

Analyzing Intermodal Freight Transport (IFT) Supply Chains



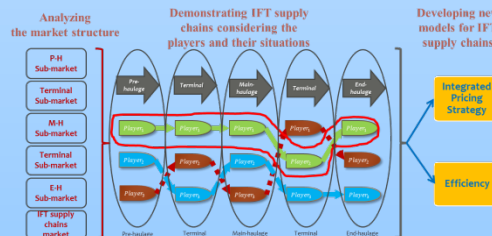
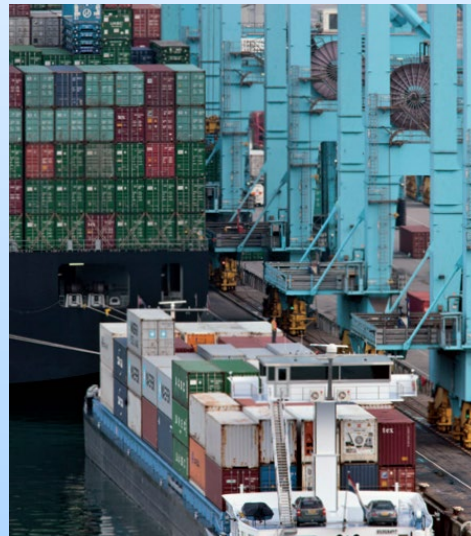
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Main questions

1. What is the structure of the IFT market, who are the main players in the market of IFT services in Europe how are they related to each other?
2. How efficient are IFT supply chains and how could they be improved to realize a higher market share compared to road transport?
3. How does the competitive position of IFT supply chains influence its pricing strategy and vice versa and how could it be improved?

Relation with port

In this research, different players in IFT supply chains will be analyzed. Important players in the port are terminal operators and carriers at the sea- and landside. The Port of Rotterdam and its hinterland is an important case that will be considered in this research.



Methodology

1. Several different market analysis models (such as the extended Porter model, market share indexes) will be extended and applied to the respective intermodal market segments.
2. Development of a strategy for integrated pricing in IFT supply chains based on cooperative game theory, considering the value of the service as transfer price.
3. Conventional data envelopment analysis (DEA) cannot be employed directly to measure the performance of intermodal supply chains and their members, so the Network-DEA model will be extended. Especially, the value of freight services will be analyzed as one of the decision-making variables.

Societal problem

Road freight transport causes a lot of emissions and congestion, so finding the attractive substitute for road transport and trying to create a shift towards intermodal freight transport as a sustainable alternative is an important goal in the European Union (EU). Despite all policy and scientific efforts, the market share of intermodal freight transport in the EU remains low.

Main objective

The main objective of this research is to analyze the market of IFT services in Europe and develop instruments for IFT service providers. In particular, from a supply chain point of view, we consider their efficiency and we develop pricing strategies. We will also use the results to make recommendations to coordinators of IFT supply chains or policy makers to expand the market share of IFT services.