Capacity Underutilization and the Burden of Excess Labour in Micro and Small Enterprises: An Empirical Study

Mamoni Sharma[1]

[1]*Associate Professor, Department of Economics, Digboi College, Digboi Assam, India*

ABSTRACT

In Twelfth Five Year Plan (2012-2017) document of India, Micro, Small and Medium Enterprises (MSMEs) have a focus attention. According to Planning commission (12th Plan), "The Growth of the MSME Sector must be a central focus of India's Manufacturing strategy. This is the foundation for a strong Manufacturing Sector providing more employment with less capital.......". Thus the plan envisages 'Capacity Building' of micro enterprises which constitutes 94.9% of the manufacturing units (Fourth All India Census of Micro, Small and Medium Enterprise, 2006-07), so as to ensure that Micros grow into Smalls, Smalls to Mediums and then to Larges so that by the end of plan period, in the year 2017, we have at least 10% Medium and 25% Small Enterprises in Manufacturing (Salvekar, 2013). However, before taking any step for capacity building in micro and small enterprises with the aim of generating more employment avenues, it is important to examine the extent to which the existing capacity installed in micro and small enterprises has been utilized and whether the labourers employed in such enterprises are optimally used or not. Thus the present paper aims at measuring the average capacity utilization in micro and small enterprises and examining its relationship with the optimum use of labour force. Establishing the relationship between average capacity utilization and the burden of excess labour in micro and small enterprises, the study also recommends the ideal level of capacity utilization required to attain the efficient use of labour force. The relationship between average capacity utilization and the burden of excess labour has been established by using Karl Pearson's correlation coefficient and the required level of capacity utilization has been determined by fitting a straight line equation with the help of least square method.

Keywords: Micro and small enterprises, Capacity underutilization and optimum use of labour.

1. Introduction

The labour productivity virtually means the overall productivity of the micro and small enterprises which are generally labour intensive in nature. Therefore, in such enterprises motivating the workers in the healthiest manner should be a constant strive for the entrepreneurs (Sarma, 1976). While discharging the function as a co-ordinator for input mobilization, an entrepreneur basically manages four 'M's, viz. Man-power (human factor), Machine (tools & equipments), Material (raw or semi-manufactured items purchased from other firms) and Money (finance).Among all these factors human factor that is labour is the most important power of any productive activity. It is labourer who makes the wheel of progress move. To mean Labour force the terms 'Worker', 'Manpower', 'Personnel', Human resource' etc are used in industrial and business organizations (Kaulgud, 2003). Whatever may be the term used, the most important in case of labour is its proper utilization by making it suitable to adjust with the changing socio-

economic, political and technological environment. The success or otherwise of an enterprise, particularly the micro and small scale enterprise largely depends on the efficient utilization of its labour force.

The Micro, Small and Medium Enterprise Development (MSMED) Act that came into the force with effect from 2nd. October, 2006 has defined Micro, Small and Medium Enterprises as follows:

a) A Micro enterprise is a unit which invests up to Rs. 25 lakh in plant and machineries in manufacturing sector while in service sector a micro enterprise invests up to Rs. 10 lakh in equipments.

b) A small enterprise in manufacturing sector is the unit in which the investment in plant and machineries is more than Rs. 25 lakh but does not exceed Rs. 5 crore while in small scale enterprises under service sector the investment in equipments is more than Rs. 10 lakh but does not exceeds Rs. 2 crore.

c) Medium enterprises in manufacturing sector invest within the range of Rs. 5 crore to Rs. 10 crore in plant and machineries while such enterprises under service sector make their investment in equipments within the range of Rs. 2 crore to Rs. 5 crore.

According to Fourth All India Census of Micro, Small and Medium Enterprise,2006-07(Development Commissioner, MSME, Govt. of India), out of 15.64 lakh registered operating enterprises in India, Micro and Small enterprises together constitute 99.83% while only 0.17% is recorded as medium enterprises. So far as employment generation is concerned the micro and small enterprises create employment avenues in the order of 65.34 lakh (70.19%) and 23.43lakh (25.17%) respectively while 4.32 lakh(4.64%) employment is generated by Medium enterprises. In case of Assam the MSMEs provide the maximum self employment and job opportunities after agriculture. At present in Assam the total number of 19,864 registered working enterprises are generating employment avenues for 2, 10,507 persons out of which the micro and small scale enterprises employ 1, 15,279 and 77,452 persons respectively (Fourth All India Census of Micro, Small and Medium Enterprise, 2006-07).According to Economic Survey of Assam, 2011-12, till the year 2010-11, the total SSI/MSME units in Assam numbered 34,327 are providing employment to 1, 78,054 persons.

In the 12th Five Year Plan (2012-2017) a target of 4 lakh new Micro Enterprises has been fixed for creation of new employment opportunities for around 32 lakh unemployed youth under PMEGP scheme-says MSME Minister (Conference on MSME funding - opportunities and challenges, May 23,2013,New Delhi).

In Twelfth Five year Plan document, MSMEs have a focus attention. According to Planning commission (12th Plan), "The Growth of the MSME Sector must be a central focus of India's Manufacturing strategy. This is the foundation for a strong Manufacturing Sector providing more employment with less capital. It is the entry point for the workers and entrepreneurs who move through it to large-scale enterprises……" In the 11th Plan Rs. 10247 Crore was the total outlay for MSME Ministry. It has been increased by 153.87 per cent in the 12th Plan. The Budgetary support during last Five Year Plan was Rs. 9175 Crore which is being raised by 162.93 per cent during the current Plan which stands to Rs. 24124 Crore. This increase in plan outlay aims at 'Capacity Building' of micro enterprises which constitutes 94.9% of the manufacturing units (Fourth All India Census of Micro, Small and Medium Enterprise, 2006-07) so as to ensure that Micros grow into Smalls, Smalls to Mediums and then to Larges so that by the end of Plan period, in the year 2017, we have at least 10% Medium and 25% Small Enterprises in Manufacturing (Salvekar, 2013). However, before taking any step for capacity building in micro and small enterprises with the aim of generating more employment avenues, it is important to examine the extent to which the existing capacity installed in micro and small enterprises has been utilized and whether the labourers employed in such enterprises are optimally used or not.

2. Objectives of the Study

Under the above backdrop the present paper aims at

i) measuring the average capacity utilization in micro and small enterprises
ii) examining the relationship between average capacity utilization and the burden of excess labour in micro and small enterprises
iii) determining the required level of capacity utilization to attain the optimum use of labour force.

3. Scope and Methodology

The present study takes the district of Tinsukia in Assam as its base. The district is the pioneer in the industrial map of Assam and still occupies leading position in the industrial scenario of the state with concentration of most of the medium and large-scale industrial units of the state. Some important medium and large scale industries operating in the district are petroleum, coal, tea and plywood. As regards the

number of Micro and small enterprises (registered under DICC), as on 31st. March, 2010 there are 1425 registered operating units in Tinsukia district of Assam. These 1425 units constitute the universe of the present study. All the 1425 functioning units having permanently registered with the DICC, Tinsukia are categorized according to various industry groups to which each of them belongs. Thus there emerge 15 industry groups. On being categorized, 5% units from each group subject to a minimum of two units were taken by random sampling method. Thus 111 units emerged.

For the purpose of the present study, a field survey was conducted during the financial year 2013-14 and performance data are related to the average of three years viz 2010-11, 2011-12 and 2012-13. So far as the employment is concerned, in the present study an entrepreneur is also considered as a labourer in addition to the permanent and casual workers (both managerial and non-managerial) employed in the enterprise.

4. Empirical Study

The findings of the present study are analysed under the following heads:
A. Average Capacity Utilization
B. The Burden of Excess Labour
C. The Required Level of Capacity Utilization

A. Average Capacity Utilization

The level of capacity utilization of an enterprise reveals the general health of the unit. In fact, the level of capacity utilization of an enterprise gives a true and fair view of its performance. "In other words, unutilized capacity of an enterprise is an index of its problems and all the problems faced by an enterprise leads to underutilization of installed capacity" (Prasain and Singh, 2007). An efficient entrepreneur is able to minimize wastages by curbing the existence of excess capacity to a minimum level; that not only fetches him a sound return on investment, but also gives maximum benefit to the society in terms of employment or resource utilization.

With a view to depicting a general picture of the level of plant capacity utilized by the sample enterprises, Table 1.01 is presented here. It is evident from the table that the average capacity utilization of the sample enterprises in the district under present study is 51.87%. Further, six industry groups viz., Textiles, Paper products, Ceramics, Beverages, Leather & allied products and Bamboo & cane products are producing above the district average; Metal product group is producing at par the district average, while the remaining eight groups are working below the district average. In its 'Survey of capacity' the office of the Development Commissioner, Small Scale Industries (MSME DC), Govt. of India, allowed an efficiency factor of 75%, the remaining 25% being provided for repairs, maintenance, start up time and other production interruptions. This means that the capacity utilization of 75% is taken as the norm in the Micro and small enterprises taken together (Sarma, 1999). Incidentally, all the industry groups except 'Beverages' and 'Leather & Allied Products'' have unutilized capacity in the plants at varying degrees.

Table-1.01. Industry group wise computation of average capacity utilization and surplus permanent workers employed in the sample units

Dist. — Inustry Group	Tinsukia District						
	Average Capacity Utilization	Total Sample	Permanent Employee			No. Of Unit Suffering from Over Staffing	Average No. of Surplus Workers
			Actual	Standard	Variance		
Taxtiles	60.89	09	21	18	03	02(22.22)	1.5
Wood Products	35.18	07	95	49	46	03(42.86)	15.33
Food & Allied Products	44.44	14	147	138	09	03(21.43)	03.00
Paper Products	64.33	08	77	76	01	01(12.50)	01.00
Chemicals	50.67	04	10	06	04	01(25.00)	04.00
Metal Products	51.78	14	76	73	03	02(14.29)	01.50
Transport Equipment &Repairing	41.69	10	30	22	08	03(30.00)	02.67
Ceramics	57.50	07	21	19	02	01(14.29)	02.00
							Continue

Machineries & Repairing	46.06	05	17	14	03	02(40.00)	01.50
Breverages	76.50	06	95	94	01	01(16.67)	01.00
Leather & Allied Products	76.67	02	20	20	00	00(00.00)	00.00
Non Metalic Mineral Products	46.20	08	73	57	16	02(25.00)	08.00
Rubber Products	50.34	02	17	14	03	01(50.00)	03.00
Cane & Bamboo Products	55.00	01	20	16	04	01(100.00)	04.00
Misc.	50.79	14	33	30	03	01(07.14)	03.00
Total/Average*	51.87*	111	752	646	106	24(21.62)	04.42*

Source: Compiled from Field survey inputsFigures in the parentheses indicate the percentage of group totals.

B. The Burden of Excess Labour

Capacity underutilization in small scale enterprises is the most important reason behind casualisation of labour in such enterprises. When the level of capacity utilization is at substantially low level, some of the permanent staffs remain unutilized. This creates huge financial loss to the enterprises thereby discouraging the employment of permanent labour.

With a view to examining the impact of capacity underutilization on the optimum utilization of the labour force permanently employed in the units, the entrepreneurs were asked to indicate the actual number of permanent workers they need to maintain the present level of operation of their enterprises. It can also be seen from the table that out of 111 sample enterprises 24(21.62) are suffering from over staffing. The table further reveals that all the groups of industry with the exception of Leather & allied products group, suffer from the malice of excess employment of permanent workers in varying degrees. The brunt falls heavily on the Wood products group. Under this group, out of 7 sample units operating at average capacity level of 35.18%, 3 units employ 46 permanent workers in excess of their standard requirement at this level of operation. Thus, there is excess employment of 15.33 permanent workers per unit of enterprises suffering from overstaffing. This is followed by Non-metallic mineral products with 8 sample units utilizing 46.20% of their rated capacities; employ 16 permanent workers in excess. Under this group, 2 units are suffering from overstaffing. Thus the average excess employment is 8 persons per unit. Similarly, Cane and Bamboo products and Chemical groups, working at 55% and 50.67% levels of operation respectively, have 1 unit in each bearing overstaff and employ 4 permanent workers in excess.

Interestingly, the Leather & allied products group utilizing the highest average capacity of 76.67% among all groups under the sample does not complain about existence of surplus permanent workers. Among the other groups the least sufferers are Paper products and Beverages utilizing 64.33% and 76.50% of their plant capacities respectively.

Computation of coefficient of correlation (r = -0˙64) between the average capacity utilization of the sample units and the average number of surplus workers per unit reveals that there is an indirect relationship between the two variables. This means that higher the level of capacity utilization, lower is the average number of surplus workers employed in the units.

To highlight the extent of financial loss incurred annually by the sample entrepreneurs due to overstaffing, table 1.02 is compiled and presented here.

Table 1.02 clearly reflects that industrial units belonging to various industry groups experiencing capacity underutilization at varying degrees incur substantial amount of financial losses due to overstaffing resulting from the existence of idle capacity of their units. It can be seen from the table that the brunt falls heavily over Wood products group, which has to bear an annual additional financial burden of Rs. **4, 58,709** per unit of the four sample units suffering from overstaffing. This is followed by Non-metallic mineral products (Rs. **2, 10,408**) and Misc. (Rs**1, 73,455**) groups. Thus, the annual additional financial burden ranges from Rs. **30,740** to Rs. **4, 58,709** per unit depending upon different industry groups.

C. Required Level of Capacity Utilization

Thus from the above study it is found that in proper mobilization of labour force by utilizing their optimum capacity, an entrepreneur faces great hurdle due to the existence of idle capacity in the unit. To overcome this crucial problem, measures are to be taken to increase the average capacity utilization in micro and small enterprises. Now the question is to what extent the average capacity utilization is to be increased so as to attain optimum utilization of workers permanently employed in the units?

If we fit a straight line equation taking average number of surplus labour (Y) as dependent variable and the average capacity utilization (X) as independent variable (from Table 1.02), we will have

$$Y = 14.52 - 0.206 X$$

Thus to eliminate the surplus worker (Y=0), the average capacity utilization of the enterprises is to be increased to about 70 %(X=70.49) from existing level of 51.87 %(Table 1.02).

In order to increase the average capacity utilization of micro and small enterprises the reasons behind capacity underutilization in such sector are to be examined.

Table-1.02. Computation of annual financial loss incurred by the sample enterprises due to over staffing

Dist. Inustry Group.	Tinsukia District								
	Total Sample	Average Capacity Utilization	Total Permanent Worker	Total Annual Salary (Rs.In Lakh)	Average Salary (Rs.)	No. Of Surplus Workers	Additional Financial Burden Per Annum (Rs)	No. Of Units Suffering From Over Staffing	Average Additional Financial Burden P.A. (Rs)
Taxtile	09	60.89	21	708	33,714	03	1,01,142	2	50,571
Wood Products	07	35.18	95	2842	29,916	46	13,76,126	3	4,58,709
Food & Allied Products	14	44.44	147	9677	65,830	09	5,92,469	3	1,97,490
Paper Products	08	64.33	77	2367	30,740	01	30,740	1	30,740
Chemicals	04	50.67	10	280	28,000	04	1,12,000	1	1,12,000
Metal Products	14	51.78	76	6594	86,763	03	2,60,289	2	1,30,145
Transport Eqipments & Repairing	10	41.69	30	1079	35,967	08	2,87,733	3	95,911
Ceramics	07	57.50	21	426	20,286	02	40,571	1	40,571
Machineries & Repairing	05	46.06	17	554	32,588	03	97,765	2	48,882
Breverages	06	76.50	95	4920	51,789	01	51,789	1	51,789
Leather &Allied Products	02	76.67	20	708	35,400	00	00	0	00
Non Metalic Mineral Products	08	46.20	73	1920	26,301	16	4,20,816	2	2,10,408
Rubber Products	02	50.34	17	970	57,059	03	1,71,176	1	1,71,176
Cane &Bamboo Products	01	55.00	20	616	30,800	04	1,23,200	1	1,23,200
Misc.	14	50.79	33	1908	57,818	03	1,73,455	1	1,73,455
Total/Average*	111	51.87*	752	35569	47,299	106	3,83,9271	24	1,59,970

Source: Compiled from Field survey inputs

4.1. Reasons behind Capacity Under utilization

The factors which are found to be inimical to the sample enterprises in utilizing their productive capacities have been classified under 9 categories as shown in Table 1.03. In order to find out the intensity of the factors responsible for capacity under utilization, the entrepreneurs were asked to indicate the order of intensity by ranking maximum of three reasons. Accordingly, weighted scores were calculated for each of the reasons by giving a weightage of '3' points to the most prominent one, '2' and '1' points respectively to the succeeding ones in that order. The total weighted scores for each of the reasons and ranks of all the reasons determined on the basis of those total weighted scores are presented in Table 1.03

Table-1.03. Ranking of reasons behind capacity underutilization

Reasons For Under Utilization	Tinsukia District					
	No. Of Entrepreneurs Giving the Rank Of			Total Weighted Score	Ranks	Total No. Of Entrepreneurs
	1	2	3			
Power Shortage	20	11	08	90	03	39(35.14)
Marketing Problems	50	08	06	172	01	64(57.66)
Working Capital	10	09	03	51	05	22(19.82)
Material Shortage	08	13	03	53	04	24(21.62)
Labour Shortage	10	05	01	41	06	16(14.41)
Unfavourable Climate	02	05	06	22	07	13(11.71)
Transportation Problem	02	03	00	12	08	05(4.50)
Poor Law & Order Conditions	06	39	22	118	02	67(60.36)
Others(Restriction By Pollution Control Board)	00	01	02	04	09	03(2.70)

Source: Compiled from Field survey inputs
Figures in the parentheses indicate the percentage of total (111) sample enterprises of the district

Table 1.03 reveals that 'marketing problem' is the most prominent reason behind capacity under utilization which affects as many as 64 (57.66%) sample entrepreneurs wherein 50 reported it as the most

severe one, thereby ranking first in order. The table further shows that the 'poor law and order situation' of the district resulting in frequent bandh calls, unauthorized collection of funds, threats from anti-social elements etc. affects as many as 67(60.36%) sample entrepreneurs in utilizing their installed capacities. As par the calculated weighted score, this factor ranks second in order which stands in the way of utilizing installed capacities of the sample enterprises so reported. This is followed by 'shortage of power' affecting 39(35.14%) sample entrepreneurs in the district under present study. The other two main causes for the existence of idle capacity viz., 'shortage of materials' and 'working capital shortage' are reported by 24 (21.62%) and 22 (19.82%) sample entrepreneurs of the district respectively.

Whatever may be the causes, unfortunately, the existence of idle capacity in an enterprise stands as a stumbling block in the way of utilizing maximum employment potentiality of small enterprises.

5. Recommendations

On the basis of the findings of the study following recommendations are made:

1.	It is observed that marketing problem is the major reason behind capacity underutilization. The span of market being narrow, when a large number of similar type of units crop up in an area, creates cut throat competition among themselves. Therefore, it is essential to expand the area of market. In this context, reopening of the Historic Stilwell Road that starts from Lekhapani near Ledo in Margherita sub-division of the district under study and passes through the state of Arunachal Pradesh to reach Myanmar, connects China and South-East Asian countries, will go a long way in creating the district of Tinsukia in particular and the entire North-Eastern Region in general, a prominent industrial and commercial hub of India in addition to opening up the scope for development of tourism industry

2.	For expanding market to other parts of India and also globally, the small enterprises should resort to cluster approach. Under the cluster approach, some firms in the same industry can sell their products under a common brand name, standardize and modernize their products, grasp new market aggressively with concerted efforts. Cluster approach will enable the small enterprises to gain economies of large scale production by minimizing the existence of idle capacity and enabling them to sell the products at competitive prices.

3.	While power is an essential concomitant of modern industrialization, the present power scenario of the state of Assam is at a pathetic condition. Recently the state Govt. has seen to have taken some positive steps to set up thermal power generation projects in the state based on coal. Of late the central Govt. has given its clearance to setting up of a mega thermal project at Bongaigoan based on coal.

  It is therefore recommended that the construction of the proposed power generation projects be started without further delay and be completed within time frame.

4.	Frequent bandh calls by different organizations are creating innumerable losses to our economy by disrupting the economic activities. In this context the verdict passed by the Guwahati High Court on 6th. Jan, 2010 declaring bandhs 'illegal and unconstitutional' is landmark and highly remarkable. However, success of the verdict would depend considerably upon public consciousness and the effective role of the state Govt. Therefore, the state Govt. should strictly implement the law by taking all necessary steps to prevent infringement on various fundamental rights of the citizens on account of the bandhs called by political and other organizations. Moreover, on the basis of the verdict, the public-spirited citizens can file contempt petitions in court if any organization calls a bandh despite the court declaring it illegal.

6. Conclusion

The Five year plans of India during the recent years aim at inclusive growth which allows people to "contribute to and benefit from" economic growth. However it can be made possible through generation of large number and varieties of scope for people to earn their livelihood. Further, to make the process of employment generation self sustained the optimum use of labour force is to be ensured through full capacity utilization in various productive sectors.

References

Kaulgud Dr. Aruna (2003), Entrepreneurship Management, New Delhi, Vikash Publishing House Pvt. Ltd. PP. 229-233

Prasain GP and Singh E Nixon (2007), Small Scale Industries and Entrepreneurship, Akansha Publishing house, New Delhi, PP 215-220.

 Salvekar Dilip (2013), 12th. Plan Roadmap for MSMEs Sector, googles.com, accessed on 10th. July, 2013.

Sarma T Susilendra (1999), Paper and Paperboard production, availability and Imports of India, Atlantic Publishers and Distributors, New Delhi, P 73.

Sharma A K (1976), Management Problem of the Small Scale Enterprises in Assam, Unpublished Ph. D. thesis, Gauhati University, Guwahati, Assam.