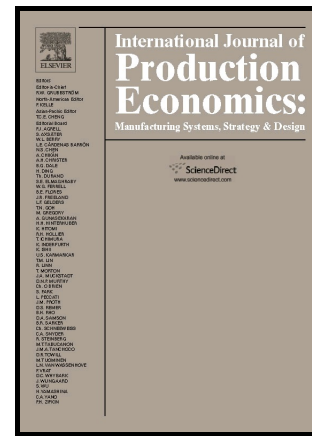


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Investment Performance Analysis of Industrial Products: Case of an Effluent Processing Facility at a Chemical Company

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Abstract

This paper proposes an approach to a multi-criteria investment performance analysis of industrial products. Manufacturers must determine the necessary and sufficient specification of products they use. Such an analysis, however, involves a broad range of factors, including some that are subjective. The performance analysis and decision making for investment thus must often rely heavily on past experience, generalities, and intuition. This paper addresses these issues from a benefit, opportunity, cost and risk (BOCR) perspective, in which the criteria are prioritized and the products are evaluated objectively. Pairwise comparisons among the criteria and quantitative assessments of the performance of products comprise a prioritized BOCR analysis. A case study demonstrating the applicability of the proposed approach is conducted at a chemical company. Results show that the proposed approach succeeds in the multi-criteria performance analysis of industrial products, resulting in a practical proposal of a product specification best suited to this company's case.

Keywords: Performance analysis; Industrial products; Customer preference; subjective factor; analytic hierarchy process; BOCR analysis

1. Introduction

Making investment decisions for industrial products costing large sums of money can be quite complicated. Customers must analyze the performance of

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