

Complexity in manufacturing systems: a literature review

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Abstract

The business environment is increasingly complex and competitive so organizations must respond to different market conditions by reconfiguring their processes, products and services. The objective of this article is based on a literature review under a scientometric and bibliometric approach, referring to the complexity in manufacturing systems, allowing to find answers to relevant questions with respect to the subject matter and to show literally the scientific fields of application, factors of complexity and methods of solution.

Methodologically, a first stage is developed on the problems and formulation of the research questions, the second stage establishes the information search strategy and finally a statistical analysis is carried out. The findings show a positive trend and interest on the part of the scientific community in the number of publications related to the subject in the different databases, highlighting the exercise of the theory of complexity in different disciplines but on a smaller scale in scientific fields such as manufacturing and supply chain management.

Keywords: Manufacturing systems, Complexity, Decision making