financial and physical performance evaluation of Bharat Aluminium Company Ltd., (BALCO) and Indian Aluminium Company Ltd., (INDAL) taken as "Sample Aluminium Industry" for the purpose of empirical study and to draw the conclusions based on observations to form a base for offering some suggestions at a unit level as well as for aluminium industry as a whole with special reference to public sector enterprises.

In following paragraphs summarized are the observations and conclusions.

CHAPTER - I

Some contrasting features of Indian Economy are revealed in the history of last 40 years of planning. Chapter-I observes some important features and problems.

1. Rapid industrialisation through centralised planning in a democratic political framework.

2. Co-existence of public and private sector in an economy, where the public sector has been entrusted to "Command the Heights of the Economy".
(3) In the last 40 years there has been changing emphasis on the various growth sectors like low priority to agriculture, rapid industrialisation with low availability of consumption goods and rising unemployment.

(4) Public sector philosophy of creating a 'Socialist State' has been overburdened with the emphasis on 'Social Grains' objective at the cost of public sector profitability especially in industrial and commercial public sector enterprises.

(5) Profitability was looked downs and has been heavily criticised as sin against the social welfare.

(6) Irrespective of high capital investments the profitability was never given a proper attention, rather it was neglected even though it was highly expected.

(7) Due to the non-profitable nature of public enterprises with heavy capital investments it has become a drag on national economy with no support to budgetary resources through public sector contribution by way of profit, or sometimes very negligible contribution.

(8) Profitability and pricing both have been the areas of high criticism besides the conduct of public enterprises management and parliamentary control.

(9) Hence, the observations stresses the need to
redraft the role of public sector in economy and overall planning and reorient the philosophical foundation, in the light of a new idea, 'Privatisation'.

(10) 'Privatisation' of Public sector has become a new coinage in the western capitalist world, along with the big dose of 'liberalisations of economic controls' of which both are not new for India, for Industrial Policy Resolution of 1956 provides the built-in-mechanism for both.

(11) International Monetary Fund's conditionalities have had imposed upon the privatisation of public sector and strengthening the role of private initiative.

(12) The real problem is whether India should opt for privatisations of public sector, which has started taking shape and momentum or give emphasis on 'profitability' to redefine the role of public sector in the economy? In a country like India it would not be wise to follow the path of privatisations.

(13) This study hence, emphasises the need for redefining the role of public sector as a whole and public enterprises especially commercial and industrial, and strictly follow the commercial profitability as an essential norms of efficiency measurement.
(14) There are views placed as counter arguments against profitability and have suggested alternative criteria as 'Index of Total Factor Productivity'.

(15) Even if it is accepted that the index of total factor productivity can be an alternative criteria, it is mistaken that while observing productivity the profitability should be neglected totally. Rather both are interdependent, criteria. One cannot say that there is no productivity in private sector while suggesting the alternative criteria for public sector.

(16) It was hence, highly a need felt to undertake empirical investigations and research work to study the productivity, capacity utilisation and economic profitability. This study takes a note of such work and has undertaken to study financial performance evaluation of public sector in India with special reference to aluminium industry in India on the basis of the 'Sample aluminium plants' as Bharat Aluminium Company Ltd., a public sector unit and Indian Aluminium Company Ltd., a private sector unit to screen the performances on financial as well as productivity criteria on independent as well as comparative level.

(17) The 'Financial Performance Evaluation in Public Sector Enterprises' is based on the model for such
evaluations provided by S.C. Bansal and the index of total factor productivity criteria as an alternative criteria for evaluating productivity performance for both public and private enterprise under sample aluminium plants selected.

(18) This study emphasises the prime need and importance for observing the profitability as major and prime most criteria alongside the productivity criteria so suggested and so test the validity of the observations and conclusions drawn based on the later one.

(19) This study also emphasises the need for such work based on the above criteria at least for the commercial and industrial public enterprises, leaving aside the public sector services and infrastructure, because productivity is the precondition for efficiency in the resources utilisations on a unit level as well as the economy as a whole, and commercial and industrial enterprises irrespective of whether they exist in private or public sector must follow the profitability norms since the profitability follows the productivity.

CHAPTER III

(1) A change in the means of ownership of production forms the basis of any economic system and policy.
(2) 'Laissez Fair' capitalism was juxtaposed by Marx's criticism of capitalist mode of production with his historical materialist views in the formations of social relationships, which are primarily based on 'ownership of means of production.

(3) After the World War-I and the "Great Depression of 1929-30, it was Lord J.M. Keynes who contributed towards the revival of capitalism in its neo-classical sense, and proposed for 'Government intervention in Business resulting in a Mixed Economic System popularly known as state capitalism.

(4) The 'Third World' countries which mostly are committed towards creating social and economic justices are impressed by 'socialist philosophy'. These countries are under the constant threat of international bodies like 'World Bank' and 'IMF' directing their assistance only for those countries liberalising policies, economic and political in favour of private initiative, and political interference by the donor countries, as well as restricting the investments in public sector. Its a kind of 'Techno-financial Imperialism' replacing the old 'Colonial Rule' of the erstwhile empires.

(5) In India development through "Centralised planning" in bringing 'Democratic Socialism' as the supreme objective
of establishing 'Socialistic Pattern of Society' a guiding force; has become an accepted policy in kinds of rules, regulations and laws to frame institutional climate.

(6) Industrial Policy Resolution of 1956 is the guiding force of industrialisation in India. While classifying the industries there is a wider scope for private sector enterprises. In fact a schedule 'A' industries are open for private sector along with the areas, reserved for public sector, the 'Aluminium' industry being the foremost example under study, where private sector has dominated over public sector.

(7) On the recent trends of 'Privatisation and economic liberalisations it is the choice to be made by the Indian planners, whether the economic planning and policy should be governed by the indigenous savings base rather than foreign capital base with a raw deal to the public sector programme in favour of planned socialist objectives.

(8) The number of public enterprises centrally owned has gone up from more 5 in number to 214 with the capital investment gone up from Rs.29 crores in 1951 to Rs.61603 crores in 1987.

(9) The declining rates of capacity utilisation in almost every basic and heavy industry has been the hurdle in 'take-off' of the economy.
(10) Profit after tax has been very low at a level of 2.9 per cent in 1986-87.

(11) Public sector savings, out of the total national savings has been below 20 per cent i.e., 4 per cent of Net Domestic Product.

(12) This growth in savings has been due to profits from departmental enterprises and not due to non-departmental profits.

(13) The private sector share of 'Gross Fixed Capital Formation dropped from 77 per cent to 51 per cent from 1950-51 to 1981-82, i.e., by 26 per cent in other words the G.F.C.E. rose about by 0.84 per cent in public sector in about 31 years. Irrespective of this, the productivity capital in public sector was for less than that of private sector due to the capital-output-ratio.

(14) Share of public sector in Net Domestic Product was doubled as to 21.4 per cent in 1981-82 as compared to 10.7 in 1960-61.

(15) High capital-output-ratio resulting in a low productivity of capital, low contribution to gross domestic capital formation have the cumulative effects on cutting the public sector investments in seventh plan.

(16) Economic Policy liberalisations in favour of indigenous and foreign private sector with foreign capital
and technology with IMF conditionalities to privatise public sector would not help development of Indian Economy.

(17) Increasing adverse position of Balance of Trade is one of the limiting factor in recent growth process in Sixth and Seventh Five Year Plans.

(18) In a process of import substitution based industrialisation import/gross Domestic Product Ratio should fall simultaneously with the higher rates of Export/Gross Domestic Product Ratio.

Import/GDP ratio ranged from 6.84 per cent to 8.16 per cent from Third Five Year Plan to Seventh Five Year Plan. In the Three Annual Plans and Fourth Five Year Plan the ratio was 7.10 per cent and 4.75 per cent. This showed the increased from 7.21 per cent to 10.03 per cent over the quinquennial periods from 1960-61 to 1984-85. This shows that the imports have increased at a fairly rapid rate over the period from 1950 to 1980 with more emphasis on capital goods import.

(19) While the Export/GDP ratio had been low over the different plan periods as well as over quinquennial sub-periods with lesser emphasis on capital or intermediate goods export than traditional goods.

(20) With reference to the above observations regarding Import/GDP and Export/GDP ratios and composition of
imports and exports, it is required that selective import liberalisations and rigorous import substitution should be followed by improving non-primary or non-traditional exports rather than to depend on foreign capital and technology based export promotions.

CHAPTER-III

On the basis of the major conclusions drawn in Chapter-II regarding public sector investments, low capacity utilisation, low productivity, low profitability, low share in net national product and Gross domestic product reflecting on imposing the cuts on public sector investments and allow private sector more upperhand in economic efforts by offering more liberalised economic policies for domestic as well as foreign private sector by allowing free entry for foreign capital and technology oriented export promotions, which in long run will not be favourable for Indias economy. Low profitability alongside low productivity in public sector has been the main reason for such circumstances, and the profitability criteria has been emphasised more forcefully in this study over any other criteria mainly on the backdrop of following changes taking place.

(1) Increasing burden of international monetary Fund and the World Bank towards the strengthening of the role of private sector.
(2) Privatisation of Public Sector wherever possible.

(3) Allowing more freedom for foreign capital and technology imports; multi-national collaborations.

(4) Allowing the top managerial control by giving top posts to private sector giants from within the nation and from foreign company collaborations with Indian public sector enterprises to hold economic powers with small equity base.

Instead, to succumb to the international pressures and the privatisation programme catching ways all over the world it would be better to emphasise the need for renewal of socialist objectives and philosophy in managing the public sector and commercial profitability be strictly adhered to which has been totally neglected even after repeated warnings and emphasis given by different authorities, economists, and academicians.

(1) Industrial Policy Resolution of 1948 refering the 'Industrial Conference Resolution of 1937' accepts the views which are also placed in Industrial Policy Resolutions of 1956 that a fair return on capital employed in the industry and reasonable services for maintainance and expansion of the enterprise must be provided for.

(2) Industrial Policy Resolution 1956, emphasises the need for the management of public enterprises on business
lines in order to augment the revenues for the state, and provide resources for further development.

(3) Even after the central authorities like 'Bureau of Public Enterprises' (BPE) and 'Committee on Public Undertakings' (COPU) have asked Central Government to establish unit level objectives for each public enterprise, which government failed to do so.

(4) Indian Planning Commission has observed that profits are universally accepted as an index of efficiency.

(5) Profit is even accepted as an inevitable criterion for measuring enterprises performance in many of the socialist countries, including Soviet Union. Professor Liberman also emphasised that, all embracing criterion that could ensure the growth, stability, quality and efficiency of production was the maximisation of profits.

(6) Central Committee of the Communist Party of Soviet Union has also accepted that in an organisation of production or any work of the enterprise is inevitably reflected in profit positively or negatively.

(7) According to J. Wilczynski there is direct link between profit and incentive payments. Trends in the levels of profitability of different branches of economy provide guidance to Central Planners in optimising the allocation
of resources.

(8) Due to the absence of proper profit policy the area of pricing of public sector enterprises' products has also been highly criticised.

(9) 'No-Profit No-Loss' or 'Low Price Mechanism' both proved to be unallocate prices of commodities and services in public sector should not only be sufficient to meet the cost of production but also include the following items - depreciation, provision for expansion contribution to tax revenues and capital formation.

(10) The need for a fresh thinking towards profitability and pricing policy for the purpose of creating the surpluses in public enterprises is a need in the light of recent privatisation trend and economic policy liberalisations.

CHAPTER IV:

Aluminium industry is basically capital intensive, high power consumption, and high cost oriented with low profitability. The problems of profitability have become more complex by pricing of this metal.

(1) Aluminium industry is one of the young amongst the non-ferrous metal industry in India.

(2) Irrespective of the early start-up of India's aluminium industry as compared to the late start by other
developing countries, the growth of aluminium industry in India has been slow.

(3) After the end of World War-II the major aluminium companies expanded their smelting capacities in the developing countries in the form of equity ownership. In India ALCAN (of Canada) and Kaisers (U.S.A.) entered into equity participation with their Indian counterparts, the Indian Aluminium Company Ltd., (INDAL) and Hindustan Aluminium Corporation (HINDALCO).

(4) High Cost of production and unremunerative prices are the two basic features regarding growth of aluminium industry in India.

(5) All costs of inputs are higher in Indian aluminium industry and due to the late revision of aluminium prices by 'Bureau of Industrial Costs and Prices' (BICP), it cannot cover the costs and continue to suffer the losses. The retention prices do not guarantee the profit prescribed as 12 per cent on capital employed.

(6) Excise duties are higher and charged on ad-valorem basis makes Indian prices more incompatitive as compared to international prices. This excise duty, is charged on inputs as well as output; which is 2 to 3 times higher than charged on any other metal like steel.
(7) Power is a basic input which over all plants in aluminium industry has not been continuous in supply. In most of the cases like INDAL there has been almost 50 percent cut in power supply due to which the production schedules have not been observed resulting in a low capacity utilisation leading to uneconomic production. Besides this the tariff rates are also as high as compared to international rates.

(8) Other raw materials are costlier which are mostly supplied by other public sector enterprises, as compared to international prices.

(9) Due to above main causes and problems the production of aluminium metal falls short leading to import of this metal.

Summerized conclusions for Chapter Five, Six and Seventh deal with the BALCO's performance evaluation and Chapter Eight, Nine and Tenth deal with the INDAL's performance evaluation.

Following are the comparative observations and conclusions of BALCO and INDAL based on physical and financial analysis.

(a) Return on Investments:

(1) BALCO does not show any sign of Financial efficiency
inspite of its strong assets structure, due to continuous losses with higher loss trends after 1980 to 1984 while as INDAL's financial performance as to return on investments is quite satisfactory eventhough it may not be called as best it compared to the 12 per cent return on capital employed prescribed.

(2) The cummulative losses in BALCO are up to a level of Rs. 3305.03 millions upto 1989 from Rs. 35.92 millions in 1974 to Rs. (-) 434.05 millions in 1987 and in the last years it made a profit operating net profit. The highest loss incurred was in 1986 to Rs. (-) 770.10 millions. Which is almost 59 times increased over a period; while in INDAL being a profit making aluminium plant in private sector had the cumulative profits (Net) of Rs. 1529.54 millions. Especially there were high profits during 1974 to 1979 and thereafter in 1984 to 89.90. During 1980 to 1983 the profits had been comparatively low as compared to pre 1980 and post 1983 profits.

(3) Due to the absence of profits BALCO could not contribute towards dividend and interest on loan, while as INDAL contributed substantially with the total contributions of Rs. 512.46 millions and Rs. 893.74 millions over a period from 1974 to 1984-90.

(4) BALCO could not provide contribution towards reserves and surpluses since it had continuously suffered
the losses. The balance on reserve and surpluses as shown in Balance Sheet has been Rs. 13.03 millions till 1987 and in 1989 it was only Rs. 5.89 millions. The depreciation provision was made in total to the tune of Rs. 1976.39 millions. In INDAL the reserve and surpluses went upto Rs. 1126.30 millions in 1989-90 while depreciation provision made over the period in aggregate was Rs. 1032.60.

(5) BALCO had remained a non-tax contributing unit due to losses, while INDAL’s contribution by way of taxes Rs. 841.50 millions over a period from 1974 to 1989-90. In the absence of taxable profits no taxes were contributed in 1983 and 1984.

Hence, it can be said that BALCO had been totally unsuccessful public enterprise as compared to INDAL’s comparatively better performance, for the period under study.

(b) Fixed Assets Management:

(1) No capital investment of any type has been effectively utilised providing any specific rate of return positively since BALCO has been a loss making unit throughout the period from 1974 to 1988. As compared to BALCO’s dismal performance on account of fixed assets management, INDAL did well averaging EBTI to sales as 11.54 per cent EBTI to total assets as 13.14 per cent, cash flow to total capital,
total liabilities and net worth as 14.40, 18.37 and 22.78 per cent respectively. INDAL especially performed well during 1974 to 1979 and thereafter from 1984 to 1989-90 on account of generating fairly good amount of income to sales and total assets, and generating attractive cash flows against total capital, total liabilities, and net worth. Capital utilisation had been effective in INDAL on an average.

(2) Net income to EBIT or cash flows do not show any significant achievement positively to measure the efficiency of most valuable resources of the productive system in financial terms in BALCO.

It could be said that capital investment decisions or the capital employed in BALCO shows complete absence of logical reasoning in its capital investment and utilisation decisions as a public enterprise. Where as in case of INDAL the investment decisions have been judicious and result oriented.

(c) **Assets Turnover**:

(1) BALCO's sales performance as compared to total assets investments has been very poor in the beginning showed increasing trend upto 1979, and showed decline upto .17 in 1981 and revived upto .40 in 1984. It showed an increasing trend upto 0.53 in 1985, going down to 0.40 in
1987 and revived upto 0.48 times in 1989. The average sales to total assets had been 0.35 which is not satisfactory. INDAL indicates better performance on account of sales to total assets and net sales to operating assets as 1.01 and 0.75 times as compared to .35 and .36 times indicated by BALCO.

(2) Due to ineffectivity in sales performance and higher volume of current assets with the increasing inventory has reflected on negative profitability in BALCO with high solvency in long term. While sales to inventory sales to current assets and sales to quick assets, out of which first two show the higher ratios as compared to BALCO, except the last one as 2.68, 1.73 and 5.68 times in INDAL. The last two ratios being upto 1986 only.

(3) The cost of goods sold to inventory turnover ratio indicates rapidity the inventory turns in to sales. The inventory level in BALCO in higher as compared to sales and hence resulting in a low sales performance. While INDAL shows high effectivity of sales performance to cost of goods sold keeping down the inventory level. Cost of goods sold to inventory ratio on the average is 2.93 in BALCO and 3.63 in INDAL.

On the whole, BALCO's performance in assets for turnover has been ineffective in terms of total as well as operating assets management with low level of sales with
respective assets. INDAL’s total assets, operating assets and current assets management has been impressive.

(d) Long Term Liquidity:

(1) Net income to net worth ratio has been negative and sales to net worth ratio has been very low in BALCO as (−)0.30 and 1.61 as compared to INDAL’s 13.60 and 2.55 times as the average. While the long term debt to net worth and total debt to net worth ratios in BALCO have been high in BALCO as 3.48 and 3.64 as compared to INDAL’s 0.58 times for both the ratios.

(2) There hardly remains any significant difference when equity and debt capital have been financed by Government, as it must be used effectively. Since the absence of any profit it could be said that all government funds have been used inefficiently. In INDAL these ratios have increased especially during 1980 to 1983 resulting in high interest burden and low rates of return. Irrespective of the price constraints (low retention price) INDAL’s performance could be called impressive which could have been otherwise if it could determine its own price in open market.

In short, the whole equity funds or alternatively the Government funds on an equity or net worth have been proved worthless. It can also be said that, it is due to
high debt-equity ratio BALCO had to sacrifice long term liquidity to its ineffective use of all kinds of funds resulting in losses, as compared to INDAL.

(e) Short-term Liquidity:

(1) BALCO's current assets to current liabilities ratio is better averaging 2.15:1 while current assets to total assets ratio is 0.27:1 as better, as compared to best performance shown by INDAL as 2.15:1 and 0.86:1.

(2) Quick assets to total assets and quick assets to current liabilities have been poor in BALCO as to 0.10:1 and 0.77:1 reflecting very low capacity of immediate fulfilment of third parties liabilities while INDAL shows better ratios as to 0.25:1 and 0.62:1 as comparatively less better ratio respectively.

As a whole, Bharat Aluminium Company's Liquidity in short-term is better, but INDAL's short term liquidity and working capital management is considerably better than that of BALCO.

(f) Debt-Equity Structure:

(1) Current liabilities to total assets and total debts to total assets ratios on the average are 0.13:1 and 0.65:1 in BALCO, as compared to 0.29:1 and 0.26:1 in INDAL it is clear that INDAL depended much on current
liabilities as a means of financing total assets than the debts as is the case with BALCO.

(2) Current liabilities to Gross plant in BALCO has been 14.1 against 33.1 in INDAL. This shows that INDAL depended on short term financing through current liabilities much more than BALCO.

INDAL's Debt-Equity Structure has been devised quite judiciously striking the proper balance between equity and creditorship finances, and long term financial position vis-a-vis total assets management. This shows that BALCO had heavily relied on debt finances particularly in last five years from 1980 to 1984 with a increase from 55.56 to 88.24 per cent respectively in the total debts to total assets ratio. With the highly geared capital structure with low level operations and negative profitability it has proved to be over capitalised. It can also be observed that the debt proportion has been particularly high from 1981 as 60.21 per cent to 64.48 per cent in 1989.

(g) Use of Working Capital:

(1) Net Income to working capital and cash flow so working capital ratios in BALCO are negative as (-)36.56 and (-)14.40 per cent. While long term debt to working capital ratio has been 4.23:1. In INDAL these ratios are 18.50 per cent, 30.98 per cent and 0.79:1. Net income
to cash flows generated in earlier period show low level mixed trends than high level mixed trends in later period from 1980 to 1989.

(2) BALCO has for lack of positive returns and internal reserves had to depend on debt finances for working capital requirements for financing current assets; while INDAL was doing well on generating high ratio of incomes and cash flows as compared to BALCO had to depend very less on long term debts; but when these ratios fall down it had to switch over to conservative policy of depending on long term financing for working capital needs prior 1980 and changing this policy in a later period after 1980.

In turn, INDAL's working capital utilisation has been more effective maintaining the required rates of income and cash flows and accordingly adjusting the working capital needs financed by long term debts. The operating efficiency and working capital management has made the total assets management and performance very much ineffective in BALCO.

(h) **Input-output Analysis** (BASE 1976):

(1) Average installed capacity of BALCO is marginally lower than INDAL (BALCO - 100000 TPA, INDAL - 1,03,158 TPA an average).
(2) Average actual production or capacity utilisation in BALCO is marginally lower to that of INDAL (BALCO 55198.21 tonne per annum i.e. 58.56 per cent and INDAL 60410.00 tonne per annum i.e. 55.20 per cent to installed capacity level.)

(3) The average capital input of BALCO is Rs. 3702.99 millions, and INDAL Rs. 1435.88 millions. This is 2.59 times of INDAL's capital.

(4) Labour input in terms of salaries and wages and employee welfare are 60.48 per cent in BALCO than that of INDAL (BALCO's labour input in Rs. 133.64 millions while in INDAL it is Rs. 220.96 millions).

(5) The total number of average labour in terms of number of employees on job in BALCO are 15867 while in INDAL are 7729 BALCO's average employment is 76 per cent.

(6) Average estimated value of output in BALCO is Rs. 2075.75 millions while in INDAL it is Rs. 4357.87 millions. The actual value of output in BALCO is Rs. 1288.96 millions and in INDAL it is Rs. 1915.97 millions. INDAL’s actual average value of output has been greater by 0.49 times (48.64 per cent). The value of actual output achieved is 62.10 per cent in BALCO and 43.97 per cent in INDAL as compared to estimated value of output.
(7) Capital input per tonne of installed capacity in BALCO is higher than INDAL (BALCO Rs. 0.0370 millions and in INDAL Rs. 0.0133 millions) i.e. 278 per cent higher than INDAL.

(8) Capital input per tonne of actual production in BALCO is Rs. 0.0732 than Rs. 0.0223 millions on the average in INDAL, i.e., 3.28 times that of INDAL.

Capital input per tonne at actual production level is higher by 97 per cent in BALCO, and 67 per cent in INDAL, over installed capacity capital input per tonne.

Capital input at both levels, installed as well as actual level in BALCO is higher than that of INDAL by 1.78 times (178 per cent) and 2.28 times i.e., (228 per cent).

(9) Labour input per tonne of installed capacity in BALCO is Rs. 0.00134 millions per tonne and in INDAL it is Rs. 0.0020 millions.

Actual per tonne labour input in BALCO is Rs. 0.00230 millions and in INDAL it is Rs. 0.0037 millions. The over absorption of labour input in BALCO's actual production comes about by 71 per cent higher, while in INDAL it is 85 per cent higher.

INDAL's both labour input per tonne at installed and actual production level are higher by Rs. 0.00066
millions and Rs. 0.0014 millions i.e., 49 per cent higher (0.49 times) and by 61 per cent higher (about 0.61 times), than that of BALCO.

(10) Actual value of output per tonne at actual production level comes to Rs. 0.02088 millions in BALCO, while in INDAL it is Rs. 0.03124 millions. The output per employee in BALCO is 9.15 per tonne and INDAL it is 7.78 tonnes. BALCO's per employee output is higher by .17 times or by 17.61 per cent as compared to that of INDAL.

(11) The overall conclusion about capital-output and labour-output ratio is that, both of these ratios are more effective in actual terms and on estimated terms which show the absolute and relative productivity of both the factors of production as higher in INDAL as compared to BALCO.

As is observed that the absolute productivity of INDAL is higher by 83.62 per cent shown in Table No.11.2.

(12) Idle capital input in BALCO is Rs. 1208.88 millions while for INDAL it is Rs. 658.58 millions i.e., 32.64 per cent and 45.72 per cent of actual average capital input.

(13) Index of total factor productivity is derived by dividing the index of net output by the corresponding
index of total factor input. It measures the extent of change in the overall efficiency of productive resources during the period under study in relation to the general level of efficiency prevailing in the base year.

None of the total factor productivity series show a smooth upward trend either of BALCO or INDAL, over a period from 1976 to 1989-90.

(14) The overall extent of growth in the total factor productivity taking 1976 as base year ranges from 1.00 to 3.19 in 1989, in BALCO, while in INDAL it ranges from 1.00 in 1976 to 2.48 in 1989. The overall extent of net growth comes to 2.19 (219 per cent) in BALCO, and 1.48 (148 per cent), in INDAL respectively. The extent of growth has been faster in BALCO by 71 per cent. The average rate of growth is 15.57 per cent in BALCO as against 10.57 per cent in INDAL.

(15) The overall growth in total factor input has been upto 493.53 per cent in BALCO and INDAL it is 266.22 per cent i.e., this growth is higher by 393.53 per cent and 166.22 per cent respectively, with the average of 28.11 per cent and 11.87 per cent. Had the productive efficiency of base year remain unchanged i.e., 1:1 (100 per cent) the net output growth should have been increased by 174.53 per cent in BALCO and 18.22 per cent in INDAL. This shows that BALCO's output has fallen down by 44.35 per cent and
INDAL's has been 10.96 per cent. The relative fall in output is by 3.17 per cent and 0.78 per cent in BALCO and INDAL respectively i.e., the overall relative productivity has been 55.65 per cent and 89.04 per cent in BALCO and INDAL. This means that the INDAL has attained the growth in its productivity comparatively faster than that attained by BALCO.

(16) BALCO's overall growth in total factor productivity has been 3.97 per cent per annum over the period. While, INDAL has attained the growth rate of 6.36 per cent. The growth of productivity in INDAL has been faster by 2.39 per cent per annum over a period under study. It means that the INDAL's resources have been used more productivity than BALCO.

(17) The overall average annual performance of the contribution made absolutely and relatively, for the period under consideration by total factor input and total factor productivity to the net output growth in BALCO is 0.13600 and 0.1639 times, while in relative terms it is 15.52 per cent and 7.54 per cent respectively. It means that the contribution made by the total factor input has been significantly higher by 7.98 per cent over that of contribution made by the total factor productivity relatively.
While, the overall performance of the contribution made by Indal absolutely and relatively for the period under consideration towards the net output growth by total factor input and total factor productivity has been 0.0786 and 0.1011 times. In relative terms it is 12.35 per cent per annum and 10.73 per cent per annum. The contribution made by the total factor input has been higher by 1.62 per cent over that of the contribution made by the total factor productivity.

(18) INDAL's contribution by way of Excise Duty, Aluminium price regulation levy, Corporate Taxes, Salaries and Wages, Dividend, Earnings in Foreign Exchange and Value Added is comparably far higher and spectacular than BALCO if measured by these criteria as performance evaluation in public enterprises.

(19) Costs of production are high in both the plants due to high prices of basic inputs, but cost of production of BALCO as compared to INDAL is higher, as the cost of sales does show higher volumes in BALCO as compared to INDAL.

(19) Broad Conclusion:

It can finally concluded that Indian Aluminium Company's performance in each department of comprision as compared to Bharat Aluminium Company has been spectacular considering the low retention prices, resulting in the
non-recovery of the full costs of production which brings the profits to a low level. The financial performance of INDAL would have been more effective had the prices determined by the 'Bureau of Industrial Costs and Prices' been on realistic grounds. As against this BALCO has been the continuous loss maker over the period under study.

As against the profitability it is advised that the 'Index of Total Factor Productivity' could be the alternative criteria for performance evaluation in the public enterprises. On the basis of this criteria INDAL's efficiency has been proved better than BALCO. (See the preceding observations 15, 16, 17 and 18). But this criteria seems to be defective in the case where initial base year value of output (net output) being low as compared to the successive years which results in higher growth rates, and high total factor productivity, which has happened in case of INDAL. INDAL's growth rates are bound to be low when taking the base year value of output which successively shows the comparatively lower rates of growth and low total factor productivity. While as the sources of output growth by independent factor inputs on the whole over a period under study are better in INDAL as compared to BALCO.

As compared to other norms of performance measurement INDAL has proved to be effective contributor to the end users or beneficiaries than BALCO, the criterias which
are specially used to measure the efficiency of public enterprises otherwise. This is due to the profitability that INDAL could effectively contribute towards interest, depreciation, dividends, higher salaries and wages, taxes etc., which BALCO fails to observe on many of these counts. Hence, the profitability criteria cannot be overlooked by the public enterprises, and moreover profitability and productivity are inter-related with each other as productivity is finally reflected in profitability which not the case with Bharat Aluminium Company Limited.

(II) Suggestions:

The study observes the aluminium industry as a young industry with the strategic importance of the vast range of its products. There is wide amount of scope to develop aluminium uses in a day-to-day life since the present per capita availability is only to the extent of 0.50 k.g., in India.

Among the sample aluminium companies, it is observed in the study particularly in the years of 1983 and 1984 Indian Aluminium Company's capacity utilisation has gone down. While as in case of Bharat Aluminium Company capacity utilisation has been continuously increasing. Contrary to this is that while capacity utilisation has gone down in case of INDAL it has been a profit making unit as against persistent loss making feature of BALCO,
and this is the main cause showing increasing rates of value of output growth as compared to the growth rates of inputs as a result of which the total factor productivity seem to be high as compared to that of INDAL.

The productivity of capital in relative terms is higher by aggregate average productivity criteria as against total factor productivity criteria.

By observing the productivity INDAL has also been successful in maintaining its profitability which is not the case with BALCO.

The problems of aluminium industry are enormous and have retarded the growth of this industry. The basic inputs of aluminium are costly due to high indigenous prices; power supply and power rates both fluctuating have led to low capacity utilisation along with cost escalation. The foremost important is the problem of pricing of this metal; which fail to cover the costs due to untimely revisions.

For the purpose of giving momentum to this industry the government should draft a pragmatic policy for healthy development of this industry. Following are the important suggestions which could be adhered to -

(1) It appears from the study that the cost structure of aluminium industry is artificially high due to Government
policy. Basic input prices are two to four times higher than the international prices. The steps must be initiated to rationalise the input prices which are supplied by indigenous public sector units.

(2) Another problem is that the excise duty, sales tax, electricity duty etc., are adding to the high cost structure. Government should reduce these taxes and duties and bring these to a minimum level in comparison with the aluminium substitutes. It appears that the Government has initiated the steps regarding reduction in excise duty on semi-fabricated items marginally, though it is double that of steel.

(3) Third important aspect is of maintaining uninterrupted and low rated supply of electricity supply, which has been mostly absent causing full utilisation of the smelter capacity in both the aluminium sample units. Particularly INDAL has been suffering with low capacity utilisation in recent years due to often power cuts, at the different smelters. At the same times the power tariff is also going high. Government should provide smooth supply of electricity with lower power tariffs in order to enhance the capacity utilisation and cost reduction in consultation with State Electricity Boards.

(4) The nexus of success of aluminium depended largely upon 'Retention Prices' a government pricing
formula, which does not seem to be working appropriately since the retention prices have been many more times low than the cost of production in sample aluminium industry as well as other aluminium companies. Some companies have to contribute towards "Aluminium Price Regulation Levy Account" since receiving high retention prices which costs the burden and adds to the unrecovered costs to such plants. The profitability of such plants is hauled due to such unprecedented and untimely price declarations. It is better to end with such 'centrally sponsored' price which do not help covering costs and be competitive in local as well as international markets. Free market pricing for the aluminium would increase the efficiency and capacity utilisation with cost effectiveness than the existing pricing formula.

(5) In order to lower the incremental capital-output ratio the existing constraints capacity utilisation should be removed as are mentioned above. In order to be cost-effective with lower capital-output ratio it is urgently needed that the existing cost structure which is artificially high be studied carefully and permit the reduction in various costs by rationalising the prices of inputs. To open with the new vistas of low cost high efficient production of this metal government should initiate the pragmatic policy reducing the difficulties in the industry.
It should also decontrol the aluminium in order to enhance production.

(6) The important issue being the exports of bauxite from Andhra Pradesh Bauxite Mines project; and the export of high grade Alumina and aluminium ingots irrespective of the shortfall of the local demand and shortage of bauxite particularly in Bharat Aluminium Company. The policy of exports of these varieties do not seem to be consistent, when the nation also plans for import of aluminium metal. In a situation of domestic shortage of aluminium and its non availability abroad at affordable prices; it will be prudent to stop exports of alumina and feed the domestic industry in the national interest.

(7) As concerned to the whole public sector and industrial and commercial public sector enterprises in particular, it is the total neglect on the part of Government and public sector management towards profitability and still the talk of privatisation of public sector shows that the Government has bent before international pressures put through I.M.F. and the World Bank. Instead of going for privatisation it would be wise enough to follow the profitability criteria rigorously in public enterprises and opt for import substitutions, cutting import liberalisations and expanding exports of non-
traditional items; as this study observes.

On the plant level both INDAL and BALCO should attend for the following -

(1) Strict control should be kept on materials utilisations, assets utilisations, and thereby improve the capacity utilisation.

(2) To plan for the targets and achieve it by effective manpower utilisation, and increasing the labour efficiency.

(3) Should pay more attention towards the newer areas of aluminium uses through effective Research and Development Planning.

(4) It is highly needed that these companies should create consensus on the variety of problems and put the pressures on Government in order to create proper environments for the growth of this industry; then only the pragmatic and rational solution will come out. It is no doubt that Government on the above suggestion has to come with prospective policies to make this metal more brighter.

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