

Multi-criteria Supplier Selection for Implementing Lean Six Sigma Using Fuzzy AHP

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Abstract

Sustainability of lean six sigma (LSS) model relies upon the purchasing strategy of the organization's supply chain individuals which makes the supplier selection strategies basic for implementing LSS. Supplier selection is a major consideration for meeting an organization's need consistently at an allowable price range through identifying the suppliers with highest potential. For the firms who are willing to apply LSS, supplier selection strategy becomes a factor of paramount significance as this model focuses on eliminating waste. Yet there is no current study which discussed about the supplier evaluation strategy for implementing LSS. Thus, this paper aspires to aid the decision making of supplier assessment through determining the decision criteria and supplier evaluation for actualizing LSS. The suggested model incorporates Fuzzy Analytic Hierarchy Process (AHP) to pinpoint the supplier panel with highest potential. The focus of this paper is to assist the upstream management of supply chain to draw out the best outcome of lean six sigma implementation.

Keywords

Lean Six Sigma, Upstream management, Supplier selection, Fuzzy AHP.

Biographies

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