

Temporary Clusters: A New Approach for Manufacturing SME Management

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Abstract

Improving efficiency through collective actions and capacity pooling had been the driving force for many manufacturing SMEs clusters. However, the relocation cost and limitation had been one of the biggest challenges in this management approach. This research focuses on a new proposed clustering approach for increasing the competitiveness of manufacturing SMEs referred to as temporary clusters. These new clusters are offered to manage the geographical permeant connectivity challenge associated with the famous classical clusters. The research started with an empirical study of farmers markets (as an example of temporary SME cluster) to examine to what degree these temporary setups exhibit some typical cluster requirements and performance behavior. Results highlighted that temporary clusters share many of the positive performance behaviors like permanent ones with less cost and extra mobility advantages. These findings were then extended into the manufacturing SMEs context to explore the different temporary clustering configurations that can enhance specific relevant objectives for these SMEs. These objectives include technology transfer, entrepreneurial capacities, social capital and of course economic growth. Analytical analysis was conducted through a temporary cluster configurator toolbox to examine how manufacturing SMEs can be clustered based on their value chain objectives in this dynamic nature.. Various insights about the impact of the temporary clustering dynamics on the previously listed objectives were deduced. Furthermore, suggested management practices and policies that will improve the performance of manufacturing SMEs along the outlined objectives are offered.

Keywords

Clusters Management, Dynamic Clusters, SMEs

Biography

Ahmed Deif is an assistant professor of Industrial Technology at California Polytechnic State University. Dr. Deif received his Ph.D. and M.A.Sc in Industrial and Manufacturing Systems Engineering from the University of Windsor, Canada and his B.Sc. from The American University in Cairo in Mechanical Engineering. He taught previously in 3 different universities in Canada and Egypt. His current research interests are in sustainable supply chain, optimal operation management, lean gamification and dynamic analysis of manufacturing systems. He has more than 60 publications in books, international journals and refereed conferences. Dr. Deif has a diverse portfolio in his industrial experience ranging from automotive industry to steel industry to electronic industry and finally assembly industry at various engineering and consultancy capacities. As a lean and six sigma certified expert, Dr. Deif helped various industries in improving their production performance in various places across the world.