

Fuzzy Multi Criteria Evaluation for Performance of Vietnam Container Shipping Companies (Focussing on domestic companies including to previous study)

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ABSTRACT

Nowadays, container transport services play a substantial role in global cargo transportation by serving as an intermodal between the exporter and importer. Container shipping has become increasingly important over the past few decades due to its obvious advantages. However, Vietnam's container market has shown severely ongoing competition among numerous domestic and foreign shipping lines resulting in serious consequences occurring such as the freight rates substantially decreasing within the last ten years. In fact, Vietnam's sea lanes have become more defensive to cover the losses of shipping companies. Selection of criteria for competitive evaluation of container transport companies is necessary to help recognize the problems within the enterprise especially relating to its position in the market and from here, business management are able to put strategic plans in place and reasonable policy in order to be able to survive and grow.

Keywords: shipping company, operation performance

1. Introduction

Determining the most suitable container transport service provider is an important problem to deal with when managing supply chain of a company. It is vital in enhancing the competitiveness of the company and has a positive impact on expanding the life span of the company. In addition, the right choice will help customer achieve the quality of the best transport service, which help customers save costs, achieved the desired business result. The container shipping selection is a multi-criteria problem which includes both quantitative and qualitative criteria some of which can conflict each other.

Nowadays, selection of transport providers becomes complicated due to multiple suppliers, multiple conflicting criteria, and imprecise parameters. In addition the uncertainty

and vagueness of the experts' opinion is the prominent characteristic of the problem. For this reason the use of Fuzzy-AHP methods to determine the shipping company that the best quality.

The research builds a questionnaire to identify those criteria that are currently applied by shipping lines and Fuzzy AHP approach is applied in this research to show the weight of each criterion in the shipping liner feature category. The results were distributed again in a second questionnaire which is sent to the experts and academics in the field to highlight the basic criteria from their own perspective. Finally, the results of both questionnaires are given weight for each criterion through the F-AHP method of analysis and the results were applied on the actual data each company.

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