

A Study of Supplier Selection Using VIKOR Method - A Case of the Automobile Manufacturing

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ABSTRACT

Car market affected world trade organization (WTO) and cross-strait service trade agreement (CSSTA) to stimulate the market demand. The automobile manufacturers began extensive expansion and actively seek cooperation of suppliers. Moreover, this is a critical point and has a considerable influence on supplier selection. Its procurement capacity for enterprises business plan and execution due to the cost of raw material keeps rising. Thus, a well supply chain is composed with a combination of excellent suppliers cooperate with each other. It will create the core competitiveness by the ability of modify the product and production process for market differentiation. If the enterprises can cooperate and ally with well supplier, this will enhance the competitiveness of the whole industry chain.

The study generalized the decisions factor of supplier management in automotive industry by establishment and discussion of experts in related industries, selected performance indicators of references, and integration of expert opinions using fuzzy Delphi method (Max-Min). Thus, it will screen a guideline for selection corporate's supplier suitably. After that, this study discuss the final weight between various selection criteria using analytic hierarchy process (AHP) model, and the experts make an performance evaluation for five suppliers by questionnaire using VlseKriterijumska Optimizacija I Kompromisno Resenje (VIKOR). Finally, assess the merits and classify five suppliers by geometric average method. Thus, this study will have the system analysis and selection to allow managers to make quick, cost-effective decision for supplier selection by supplier capability and actual performance. The results of this study show the supplier C is best suitable to provide the company for a long-term supplier partners.

Keyword: Fuzzy Delphi Method (Max-Min) 、 Analytic Hierarchy Process (AHP) 、 VlseKriterijumska Optimizacija I Kompromisno Resenje (VIKOR)