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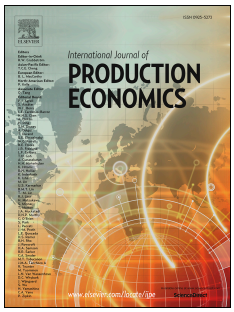

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Prioritizing Process Improvement Initiatives in Manufacturing Environments

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Abstract

In today's competitive and globalized markets, companies need to focus on eliminating wastes in their processes and implement continuous improvement initiatives. Lean and Six Sigma are two process improvement philosophies that have been successfully applied by many organizations to improve their business processes. Selecting and prioritizing process improvement initiatives in the workplace can be a challenging task, especially when multiple decision factors are involved. In this study, a proposed framework for prioritizing process improvement initiatives in manufacturing environments is developed which considers process variables, resource constraints, and operator skills. The framework ranks workplace areas and uses a multi-objective optimization model to assign the improvement projects and the associated operators. A case study from a manufacturing environment is used to illustrate the applicability of the proposed framework.

Keywords: process improvement; Lean Six Sigma; project prioritization; manufacturing.

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