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Industrial Capacity Utilization in India

Kanishka Gupta^a

^aO P Jindal Global University, Sonipat, India

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Capacity Utilization is very essential for industries as it provides full usage and maximum level of potential reaching of any firm. Capacity Utilization in Indian Industries is a problem. They are not focused at, and researchers, the very limited researchers who are actually trying to look into Capacity Utilization as an essential ingredient of manufacturing, are trying to look for ways that suit India. In this essay, an analysis of Capacity Utilization at the time of Liberalization, Privatization, and Globalization and basic Capacity Utilization analysis is done, which provides insight as to where our country stands with Capacity Utilization. Ways to Increase Capacity Utilization level are iterated, what leads to low Capacity Utilization along with, what is the current scenario, or the status of Capacity Utilization in our country.

Keywords: *industrial capacity, privatization, globalization.*

INTRODUCTION

“Capacity Utilization is a ratio of the actual level of output to a sustainable level of output or capacity.”¹ In simpler words, Capacity Utilization is the relation between the final output that is produced by the firm using its available capacity and the maximum potential output the firm can reach or which can be produced, if the available capacity was fully used. It becomes essential

¹ Corrado C & Matthey J, ‘Capacity Utilization’ (1997) 11(1) Journal of Economic Perspectives 151–167

for a firm to produce at 100% of its capacity, as not only they will be using its available capacity to its full use, but also, they will be able to make its business more competitive as, when output increases, the average production cost used while this increase tends to fall and thus, higher utilization can reduce unit costs. And when a firm is operating under 100% of its maximum capacity, it has 'Spare Capacity.'

"The estimation of capacity utilisation provides an indication of the demand pressure in an economy."² And there are two ways in which we can estimate the Capacity Utilization of Industries. One is the survey method and the other is by using the time-series method. In the case of our country, researchers are trying to find the best way to assess Capacity Utilization for our country, and so far, they believe that the time-series method is able to assess the fluctuations of the business and the inflationary pressures fairly better than the survey method. There is another method to calculate Capacity Utilization and that is the production function method. This is basically an engineering formula to calculate a company's Capacity Utilization. "Under this method, capacity utilization is measured as the ratio of actual production to installed capacity. It can be formulated as"³: Capacity utilization (%) = Actual Production/Installed capacity ×100

Capacity Utilization can be less than 100% for a firm for a lot of reasons, for example, falling market share, the possible introduction of new technology, poor maintenance of employees, poor allocation of resources, etc. But sometimes, there are other factors, such as a rise in demand or excess demand, which is the situation when the demand is rising so much that the firm is not able to meet it, which is not in the control of the firm. This situation can be tackled by either increasing the workforce, increasing the working hours of the labor, etc. But this can also put pressure on the workforce, so, there are some drawbacks in an attempt to reach 100% potential.

STUDIES OF INDUSTRIAL CAPACITY UTILIZATION IN INDIA

² Mukherjee A & Misra R, 'Estimation of Capacity Utilisation in Indian Industries: Issues and Challenges' [2012] Department Of Economic And Policy Research

³ Bhatia A & Kaur B, 'Capacity Utilization of Capital Goods Industry in India: An Empirical Evaluation' (2017) 10(4) Pacific Business Review International

History of Capacity Utilization in India:

“Industrialization in developing economies plays a vital role in promoting aggregate economic growth and development.”⁴ And India has proved to be one of the fastest-growing third-world countries through its impeccable economic performance. Even though the power of demand and supply also reduces the chances of a firm having a stable profitable ratio and thus, it makes it important for the firm to reach at “decisions relating to the volume of output to be produced under optimal conditions of factor use.”⁵ And thus, these decisions have a direct effect on how to utilize the available resources and in what capacity to reach that decided output level. Through this, the company is not able to fully utilize its resources.

The National Council of Applied Economic Research (NCAER) gives out information on Capacity Utilization in Indian Industries and recently, economists have started using Capacity Utilization and have started analyzing Capacity Utilization to predict the inflationary conditions in the economy. There has been very little focus on the studies of Capacity Utilization in the past. The earliest studies of Capacity Utilization can be dated back to the 1950s, for the period between 1951-1959, done by Budin and Paul and published by CSO which was based on Monthly Statistics of Production of Selected Industries (MSP). In 1966, another study was conducted by NCAER which was based on MSP data and survey data. These studies later continued to take place in the future as well, but the basis and the theme of all the studies relating to Capacity Utilization varied on different elements. For example, “in the year 1970, RBI published estimates of ‘potential utilisation rate’ for manufacturing industries in India (Divatia and Varma, 1970) for the years 1960 to 1968 using a trends-through-peaks method as discussed earlier”⁶ and “Goldar and Ranganathan in the year 1991 studied the effect of market structure and government policies on Capacity Utilization in Indian industries.”⁷

⁴ Kumaravelu M & Madhavan M, ‘A Study on the Capacity Utilization of Indian Industries’ [2014] Research Revolution

⁵ *Ibid*

⁶ Mukherjee (n 2)

⁷ *Ibid*

And through all these studies, they came to a conclusion with regard to the movement of Capacity Utilization:

- From 1974-84, there were high fluctuations
- 1984-1990, India witnessed a relatively stable CU
- 1991-1998, it was observed that the first phase (1974-1984) was surfacing
- It was noted that there was no correspondence with Capacity Utilization and the policy environment
- “The impact of economic reforms *per se* has not been found to be remarkable.”⁸

CURRENT SCENARIO

In this time and age, there are no official plans to calculate and assess the Capacity Utilization of the countries' industries, or any other sector for that matter. Most of the studies of Capacity Utilization of Indian Industries are obtained through conventional methods. The only available information provided to us on Capacity Utilization of the Indian industries is either done by Central Statistics Office (CSO). Or the limited information obtained by the country on our Capacity Utilization is gathered through various business surveys done by RBI, NCAER, and the Federation of Indian Chambers of Commerce & Industry (FICCI).

PROBLEMS WITH INDUSTRIAL CAPACITY UTILIZATION IN INDIA

“The principal problem underlying the interpretation of most of the existing studies is the weak link between the underlying economic theory and the used measures of capacity utilization; therefore, a theoretical investigation into the problem is difficult to find.”⁹ These studies of Industrial Capacity Utilization have left several theoretical and data problems. It is also believed that the calculations of Capacity Utilization are very ambiguous because of undefined economic foundations.

⁸ *Ibid*

⁹ Ray S, 'A Close Look into Research Studies on Capacity Utilization in India and Abroad' [2013] International Journal of Economics, Finance and Management

ANALYSIS OF INDUSTRIAL CAPACITY UTILIZATION REPORTS IN INDIA

“Industrial sector in India, in general, is suffering from the problem of under-utilization of plant capacity.” The result of this can be seen in a number of things, but more prominently in the higher cost-structure of industrial production along with the Incremental capital-output ratio. This leads to minimized competitiveness of Indian industries across the globe.

<i>Industry</i>	<i>Capacity Utilisation</i>	
	<i>1980 (%)</i>	<i>1993-94 (%)</i>
1. Sugar	65	80
2. Vanaspati	55	40
3. Aluminium	57	76
4. Commercial Vehicles	73	46
5. Passenger Cars	58	100.1
6. Dry Batteries	77	57
7. Domestic Refrigerators	82	106.8
8. Power Transformers	62	86
9. Cement	74	80
10. Paper Board	70	58.1
11. Petroleum Products	74	95.7
12. Soap	149	58

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The above table provides Capacity Utilization in the percentage of some important industries in India. This data is from the time of Globalization. An increase shows better utilization of the capacity, while a fall shows a fall in the capacity utilization:

- For the sugar Industry, the data of 1980 says that the Capacity Utilization of the Sugar Industry was 65% which increased by 15% in 1993-94.
- While the data of 1980 for Vanaspati Industry’s Capacity Utilization shows 55% but in the following decade (1993-94) it falls by 6% to 44%.
- In the Aluminum Industry Capacity Utilization data, we see that it was 57% in 1980 and then a 21% increase by 1993-94.
- But for Commercial Vehicle Industry, we see a drastic fall of 27%, from 73% in 1980 to 46% in 1993-94 in its Capacity Utilization.
- In 1980, the Capacity Utilization can be seen as 58% but then in the next data, it has risen to a 100.1%.

¹⁰ *Ibid*

- Dry Batteries Industries suffered a fall in their Capacity Utilization of 20%, from 77% in 1980 to 57% in 1993-94.
- The domestic refrigerator industries' Capacity Utilization had increased. It was 82% in 1980 and then, 106.8% in 1993-94.
- Power transformers saw an increase in their Capacity Utilization as well. From 62% to 86% in the same period.
- Even the cement industries saw an increase in their Capacity Utilization, even though a minute increase, from 74% to 80%.
- But paper board industries were not as lucky as cement, power transformers, and domestic refrigerators in terms of their Capacity Utilization. They suffered a fall, from 70% in 1980 to 58.1% in 1993-94.
- But petroleum products' Capacity Utilization rose. From 74% in 1980 to 95.7% in 1993-94.
- But it was the soap industries that suffered the most with respect to their Capacity Utilization. They suffered a fall from 149% in 1980 to 58% in the subsequent decade (1993-94).

This was an analysis of the Capacity Utilization of Indian industries at the time when LPG (Liberalization, privatization, and Globalization) was taking place in India. The next analysis is of India's current Capacity Utilization in its industrial sector. "Things may be getting a tad better for Make in India even as capacity utilization of factories remain low, a survey by The Federation of Indian Chambers of Commerce and Industry (FICCI) has found." The data for all four quarters of 2018-19 and the possible quarters of 2019-20 represents the total Capacity Utilization of all the industries in an aggregated form. In the first quarter of 2018-19, it was around 54%, which remained the same in the third quarter. Then, in the last quarter of 2018-19, there were some changes observed. "At the aggregate level, Capacity Utilization declined to 73.6 percent in Q1:2019-20 from 76.1 percent in Q4:2018-19, broadly tracking the de-trended index of industrial production (IIP). Seasonally adjusted, Capacity Utilization increased by 0.3 percentage points to 74.8 percent in Q1:2019-20."

FACTORS THAT LEAD TO A DECREASE IN CAPACITY UTILIZATION IN INDIA

Insufficiency in the basic inputs: **When the basic inputs of the produce or output, are lacking, it leads** to a fall in Capacity Utilization. For example, when basic electricity and power are absent, Indian industries have to work lower than the capacity they can reach.

Fall in Demand: When the demand for a product falls, the firm reduces its production and this, in turn, leads to a fall in the capacity at which the firm can produce.

Inter-Industrial Disputes: The inter-industrial disputes lead to a fall in Capacity Utilization as bad relations between firms and the resulting enmity lead to no business between them, and thus, a loss in man-days occurs and then, it decreases the maximum level of Capacity Utilization at which, the firm can reach.

Faults: Sometimes, faults in the product itself can be an indicator of low Capacity Utilization. Any fault in the product arises from the lack of proper diligence and care by the management and the production group of the firm.

WAYS IN WHICH INDIA CAN INCREASE CAPACITY UTILIZATION

- First, is to make sure that the above-mentioned factors are taken care of and do not create any sort of problems.
- Try to create a healthy environment for the workers so that the cause of strikes and tardiness does not take place.
- If the labor is lacking, then hire new labor, and if the demand is rising and there is not enough workforce to meet the demand, hire a new workforce or make the previous ones work extra time.
- Try to find possible ways to promote efficiency, as inefficiency is what leads to low Capacity Utilization.

CONCLUSION

Capacity Utilization of a firm is, hence, very important to be recognized and assessed as, mentioned earlier, when a firm tries to increase their potential utilization and try to reach the highest level possible, the company incurs better profits, has better production efficiency and does well in the long run. And in the case of our country, Capacity Utilization has always been a challenge. It has become important for the Indian industries to finally start focusing on their Capacity Utilization level and make sure that the potential is reached as it would not only improve their profits and business in the long run but it is believed it will also help in job creation. If the companies use their available resources to their maximum potential, which leads to Capacity Utilization maximization, the need for heavy investments or continuous investments can stop and the companies can easily produce more in the available resources and save millions of money at the same time. To sum up, Capacity Utilization is an essential factor in business planning and business growth, and it has been ignored or given less importance for far too long by Indian producers and industries. A little effort in the management department and decisions making process and can give rise to a better Capacity Utilization level.