

CHAPTER I.

CAPACITY UTILISATION

Review of Literature

1.1 Introduction:

Various academicians, industrialists and organisations and managing directors of different organisations had made studies of the capacity utilisation problems. These studies had been made in various industries ranging from small scale industries to large scale industries and from private sector industries to public sector industries. A brief review of these studies will enable us to understand broadly the causes of changes in and mainly the the underutilisation of the capacity.

1.2 We will start with the studies of private industries made by T. Subbi Reddy and Murthy¹, who studied the capacity utilisation of small industry at Anantpur Industrial Estate. The study covered 21 different units comprising industrial units such as foundries, tin-making, cables, metals, oil-mills, battery, ice, rayon, paper industry, etc. The objective of the study was two-fold. One was to find out the extent of utilisation of the capacity. Their findings indicated the range of capacity utilisation from 30% to 100%. The under

utilisation of the installed capacity was the result of various problems faced by these units. As these units were situated far from the metropolitan cities, they faced marketing problems, resulting in additional cost on storage and transportation which reduced the product competitiveness. The second problem faced by these units was related to the supply of raw material. The supply of raw material was inadequate and irregular. Finance was the third impediment in the full utilisation of the capacity. There was inadequacy of working capital due to rigid loan operation policies, without raising the limit, unless the units concerned raised its utilisation of capacity and being security oriented rather than production oriented. The Government, through the Department of Industries, encouraged the entrepreneurs to start a unit without considering the norms for a healthy unit and the availability of inputs and its capacity to supply the same. This policy was also partly responsible for underutilisation of capacity. Non-availability of skilled labour and ineffective management due to lack of systematic approach to decision making were the other problems which were responsible for underutilisation of capacity.

- 1.3 Dr.P.Ramayya & A.Pappayya of Warangal District in Andhra Pradesh ² made a micro level study of capacity utilisation in rice milling industry. They analysed the problems related with the utilisation of capacity in the rice milling in Warangal. They made four categories of the mills according

to their capacity such as less than 1 tonne, between 1 to 1.5 tonnes, 1.5 to 2 tonnes and 2 to 3 tonnes. Their findings indicated that the rice milling industry in Warangal was utilising 62.5% of its installed capacity, which was higher than the all-India average of 50% utilisation. Category-wise, capacity utilisation was 65.5%, 60%, 66.67% and 58.33% respectively. They cited various reasons for the underutilisation of capacity. The mushroom growth of mills operating in the villages over their counterparts in Warangal increased the competition. Inadequacy of raw material, especially during slack season, was the other reason. Very little quantity of paddy comes to the market which is not sufficient to feed the entire industry. As the agriculture in the district mostly depends on the monsoon and rainfed tanks, it creates fluctuations in paddy production, affecting the capacity utilisation. Another important factor related to capacity utilisation was Government policy. The Government had imposed 50% levy of rice produced at a price much below the market price. Other factors cited by them are organisation of the industry, i.e. the pattern of rice milling industry in Warangal being highly individualistic and family-oriented, lack of technical knowhow, shortage of skilled workers, unexpected breakdowns of machinery due to lack of preventive or maintenance department. Alongwith these problems, they also faced the problems of marketing as the villagers mostly brought the produce to the city and sold directly, as a result of which the grip over the local market was lost.

1.4 Another important study of capacity utilisation was made by Kedia Y.P.³ It was a case study of machinery manufacturing plant in the private sector. His study aimed at demonstrating the relevance of improving capacity utilisation by identifying the causes of underutilisation of capacity. In his study, he covered six years' period from 1972 to 1978 and the range of capacity utilisation rate was found to be between 60 to 110%. The major factors responsible for under utilisation of the capacity were the lack of availability of cranes and other facilities, operation parameters, i.e. the actual practices differed widely from the planned one due to the workers' unawareness of the correct speeds and feeds, etc. Kedia's case study pointed out the following important points. Firstly, capacity indicated by industry was only a target, based primarily on marketing potential. Secondly, money value in any case is not a satisfactory measure of capacity different units since capacity to produce is independent of prices prevailing in the market. Thirdly, production figures included values of purchased components and hence, do not, in fact, show the value added by the Firms.

1.5 The major eleven tyre Companies were studied by K.M.Mammen Mappila.⁴ His study clearly indicated a dropping trend in capacity utilisation from 74% in 1978 to 64% in 1983. The major cause for underutilisation of capacity was the Government policy. The government imposed high taxes and duties on tyres, which had been treated on norms synony-

mous with those for luxury items. It restricted market growth due to high prices. The cascading effects of duties and taxes on inputs and finished tyres had inflated the ultimate price of the tyres for the consumer to approximately three times that of the pre-tax price at which the tyres could be offered otherwise. Between 1981 to 1983, input costs alone had gone up by more than 19 percent. As a result of high costs, many tyre users had made it a practice to use their tyres upto dangerously high worn-out levels. Even those tyres whose life cannot be renewed were retreaded without any guarantee. The tyre Companies had already exhausted all avenues of cost economisation. Now they were confronted with the huge cost of underutilisation of capacity.

1.6 The problem of capacity utilisation in the context of public sector industries has also been studied by various experts. Prof. Gangadhara Rao and Dr. B. Ramkrishna Rao⁵ made a study regarding the working of Central Government Undertakings. Their findings indicate that both exogenous and endogenous factors were responsible for low capacity utilisation. The exogenous factors included load-shedding and inadequate power supply by various State Electricity Boards, infrastructural bottlenecks such as non-availability of railway wagons, raw material transport facilities and poor order book position, etc. The endogenous factors consisted of poor industrial relations, poor maintenance of plant and machinery, technological deficiencies and defective product mix profile, etc.

1.7 Mr.R.K.Mishra⁶ made a case study of the Durgapur Steel Plant. He studied the problem of capacity utilisation at the Durgapur Steel Plant in greater details. He pointed out various factors which were responsible for underutilisation of capacity. According to his study, the capacity utilisation rate for the Project was 51% in the year 1974-75. The study broadly pointed out following factors as responsible for underutilisation of the capacity. Firstly, the planning and control of production was poor. Secondly, shortage of power was another important impediment in the full utilisation of the capacity. Alongwith these factors, inadequacy of demand severe labour unrest, lack of auxilliary facilities and ineffective management were also responsible for the under utilisation of the capacity.

1.8 A special correspondent of the Hindu Survey of Indian Industries⁷ studied the units under Steel Authority of India Limited (SAIL). According to this study, the capacity utilisation rate of all the SAIL plants had been low in 1983-84. It dropped from 94% to 80% within one year at Bhilai. At Durgapur, it decreased from 66% to 49% in the period of 1983-84. The same story was true about Rourkela Plant. At Rourkela Plant, the rate of capacity utilisation was 70 per cent against 81 percent a year earlier. Similarly at Bokaro, the capacity utilisation rate was 65% as against 81% in 1982-83. At Burnpur, it fell to 55 percent from 63% in one year. The study cited various factors causing underutilisation

of the capacity such as sudden drop in demand, shortage of power, high consumption of energy, raw materials and inadequate output and lack of sophisticated technology, etc. It resulted in high cost of production.

1.9 Alongwith separate studies of the private sector industries, there are some studies in which both private and public sector units were studied jointly. A brief review of such studies is given below.

1.10 Sushil J.Lalwani, K.S.Ram and Hardev Singh⁸ studied the problem of capacity utilisation of the cement industry in the public and private sectors for twentyeight years sfrom 1954 to 1981. According to their findings, the range of capacity utilisation was between 28.9 percent to 100.4 percent. They cited various reasons for underutilisation of capacity. Power cuts or failures of electricity supply was the major impediment. The supply of coal also was quite erratic and even the availability of railway wagons was uncertain. Some internal factors were also responsible for underutilisation of capacity, e.g.shortage of raw material,mechanical troubles, repairs of mills, etc. Labour problems also interrupted the smooth working of the units which were fortunate enough to have adequte power and coal.

1.11 M.Vinayak⁹ studied the non-ferrous metals sector in public and private undertakings. In the ten years period from 1973-74 to 1983-84, the capacity utilisation of aluminium

smelters indicated a continuously decreasing trend. The rate of capacity utilisation came down from 75.9 percent to 63 percent. The factors which affected capacity utilisation adversely were drastic cuts in the supply of power, the key input to the smelters, lack of demand owing to rising prices and the Government's bureaucratic controls and erratic policies, etc.

1.12 The problem of capacity utilisation in respect of fertiliser units was studied by N.Vittal.¹⁰ In the case of nitrogenous plants, the extent of capacity utilisation was 67% and in the case of phosphatic plants, it was 69 percent. 18 out of 39 units (45%) were operating well below the average. Similarly, 55% (31 out of 55) phosphatic plants were operating below average. The causes for underutilisation of the capacity were more or less similar to those for other industries such as power problems, shortage of raw materials, equipment break downs and labour problems.

1.13 A more comprehensive study was conducted by the Federation of Indian Chambers of Commerce and Industries, New Delhi.¹¹ Its main objective was to ascertain whether there was demand constraint and the causes which brought this about. In the survey administered by a questionnaire, 600 units were studied, both from public and private sectors. It was affirmed by the responses that demand had been the major constraint. The study also revealed that the demand constraint was more

pronounced in the case of capital goods industries such as chemicals and chemical products, commercial vehicles, diesel engines, textile machinery including automatic weaving machines, etc. The range of capacity utilisation rate in the above study was found to be between 12 percent to 75 percent. According to the study, the major causes responsible for demand constraint resulting into underutilisation of capacity were high duties on inputs vis-a-vis the duties on finished products which reduced competitive-ness in the market on the one hand whereas dumping of finished products on the other hand increased the competition. Similarly, slower growth in user industries such as textile and electricity boards, etc. also created constraints on demand. High costs of inputs which were reflected in the higher prices of finished products, also reduced the demand. Introduction of cheaper substitutes and inadequate growth of exports were some other factors responsible for demand constraint and underutilisation of capacity.

- 1.14 Various experts have tried to explain the causes of underutilisation of capacity. According to Prof. Samuel Paul,¹² explanation for the underutilisation of industrial capacities in the Indian economy could be sought in the phenomena such as market structure, deficient or excessive demand, size of the firm, substitute products, import substitution, major additions of capacity in the preceding year, strikes, power shortage and transport bottlenecks, etc.

1.15 In the article "Helping Industry Attain Full Growth" Ramkrishna Bajaj¹³ pointed out the slow growth in demand as the critical factor responsible for underutilisation of capacity. He emphasised that demand had not been rising fast enough to utilise fully the capacity already established. As a result of slack demand, domestic industries were forced to accumulate unwanted inventories even with a lower level of production. Some other factors also contributed to under-utilisation of capacity, such as the low demand for investment goods which had a significant impact on engineering sector. Similarly, shortage of power, irregular supplies of coal and inadequate infrastructure had also inhibited faster growth of the industrial sector which led to underutilisation of capacity.

1.16 According to the findings of Raghunath K.Koti¹⁴ the major reasons for underutilisation of capacity in the Indian industries are lack of demand and shortage of raw materials and components.

1.17 Various studies on capacity utilisation in public enterprises¹⁵ have cited following important factors which lead to underutilisation of capacity. These factors are wrong calculation of the installed capacity, incorrect choice of technology, inadequacy of demand, power shortages, lack of balancing equipment, industrial unrest and managerial shortcomings.

1.18 The problem of capacity utilisation of sugar industry in India was studied by Dr.S.D.Tupe.¹⁶ In his article, he tried to find out the extent of underutilisation of productive capacity of sugar industry in India and Maharashtra as also the reasons for underutilisation (besides drought situation) if any. In his analysis, he provided comparative picture of capacity utilisation of Marathwada region and other parts of Maharashtra. In 1980-81, the rate of capacity utilisation was 70 percent for Maharashtra and 56.79 percent for Marathwada. The main reasons for underutilisation of capacity in sugar industry was the inadequate area under sugarcane which resulted in increasing cut throat competition, cross movement of sugarcane causing increasing cost of transport, which ultimately increased the cost of production of sugar. In the case of Marathwada, low recovery percentage is also said to be responsible for underutilisation of capacity of sugar production.

REFERENCES

- 1) T.Subbi Reddy & Murthy
"CAPACITY UTILISATION IN SMALL INDUSTRY - A CASE STUDY OF INDUSTRIAL ESTATE, ANANTPUR"
SEOME 1979, Vol.VI No.1, March 1979, pp.16-22.
- 2) Dr.P.Ramayya & A.Papayya
"CAPACITY UTILISATION IN RICE MILLING INDUSTRY - A MICRO LEVEL STUDY"
SEOME, Vol.XII No.3, Sept. 1985, pp.49-52.
- 3) KEDIA Y.P.
"IMPROVING CAPACITY UTILISATION"
PRODUCTIVITY 1983, Vol.XXIII, No.4, pp.393-401.
- 4) K.M.Mammen Mappillai
"CHRONIC DEMAND-CAPACITY MISMATCH IN TYRES"
The Hindu Survey of Indian Industry 1984, p.175.
- 5) Prof.M.Gangadhara Rao & B.Ramkrishna Rao
"CENTRAL HEAVY ENGINEERING UNITS - CAPACITY UTILISATION"
YOJNA 26th JAN. 1981 Vol.XXV/1&2, P.129.
- 6) Dr.R.K.Mishra
"CAPACITY UTILISATION IN DURGAPUR STEEL PLANT"
EASTERN ECONOMIST, Vol.67, June 1981, pp.866-902.
- 7) "SAIL UNITS TUNE PRODUCTION TO MARKET NEEDS"
The Hindu Survey of Indian Industry 1984, p.37.

- 8) Sushil J.Lalwani
"CAPACITY UTILISATION IN CEMENT INDUSTRY"
PRODUCTIVITY 1984, Vol.XXV No.3, pp.301-307.
- 9) K.Vinayak
"COSTLY EXPERIENCE IN NON-FERROUS METALS SECTOR"
The Hindu Survey of Indian Industry 1984, p.49.
- 10) N.Vittal
"FERTILISER UNITS - EFFORTS TO RAISE PRODUCTIVITY"
The Hindu Survey of Indian Industry 1984, p.125.
- 11) "IS THERE A DEMAND CONSTRAINT ?" A study made by
Federation of Indian Chambers of Commerce & Industry,
ECONOMIC TRENDS, A Fortnightly Journal of Economic
Affairs.
- 12) Planning Commission (Government of India, New Delhi).
"INSTALLED CAPACITY & ITS UTILISATION IN INDIAN
INDUSTRIES" (published in papers relating to the
formulation of Second Five Year Plan 1955).
- 13) Ramkrishna Bajaj
"HELPING INDUSTRY ATTAIN FULL GROWTH"
The Hindu Survey of Indian Insutry 1984, p.15.
- 14) Raghunath K.Koti
"CAPACITY UTILISATION & FACTORS AFFECTING IT IN
CERTAIN INDIAN INDUSTRIES"
1966-67 Mimeograph no.2, Gokhale Institute of
Economics & Politics, Poona 1967.

15) (A) FINAL REPORTS ON CAPACITY UTILISATION IN PUBLIC SECTOR UNDERTAKINGS PRESENTED TO THE BUREAU OF PUBLIC ENTERPRISES (MINISTRY OF FINANCE, GOVERNMENT OF INDIA) BY THE NATIONAL PRODUCTIVITY COUNCIL, New Delhi.

(B) BUREAU OF PUBLIC ENTERPRISES (MINISTRY OF FINANCE, GOVERNMENT OF INDIA), ANNUAL REPORT ON THE WORKING OF INDUSTRIAL AND COMMERCIAL UNDERTAKINGS OF THE CENTRAL GOVERNMENT 1974-75, p.125.

16) Dr.S.D.Tupe
"CAPACITY UTILISATION OF SUGAR INDUSTRY IN INDIA"
