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# Integrated model for supplier selection and negotiation in a make-to-order environment

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## Abstract

The paper deals with the development of an integrated supplier selection and negotiation process for multiple parts/materials procurement. The main objective is to integrate decisions in the internal supply chain of a make-to-order manufacturer. Two main decisions during the negotiation process are considered: (1) the manufacturing planning decision responsible for determining the production schedule and fabrication lot size and (2) the supplier selection decision concerning which suppliers are selected for company business and the order volume allocated to each selected supplier. The model is designed to support the negotiation process by generating a set of effective alternatives in each negotiation period. Its structure is multi-objective and non-linear. The combination of the interactive weighted Tchebycheff method and Benders decomposition method is applied to generate a set of effective alternatives to support the decision-maker in each negotiation period.

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