

An Evaluative Approach for Successful Implementation of Lean and Green Manufacturing in Indian SMEs

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Abstract : Enterprises adopt methodologies to increase their business performance and to stay competent in the volatile global market. Lean manufacturing is one such manufacturing paradigm which focuses on reduction of cost by elimination of wastes or non-value added activities. With increased awareness about social responsibility and the necessity to meet the terms of the environmental policy, green manufacturing is becoming increasingly important for industries. Large plants have more resources, have started implementing lean and green practices and they are getting good results. Small and medium scale enterprises (SMEs) are facing problems in implementing lean and green concept. This paper aims to identify the key issues for implementation of lean and green concept in Indian SMEs. The key factors identified based on literature review and expert opinions are grouped into different levels by Modified Interpretive Structural Modeling (MISM) to explore the importance among the factors to implement lean and green manufacturing. Finally, Fuzzy Analytic Network Process (FANP) method has been used to determine the extent to which the main principles of lean and green manufacturing have been carried out in the six Indian medium scale manufacturing industries.

Keywords : lean manufacturing, green manufacturing, MISM, FANP

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