ON CLUSTERING TECHNIQUE OF DELIVERY PATTERN FOR CLASSIFYING COURIER CUSTOMERS

Jutamat Jintana [1], Sakgasem Ramingwong [2]*, Sainatee Chernbumroon [3], Apichat Sopadang [2]

[1] Department of Industrial Engineering, Chiang Mai University, Chiang Mai 50200, Thailand
[2] Center of Excellence in Logistics and Supply Chain Management, Chiang Mai University, Chiang Mai 50200, Thailand
[3] Faculty of Business Administration, Chiang Mai University, Chiang Mai 50200, Thailand

ABSTRACT

Purpose: It is the aim of the study to classify courier customers based on their delivery pattern to understand customer behaviour and needs.

Design/methodology/approach: The transaction data is mined using K-mean clustering technique to classify customer delivery pattern based on 7 factors, i.e., Recency, Frequency, Monetary, Weight, Day, Number of Product Category and Number of Customer. The data is taken from case study courier company in Chiang Mai, Thailand.

Findings: Customers are classified as 5 clusters with different delivery patterns.

Originality/value: The study transforms traditional transaction data into useful information. The information can be used by decision maker if any measures shall be deployed to increase customer satisfaction.

Keywords: Clustering Technique, Delivery Pattern, Courier Customer

MULTIPLE CRITERIA FOR TRANSPORTATION ROUTE SELECTION OF RESERVED COAL FOR MAE MOH POWER PLANT

Tidarut Prompiang1, Korrakot Yaibuathet Tippayawong 2
[1] Graduate Program in Logistics Engineering and Supply Chain Management, Industrial Engineering Department, Faculty of Engineering, Chiang Mai University, Chiang Mai, THAILAND
[2] Excellence Center in Logistics and Supply Chain Management Industrial Engineering Department, Faculty of Engineering, Chiang Mai University Chiang Mai, THAILAND

ABSTRACT

Purpose: The purpose of this paper is to identify multiple criteria for selecting transportation route of inbound reserved coal to Mae Moh Power Plant, Lampang THAILAND.

Design/methodology/approach: This paper assembled multiple criteria from previous studies, and they were preliminary determined by Electricity Generating Authority of Thailand (EGAT) experts and stakeholders to identify liable criteria which affect the selection of reserved coal transportation route. By means of Analytical Hierarchy Process (AHP) method, the proposed approach is employed to define the important weights of criteria and calculate priorities from pairwise comparison approach.

Findings: According to the survey results which was agreed by EGAT experts, the most commonly mentioned main criteria for selection of transportation route are cost, time, reliability and environmental impact. However, another criterion such as geography, infrastructure, technology must also be considered.

Research limitations/implications (if applicable): This study identifies multiple criteria and suggests selection approach for only coal transportation route to Mae Moh Power Plant. Hence, the results may be difficult to apply to other organizations. However, the research method could be a guideline to evaluate the multiple criteria in other selection of transportation route.

Originality/value: In the future, the coal from Mae Moh mine will be decreased. EGAT required the alternative mine sources to supply the power plants. Thus, this research studies multiple criteria for selecting coal transportation route which considers community and environment aspect.

Keywords: Multiple Criteria Decision Making; Coal Transportation Route; Analytic Hierarchy Process; Reserved Coal