

Abstract

Container terminal efficiency and productivity is important issues since productivity of container terminal in Indonesia is the low but the total handling charge is relatively high compared in ASEAN. When productivity low while total handling charge is high, it reflects the inefficiency of input in production process, so the efficiency could be improved to meet the international requirements. This study was using Cobb-Douglas Production Function to analyze efficiency of Koja container terminal in the period 2010-2014, and Herfindahl-Hierschman Index (HH Index) and Shift Share Analysis to analyze the output share of Koja container terminal to Tanjung Priok Port. The results of this study shows that the inconsistent the assumption of Cobb-Douglas Production Function in Koja container terminal. This study also finds out that technological progress is a main contributor in container throughput growth. Finally, the market structure is oligopoly which concentrated in two terminals. The conclusion of this study is technological has an important role to increase the efficiency of the container terminal in order to compete in market. Terminal operator is advised to improve the quality service in handling process and necessary creates good governance to develop the port activities. The limitation of this study is the lack of data that makes this variable using proxy so it can not explain the overall situation. Moreover, using ordinary least square can not accommodate to decompose the total factor productivity, the best methods to decompose TFP is using Stochastic Frontier Analysis (SFA).

Keywords: Efficiency, Cobb-Douglas Function, Returns to Scale, Technological Progress, Output Share, Throughput

JEL Classification: C6, F3, O3, R4