

Industrial cluster and technological dynamism: study of Bangalore machine tool cluster

S.S. Prabhakara* Department of Mechanical Engineering, Acharya Institute of Technology, Bangalore – 560090, Karnataka, India Fax: +91-80-237-002-42 E-mail: prabhakara@acharya.ac.in *Corresponding author

N.V. Raghavendra Department of Mechanical Engineering, The National Institute of Engineering, Mysore – 570008, Karnataka, India E-mail: raghumysore1@rediffmail.com

Abstract:

Industrial clusters are believed to provide an environment which is conducive for the flow of technological and market information and know how. The flow of such information can take place primarily across three channels; horizontal channel, in the form of cooperation among peer firms; vertical channel, across the supply chain; and, external linkages to the suppliers, technology providers and others outside the cluster. This paper explores the influence of these three channels on the acquisition of technological capability of firms in the Bangalore machine tool cluster in south India. Development of technological capability index and suitable proxies to measure learning variables provide the methodological rigor. The information extracted from the survey and subsequent analysis reveals that vertical collaboration and external linkages significantly influence technological capability, whereas the horizontal collaboration is rather weak. This result offers interesting insights into the dynamics of this cluster, which has important implications for policy maker.

Keywords:

Machine tool cluster; technological capability; learning; technology level