A hybrid method using analytic hierarchical process and artificial neural network for supplier selection

Abstract

A hybrid approach between the Analytic Hierarchical Process (AHP) and Artificial Neural Network (ANN) has been developed to evaluate and select the best supplier for shoes manufacturing. Firstly, questionnaire was setup based on previous study to obtain supplier selection criteria for shoes manufacturing. The proposed hybrid methodology uses the AHP to determine the local and global weights of criteria, and the ANN method to select the best supplier. In order to grasp this evaluation and selection, result calculated by AHP is compared to the result of ANN.