

The Hong Kong Polytechnic University
Department of Logistics and Maritime Studies
Research Seminar

Research on International Container Transport Chain Security Model and Its Application

by

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Venue: N116, Block N

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(Conducted in English)

Abstract:

With the rapid development of international container transportation in the past two decades, security management of a container transport chain becomes a critical issue. The efficiency of international container security transportation, under the condition of the existing resource and technique, is an important logistics management problem. This study focuses on the decision-maker's cognitive and decision-making process of container security level in international transport chain and logistics chain. The concept of security degree of the international container transport chain, container security degree, is defined. The member's differences to the container security degree in international container transport chain are considered. The functional mechanism of the container security degree on the transportation costs and or the transportation effectiveness is explored. From the viewpoint of container transport flow, mathematical models to jointly optimize security cost, transport efficiency and container security degree, are formulated. Based on the structure of these models, heuristic algorithms are designed. These models are improved and the performance of algorithms by simulation on the basis of container transport practices is evaluated. This study aims to explore new areas of management science and operational research, promoting the development of optimization algorithms, and providing decision support for container security management.

Bio:

ZHAO Xiaowei is currently a PhD student at the Department of Logistics and Maritime Studies, Faculty of Business, The Hong Kong Polytechnic University, and a PhD candidate at School of Economics and Management, Tongji University. He received his Master degree (2013) from Harbin University of Commerce and Bachelor degree (2010) from Qingdao Technological University, respectively. His research interests are security management, supply chain management and model predictive control.

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All are welcome!