CLUSTER DEVELOPMENT OF MSME SECTOR IN INDIA: AN INTER-STATE ANALYSIS

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ABSTRACT

This paper examines inter-state variation in the cluster development of MSME sector in India. The inter-state variations in the parameters of cluster development (namely Net Working Enterprise, Employment, Original Value of Plant & Machinery, Market value of Fixed Assets and Gross output) are conceptualized by constructing a comprehensive Index of Cluster Development. Empirical evidences suggest that southern, western, and northwestern and some northern states scores above the average score of all the states. On the other hand, eastern, central and extreme northern states (like Jammu and Kashmir) are laggard behind in the performance of overall development of MSME clusters. It is therefore predicted that an inclusive cluster development initiatives across all regions would strengthen the process of MSME cluster development in India.

Keywords: MSME, Cluster, Net Working Enterprise, Employment, Original Value of Plant & Machinery, Market value of Fixed Assets, Gross output, India.

INTRODUCTION

Micro, Small and Medium enterprises (MSME) sector plays an important role in ensuring equitable regional development and economic growth worldwide. However, it is one of the untapped high growth sectors in India. This labour intensive sector can reduce the regional imbalances through higher income and employment generation with lower amount of investment (Sen and Salim, 2016). Thus it is considered as a priority to develop a regional economic development through less amount of investment in those areas where large scale of input is not available.

Individually, MSMEs are unable to meet the large production need, homogenous standards, and regular supply to capture market opportunities. Narrow profit margin and fierce competition blocks their investment in innovation of products. Empirical evidence shows that research and development is concentrated in large firms only (Longhi & Davide, 2000). Clustering of similar or related firms helps in generating localized external economies at lower the cost for producers. Such advantages include a pool of specialized workers, easy to specialized input suppliers & services, and quick dissemination of knowledge. In addition to external economies, there is often a conscious need to pursue joint action. The uniform growth and distribution of the sector

not only ensures prevalence of self-employment but also ensures maximum utilization of both human and material resources.

However, very few academic research works (in addition to government reports) are found on Indian clusters in the existing literature. Some of the major works on clusters in the form of doctoral thesis are done by Santhakumar (2014), Bindu (2012), Mapdar (2011). It is evident that two out of three doctoral theses are on handloom sector. Thus, a majority sector of Industrial clusters in India is untouched in the literature. Furthermore, no such comprehensive attempt has been made so far to get an overview of the inter-state variation in cluster development in India. Thus, there is a need to understand the concept of Industrial Cluster in all its dimensions and its role in the development of MSMEs. In this backdrop, this paper endeavour to address this gap of research. Specifically, this paper aims to draw an overview on the inter-state variation in the cluster development in India. For the purpose, database of 4th MSME Census on cluster is utilized.

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METHODOLOGY

To consider an overall cluster development across Indian states, an Index of Cluster Development (ICD) is constructed by considering five selected dimensions (table 1).

Table1: List of Variables for Constructing ICD

Indicators	Description	Proportional Measure
Share of Working Enterprise	Share of working enterprises in MSME within cluster as a proportion of share of networking enterprise in registered MSME sector.	D1=C/D Where C indicates ratio of number of working enterprise in a cluster of the state to total number of working enterprises in MSMEs cluster and D indicates ratio of number of working enterprise in a state to total number of working enterprises in registered MSME Sector.
Share of Employment	Share of employment generation in MSME within cluster as a proportion of share of employment generation in registered MSME sector.	D2=E/F Where E indicates ratio of employment in a state to total employment generated by MSMEs within cluster and F indicates ratio of employment in a state to total employment generated by registered MSME Sector.

Share of Plant & Machinery	Share of original value of plant and machinery in MSME within cluster as a proportion of share of of plant and machinery in registered MSME sector.	D3=G/H Where G indicates ratio of original value of plant and machinery in a state to total value of plant and machinery in MSMEs within cluster and H indicates ratio of value of plant and machinery of the state to total value of plant and machinery in registered MSME Sector.
Share of Fixed Asset	Share of market value of fixed Asset in MSME within cluster as a proportion of share of market value of fixed asset in registered MSME sector.	D4=I/J Where I indicates ratio of market value of fixed asset of the state to total market value of fixed asset in MSMEs within cluster and J indicates ratio of market value of fixed asset of the state to total market value of fixed asset in registered MSME Sector.
Share of Gross output	Share of gross output in MSME within cluster as a proportion of share of gross output in registered MSME sector.	D5=K/L Where K indicates ratio of gross output of the state to total gross output in MSMEs within cluster and L indicates ratio of gross output of the state to total gross output in registered MSME Sector.

A comprehensive Index of Cluster Development (ICD) is derived by adding all five selected dimensions, i.e.ICD=$\sum_{i}^{5}=_{1}D_{i}$, where D_{i} is ith dimension of cluster development (i = 1,2,3,4,5).

ANALYSIS OF INTER-STATE VARIATION OF CLUSTER DEVELOPMENT IN INDIA

State-wise distribution of the 2443 clusters in the indicators of number of working units, employment, and fixed assets, investment in plant & machinery and gross output is documented in 4th MSME Census report. The share of clusters in total number of MSME units is 45.92 %, in total employment is 34.85%, in original value of plant & machinery is 36.12 %, in total market value of fixed assets is 33.64 % and in total gross output is 19.01 %.

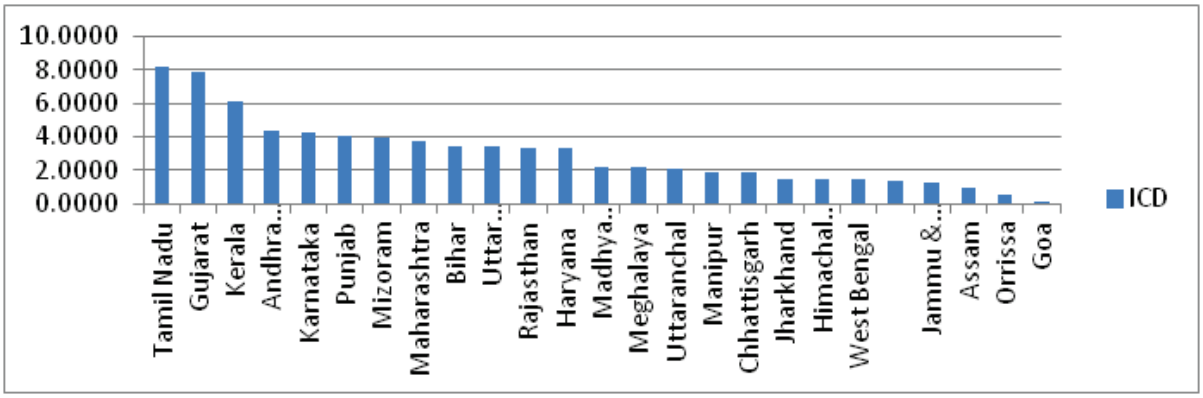
An analysis of individual dimensions suggest that MSME clusters in Tamil Nadu, Gujarat and Kerala perform consistently well in achieving higher working capital, employment and gross output. Enterprises in the clusters are also leveraged in the investment of fixed assets, plant & machinery in those states. On the other hand, states like West Bengal, Jammu Kashmir, Assam, and Orissa records a lowest gross output, even though MSME clusters in those states experiences higher investment in plant & machinery and fixed assets. This finding reveals a lower level of technical inefficiencies in the working enterprises of these states. Working clusters in Andaman & Nicobar and Goa are negligible in numbers and thereby the performance of these states in the selected indicators is not comparable with other states of India.

Table 2: Ranking of the Indian States in the Index of Cluster Development (ICD)

States	Working Enterprises Share (D1) (Rank)	Employment share (D2) (Rank)	Plant & Machinery share (D3) (Rank)	Fixed Assets share (D4) (Rank)	Gross Output share (D5) (Rank)	ICD
Tamil Nadu	1.414 (1)	1.606 (1)	1.486 (1)	1.493 (2)	2.211 (2)	8.211 (1)
Gujarat	1.213 (2)	1.375 (3)	1.389 (2)	1.613 (1)	2.279 (1)	7.870 (2)
Kerala	1.209 (3)	1.443 (2)	0.944 (3)	1.144 (3)	1.377 (5)	6.118 (3)
Andhra Pradesh	0.710 (12)	0.712 (12)	0.777 (5)	0.753 (5)	1.457 (4)	4.408 (4)
Karnataka	1.048 (5)	1.036 (4)	0.671 (8)	0.573 (7)	0.949 (8)	4.277 (5)
Punjab	0.764 (10)	0.919 (6)	0.679 (7)	0.571 (8)	1.164 (6)	4.097 (6)
Mizoram	0.582 (16)	0.756 (9)	0.722 (6)	0.476 (12)	1.461 (3)	3.997 (7)
Maharashtra	0.699 (13)	0.754 (10)	0.663 (9)	0.649 (6)	0.925 (9)	3.690 (8)
Bihar	0.691 (14)	0.837 (7)	0.474 (11)	1.027 (4)	0.446 (13)	3.475 (9)
Uttar Pradesh	0.990 (7)	0.923 (5)	0.404 (12)	0.463 (13)	0.615 (11)	3.395 (10)
Rajasthan	0.551 (17)	0.683 (13)	0.817 (4)	0.560 (9)	0.765 (10)	3.377 (11)
Haryana	0.522 (18)	0.714 (11)	0.617 (10)	0.490 (11)	0.965 (7)	3.308 (12)
MadhyaPradesh	1.131 (4)	0.811 (8)	0.122 (18)	0.077 (19)	0.095 (22)	2.237 (13)
Meghalaya	0.718 (11)	0.443 (18)	0.354 (13)	0.274 (14)	0.430 (14)	2.219 (14)
Uttaranchal	0.910 (8)	0.633 (15)	0.186 (17)	0.155 (18)	0.251 (19)	2.135 (15)
Manipur	0.422 (19)	0.422 (19)	0.214 (16)	0.270 (15)	0.539 (12)	1.927 (16)
Chhattisgarh	0.636 (14)	0.636 (14)	0.118 (19)	0.050 (21)	0.061 (23)	1.909 (17)
Jharkhand	0.486 (17)	0.486 (17)	0.113 (20)	0.045 (22)	0.245 (20)	1.484 (18)
Himachal Pradesh	0.302 (20)	0.302 (20)	0.090 (21)	0.064 (20)	0.115 (21)	1.477 (19)
West Bengal	0.273 (21)	0.273 (21)	0.248 (14)	0.240 (17)	0.278 (18)	1.439 (20)
Andaman & Nicobar	0.503 (16)	0.503 (16)	0.230 (15)	0.242 (16)	0.351 (16)	1.326 (21)
Jammu & Kashmir	0.125 (24)	0.125 (24)	0.039 (24)	0.537 (10)	0.314 (17)	1.303 (22)
Assam	0.134 (23)	0.134 (23)	0.060 (23)	0.023 (24)	0.385 (15)	0.928 (23)
Orrissa	0.146 (22)	0.146 (22)	0.082 (22)	0.041 (23)	0.058 (24)	0.547 (24)
Goa	0.000 (25)	0.000 (25)	0.010 (25)	0.008 (25)	0.013 (25)	0.031 (25)

Source: Author's calculation based on the 4th All India Census of MSME 2006-2007

Figure 1: Index of Cluster Development



Index of Cluster Development (ICD) provides aggregative information of the achievement of Indian states in there five dimensions (table 2). Associated ranking of the states suggest that Tamil Nadu, Gujarat, Kerala, Andhra Pradesh, Karnataka and Punjab secures 1st, 2nd, 3rd, 4th, 5th and 6th rank respectively. On the other hand, Jammu &Kashmir, Assam, Orissa and Goa placed in 22th, 23th, 24th, and 25th rank respectively. Performance of these states is consistently low in all the dimensions.Tamil Nadu, Gujarat, Kerala, Andhra Pradesh, Karnataka, Punjab, and Mizoram have successfully implemented the concept of clusters in the development of MSMEs in their states. Sikkim, Arunachal Pradesh, Nagaland, Tripura and other UTs (Chandigarh, Delhi, Daman & Diu, Dadra & Nagar Haveli, Lakshadweep and Pondicherry) are lagging behind in implementing cluster development approach.

CONCLUSION

This paper examines inter-state variation in the development of clusters in India. Cluster Development is a strategic initiative to enhancing the productivity, capacity, and competitiveness of the MSMEs in the economy. It is observed that there is a wide inter-state variation in the level of cluster development in India. A comprehensive index of cluster development (ICD) is developed to portray a composite picture of the cluster development across Indian states. It is suggested that the performance of the states (Tamil Nadu, Gujarat, Kerala) are somewhat satisfactorily in the development of MSME clusters, while states like Orissa, Goa are at the lower stratum in this development process. The southern region is leading in the cluster development programme, followed by western, north-western, central, northern and eastern regions. Majority of the eastern states lie below the national average in developing MSME clusters. It is thus desirable to create conditions for enhancing the cluster development programme especially in the low ranking states like Goa, Orissa, Assam so as to reduce the regional imbalances. It is predicted that an inclusive cluster development initiatives across all regions would strengthen the process of MSME cluster development in India.

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