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Title: Cost Analysis of Foldable Container Network-Connected Types

Generated on: 2026-03-12 23:56:35

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Are foldable containers a viable alternative to empty containers?

However, due to trade imbalances transport movements of empty containers remain to some extent unavoidable. Therefore, foldable containers seem an attractive option from the point of view of saving transport costs as well as handling and storage costs. So far, however, these containers have not been introduced successfully.

Do foldable containers generate revenue?

However, this does not generate revenue and incurs container management costs (CMCs). Some container carriers may use foldable containers (FLDs), such as four-in-one designs, instead of standard containers (STDs), in order to minimize the costs associated with relocating empty containers.

What are foldable and collapsible containers?

The concepts of foldable and collapsible containers were proposed to save costs in terms of transport, handling and storage.

Do foldable containers reduce container fleet management costs?

The effect of foldable containers on the costs of container fleet management in liner shipping networks. Maritime Economics & Logistics. 2012. Vol. 14. No. 4. P. 455-479. DOI: 10.1057/mel.2012.16. Shintani, K. & Konings, R. & Imai, A. Combinable containers: A container innovation to save container fleet and empty container repositioning costs.

Through intensive computational experiments, we analyze the effect of the imbalance in demand and the decreases in the purchasing cost and the handling cost of foldable containers on the ...

Through our model, one can compare the costs of various scenarios with different combinations of demands, supplies, and cost elements and can find the optimal portion of foldable containers ...

The presented foldable container passed the tests for international certifications ISO 1496-1 and CSC required for its application on site. Differently from the 4:1 folding ratio ...

We comprehensively analyzed numerical experiments to illustrate trade-offs between cost savings and potential risks concerning reliability in supply of empty containers by ...

This study considers the empty container repositioning problem of shipping companies that use standard and 3-in-1 foldable containers with more advanced designs. A ...

In this paper we analyse why previous initiatives for foldable containers failed and discuss the conditions required for successful commercial applications.

In this paper, a mathematical model is developed to describe deterministic and stochastic scenarios for a closed-loop container dynamic flow system. The uncertainties in a ...

This model, known as the container fleet sizing and empty container management problem with FLDs (CFSMP-F), solves a network flow problem for multi-commodity network problems with ...

The costs and benefits of using foldable containers in these logistic concepts are calculated and compared with the situation in which standard containers are used. It is shown ...

We use the model to minimize total transportation costs, inventory holding, handling, folding and unfolding, container leasing, and ...

We use the model to minimize total transportation costs, inventory holding, handling, folding and unfolding, container leasing, and installing facilities that accommodate ...

This study considers the empty container repositioning problem of shipping companies that use standard and 3-in-1 foldable ...

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