

A Buyer-Supplier Relationship Evaluation Model with the Consideration of Benefits, Opportunities, Costs and Risks

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Abstract

During the past two decades, the nature of buyer-supplier relationships has been undergoing dramatic changes. With increasingly fierce global competition, firms in various industries need to build a cooperative buyer-supplier relationship to survive and to acquire reasonable profit. Despite the popularity of developing alliances among firms, strategic alliances often fail, and the failure rate was reported to be as high as 70%. Therefore, in order to achieve the eventual success of the buyer-supplier relationship, a formal purchasing strategy development process, a supplier assessment and selection process, followed by the evaluation and selection of the type of collaborations are necessary. The main objective of this study is to propose an analytical approach to evaluate the forms of buyer-supplier relationship between a manufacturer and its supplier. A fuzzy analytic hierarchy process (AHP) model, which applies fuzzy set theory and the benefits, opportunities, costs and risks (BOCR) concept, is constructed to deal with uncertainty and to consider various aspects of alternatives. Multiple factors that affect the success of the relationship are analyzed by incorporating experts' opinions on their priority of importance, and a performance ranking of the buyer-supplier forms can be obtained. The proposed model is a general form that can be tailored and applied by firms that are making decisions on buyer-supplier relationship.

Keyword : Buyer-supplier relationship; fuzzy analytic hierarchy process; performance ranking; BOCR; TFT-LCD