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# Knowledge Management Practices in Indian Manufacturing MSMEs: Challenges and opportunities

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**Abstract**

Possession of knowledge is important in industries, but management of knowledge becomes even more important in manufacturing Micro, Small and Medium Scale Enterprises (MSMEs), even as they try to stay ahead in competitive global and domestic markets. Many organizations like ministries / government departments, bilateral & multilateral agencies, academic, research & development institutions, implementing & executing agencies and industrial associations have played a vital role in shaping the knowledge base of Indian manufacturing SMEs. However, it has been observed that there is very little awareness about the activities of these key organizations among SMEs and academia. This paper aims to bridge the gap between knowledge sources and recipients by creating that awareness between the two. This study also explains how effectively MSMEs and academia can mutually enrich exchange of knowledge, opportunities and networks.


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## 1. Introduction

Though Knowledge management is relatively well explored in the Indian IT sector, India is yet to achieve its demographic dividend in the manufacturing sector. No country can progress without having a sound base in manufacturing. Information brings about openness, accessibility, transparency, accountability, networking and decentralization as a result democratization [2].Many organizations have played a vital role in shaping the knowledge base of Indian manufacturing MSMEs. Many of them are currently working towards achieving manufacturing excellence for MSMEs. Time has come to transform labor and skill based MSMEs to knowledge based MSMEs.Cluster based knowledge management initiatives have been successfully implemented in India and are currently under progress in different states. MSMEs contribute to nearly 8 percent of the country's GDP, 45 percent of the manufacturing output and 40 percent of the exports [1]. They provide the largest share of employment after agriculture [1]. They are the mainsources for entrepreneurship and innovation [1]. They are widely dispersed across the country serving local and global markets [1].

## 2. Key organizations

Key organizations associated with MSMEs in India are listed below [3].

*2.1 Implementing/ executing agencies:*The Energy and Resources Institute (TERI),MITCON Consultancy Services Limited,Apex Cluster Development Services Private Limited**,** Deloitte Touche Tohmatsu India Private Limited**,** See-Tech Solutions Private LimitedandAbdul LatifJameel Poverty Action Lab.

*2.2 Ministries/ government departments:*Bureau of Energy Efficiency (BEE)**,**Ministry of Micro, Small and Medium Enterprises (MoMSME)**,** Petroleum Conservation Research Association (PCRA)**,** Micro, Small, and Medium Enterprise - Development Institutes (MSME-DIs)**,** Ministry of New and Renewable Energy (MNRE)**,** National Productivity Council (NPC)**,** Indian Renewable Energy Development Agency Limited (IREDA)**,** Entrepreneurship Development Institute of India**,** Institute of Small Enterprises and Development (ISED)**,** State Industrial Development Corporations (SIDC)andState Technical Consultancy Organizations (TCOs).

*2.3 Industry associations:*Institute of Indian Foundry men (IIF)**,** Indian Foundry Association (IFA)**,** Southern India Engineering Manufacturers' Association (SIEMA)**,** Firozabad Glass Synidcate**,** Federation of Indian Chambers of Commerce and Industry (FICCI)**,** Confederation of Indian Industry (CII)**,** Mohali Industries Associations (MIA)**,** All India Brick and Tile Manufacturers Federation (AIBTMF)andIntNirmataParishad (INP) Varanasi.

*2.4 Financial institutions/ banks:* Small Industries Development Bank of India (SIDBI), North Eastern Development Finance Corporation Ltd. (NEDFi), State Financial Corporations, State Bank of India, Punjab National Bank, Central Bank of India, Canara BankandCorporation Bank.

*2.5 Bilateral/ multilateral agencies:* Swiss Agency for Development and Cooperation (SDC),Japan International Cooperation Agency (JICA), World Bank, Asian Development Bank (ADB),United Nations Development Programme (UNDP), United Nations Industrial Development Organization (UNIDO), French Agency for Environment and Energy Management (ADEME), German Development Agency (GIZ), Department for International Development (DFID).

*2.6 Academic/ R & D institutions:* International Institute for Energy Conservation (IIEC), Central Glass and Ceramics Research Institute (CGCRI), Centre for Development of Glass Industry (CDGI) *and*Centre for Environmental Planning and Technology University (CEPT).

## 3. Research Methodology

An introductory study was done focusing on key organizations associated with Indian manufacturing MSMEs. These key organizations have given a better understanding about current happenings in MSMEs at different locations in India.In order to capture insights on challenges and opportunities for MSMEs extensive use of video sharing websites was also done. A face to face interaction was done with MSMEs, consultants, students and academicians to capture current scenario. Then it was decided to focus initially on virtual clusters and SAMEEEKSHA(Small and Medium Enterprises: Energy Efficiency Knowledge Sharing).Registration was done on virtual clusters and the interface was observed. After joining virtual clusters, welcome communication was done with the authors by National Institute for Entrepreneurship & Small Business Development (NIESBUD), which helped to further define challenges and opportunities. It was identified that there is need to first create awareness on these two initiatives.

## 4. Virtual Clusters

SMEs are the most prolific job creators and pioneers in developing new concepts. [1] The MSME Ministry of Government of India has taken the initiative to provide businesses opportunities in every possible way to facilitate the industry. A new step in this direction is the development of “Virtual Clusters”, which is a meeting place for MSMEs,academic institutions, consultants, financialinstitutions, various government departments, advisors, volunteers and non- governmental organizations [1].

The goals set by Ministry of MSME are as follows [1]:
1. Students and faculty from academic institutions can get real life experience by closely interacting with businesses located nearby.
2. MSME’s can benefit by getting students to do projects that can help businesses develop new products, increase sales, reduce production cost, improve quality, etc.
3. Consultants and industry experts can find prospective clients, who can benefit from their expertise.
4. Government can benefit more effectively by reaching out to various businesses that may have common needs.

### **4.1** *Challenges and opportunities*

1. To create awareness on virtual clusters among youth, academic institutions and MSMEs.
2. To register and actively experience virtual clusters.
3.Toshare specific achievements, research projects, studies of academic institutions that help the industry andsimplify business processesand such processescontributingto the development of industries in their manufacturing.
4. To align the students & faculty members at the college level, in making them employable and also prosper in their career with their researches and creation of a talent pool. On completion of their courses with institution they are expected to come out as responsive as well as responsible leaders.
5. Toshare the story of talent incubation and creation for the benefit of MSME sector, and write /express from timeto time in many of the ways in which onecan join hands with industry owners in order to realize their full potential.
6.To give suggestions and expectations on the initiative of launching of MSME virtual cluster portal.

## 5.SAMEEEKSHA

SAMEEEKSHA is adescriptor for Small and Medium Enterprises: Energy Efficiency Knowledge Sharing.It is a platform aimed at sharing the knowledge related to adoption of clean, energy efficient technologies and practices.The plans and activities of SAMEEEKSHA are administered by a core committee comprising of Bureau of Energy Efficiency (BEE), Climate Change and Development Division, Embassy of Switzerland, India, Ministry of Micro, Small and Medium Enterprises (MoMSME), The Energy and Resource Institute (TERI) [3]. SAMEEEKSHA

provides a unique opportunity, where industry may interface with academia, technology development specialists, R&D institutions, government bodies, training institutes and funding agencies [3].Resources like books, case studies, presentations, videos, presentations and newsletters are also available.

### **5.1** *Challenges and opportunities*

1. To create awareness on SAMEEEKSHA among youth, academic institutions and MSMEs.
2. To connect academia and MSMEs and share their stories on SAMEEEKSHA.

## 6. Authors further research

Currentlythe authors are focusing on creating awareness on virtual clusters and SAMEEEKSHA.

## References

[1] Ministry of Micro, Small and Medium Enterprises (MSME) available at: http://msme.gov.in/Web/Portal/New-Default.aspx (accessed 1 May 2014).

[2] Sam Pitroda's Twitter conference: Government for democratization of information (2012) available at:http://www.innovationcouncil.gov.in/index.php?option=com_content&view=article&id=243:sam-pitrodas-twitter-conference government-for-democratisation-of-information&catid=14:news&Itemid=13 (accessed 1 June 2014).

[3] Small and Medium Enterprises: Energy Efficiency Knowledge Sharing (SAMEEEKSHA)availableat:http://sameeeksha.org(accessed 12 June 2014).