

Marshallian industrial district evolution: Technological impacts and firms' heterogeneity

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Abstract

This paper adds to the literature by deconstructing knowledge heterogeneity for the understanding of cluster evolution. Starting from the distinction between sustaining and radical innovations, as moderators of knowledge heterogeneity in Marshallian industrial districts (MIDs), this study's objective consists of answering the question why and how districts evolve, through the understanding of the differing processes creating knowledge, i.e. sustaining and radical, and the type of firms that do so, and analysing critical issues such as how technological changes affect the pattern of district evolution. Theoretical development states that (1) in MIDs radical disruption can be expected to be led by new firms and not by incumbent technology gatekeepers (TGs), which are mainly oriented to providing incremental innovations in order to maintain their status quo and centrality, and (2) in MIDs leading incumbents demonstrate predominantly an orientation towards the creation of sustaining knowledge in dense and orchestrated networks and aim to develop competence-enhancing variety which ensures their centrality and the status quo, making clusters evolve expanding central stages, i.e. specialization. Our argumentation has also challenged a central assumption in MIDs about leading incumbents: the type of knowledge necessary to challenge leading incumbents must be new to the industry and to the district, based on exploratory district boundary-spanning, technology-distant knowledge.

keywords

Cluster evolution, Innovation, Marshallian industrial districts, Radical innovation