

SUPPLIER SELECTION FOR COLLABORATIVE NEW PRODUCT DEVELOPMENT PROCESS: AN APPLICATION TO THE AUTOMOTIVE INDUSTRY¹

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ABSTRACT

In the last few years, there has been an increasing growth in the number of collaborative partnerships between suppliers and manufacturers as a means to meet more complex customer needs and remain competitive. Selecting suppliers for a collaborative new product development (CNPD) process is a multi-criteria decision making problem involving both qualitative and quantitative factors. The aim of this paper is to identify the qualitative and quantitative criteria for selecting suppliers for a CNPD process and to provide a decision tool for evaluating and ranking potential suppliers. The main criteria are both operational and relational competencies of the suppliers that comprise three dimensions: product, structure and interaction dimensions. The multi-criteria decision analysis method used to evaluate and rank suppliers is the Analytic Hierarchy Process (AHP). The AHP model is presented in a real application to a global first-tier manufacturing company belonging to the automotive industry in Spain. Finally, results of the application are discussed.

Keywords: collaborative new product development, analytic hierarchy process, automotive industry

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