

Determinants of Port Selection in Global Container's Carriers

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Abstract

Since the circumstances for worldwide ports have been changed rapidly port competition to attract cargoes is increasing fiercely. Such a competition can be found as evidences with enlarging container vessels, building the dedicated terminals, strategic alliance among liner shipping companies, and so on. Many studies have worked for improving and evaluating the competitiveness of ports (facilities, costs or rates, and hinterland economy and linkage), but less attention has been paid to port selection made shipping companies.

The purpose of this study, starting from Murphy's structure, is to analyze the selection of port using data collected from 30 shipping companies (worldwide top 20 + major 10 in Korea). The structure of analytical hierarchical process (AHP) was built to identify the importance of internal and external factors over 6 ports (Busan, Sanghai, Tokyo, Hong Kong, Kaohsiung, and Singapore), and the structural equation model (SEM) was estimated for each port respectively to investigate the causal influence of internal or external factors, preference of call-at-port, and intention of call-at-port.

Results from this study are epitomized as follows. First, the analysis of AHP reveals that external factor with attributes (geographical location, hinterland economy, political and social conditions, and hinterland linkage) is more important than internal factor with attributes (facility of port, cost of port, service of port, and enter and leave conditions). The importance of attributes in internal and external factors is firstly ranked with entering & leaving conditions for ships, and hinterland economy respectively.

SEM models indicate that the external and internal factors have statistically significant effect on the selection of port. Also causal influence among internal and external factors, evaluation of port, and preference of call-at-port implies where Busan should go as policy issue. Busan and Kaohsiung have been definitely mainly by internal factors, whereas Honk Kong and Sanghai seem to be influenced in balance by both factors. Busan needs to learn from Sanghai and Hong Kong with the preference of call at port, and focus on development on hinterland area.

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