

An Analysis for Container Dwell Times in Iranian Ports Using Fuzzy AHP Techniques

Kiani Moghadam, Mansoor^{1*}; Kazemi Asiabar, Alireza²

1- Associate Professor in Marine Technology, Chabahar Maritime University, Chabahar, Iran. E.mail: m.kiani@cmu.ac.ir

2- MSc. Student in Maritime Transport, Chabahar Maritime University, Chabahar, Iran. E.mail: kazemi_136425@yahoo.com

Received Date: January 7, 2018

*Corresponding Author

Accepted Date: June 9, 2018

Abstract

Container dwell time is one of the main factors for evaluating performance of the seaports. The time a container spends in a port, prior to clearance is a real cost scenario that will affect the port performance and throughput at all parts of the port.

The aim of this research is to provide an analytical tool to select the best strategy to reduce the container dwell time at ports. For collecting data, historical studies, together with a technical questionnaire, field studies and experts opinions were collected. Hence, Three main strategies have been developed and the Fuzzy Analytic Hierarchy Process was used to compare and analyse these strategies. The numbers used in the fuzzy matrices for evaluating the factors have been obtained from customers and experts in the maritime transport industry of Iran.

Investigations showed that three factors including Operation of Costume, Role of Cargo Owners in Clearance of Goods, and Transport Systems with sequence of relative weights of 0.44, 0.39 and 0.17 had the most effective impact on container dwell time in Iranian ports. The study evidenced that the three main strategies including Penalty for Cargo Owners, Decentralization of Ports and Development of Customs with sequential relative weights of 0.38, 0.33 and 0.29, which had been obtained according to the viewpoint of experts, were the most important factors, respectively in this process. Reduction of container dwell time is considered as productivity criteria in ports. Therefore, port managers should pay special attention to include this criterion in their decision making.

Keywords: *Port, Dwell Time, Cargo Clearance, Container.*
