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

Economics of Global Terminal Operator

by

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(Conducted in English)

Abstract:

In recent decades, some large port operators have strengthen their presence in maritime transportation and they are called global terminal operators (GTO). In 2015, terminals owned in full or in part by GTO accounted for 65 per cent of global throughput (UNCTAD (2017)). One remarkable feature of the GTO is its operations at multiple ports in foreign countries. For example, PSA international (based in Singapore) operates port terminals in 16 countries; HPH (based in Hong Kong) operates in 26 countries. This has significantly changed competition structures of port industry all over the world. Development of GTO means new entries into the foreign ports that raise intraport competitions with the local operators. The GTO strategically sets the level of port charges in home and foreign ports. This may induce both positive and negative effects on the welfares of the countries. Increasing the intraport competition should benefit the shippers in both countries. On the other hand, some part of port profit in the foreign country is transfered to the home country of the GTO, which reduces the national income in the foreign country. This paper aims to investigate how the emergence of a GTO affects the transportation market and the welfare of two countries.

We present a formal economic model of maritime transportation which incorporates foreign operation by the GTO. We suppose that there are two countries, each of which has a port operator. We compare two cases, i.e., with and without a GTO. In the case without GTO, both operators operate their own home ports, whereas in the case with GTO, one of two operators becomes a GTO to operate its own port and a terminal at the foreign port. Comparing the two cases, we find that the emergence of the GTO is world welfare improving, but the welfare effect on the foreign country is not necessarily positive: the foreign country is likely to be better off when the relative demand size of the foreign country is larger and the substitutability of two services are sufficiently low.

The model allows the GTO to emerge endogenously by describing the choice of a firm whether to be GTO or not, and the choice of the foreign government whether to allow the entry. We further discuss the response of the foreign government concerning the choice of concession schemes: the maximum payment scheme and the minimum payment scheme. We find that the maximum payment scheme is better for the foreign country whereas the minimum payment scheme is better for the global welfare.

Bio:

Professor Se-il Mun is the Professor in Urban Economics and Transport Policy at the Graduate School of Economics, Kyoto University. He earned his D. Eng in Civil Engineering from Kyoto University in 1988, and had worked as a Fellow in Japan Society for Promotion of Science, Research Associate in Research Center for Applied Information Sciences, and Associate Professor in the Graduate School of Information Sciences, Tohoku University. He had been the Dean for the Graduate School of Economics for two years in Kyoto University between 2016 and 2018. Professor Mun served as the President for Applied Regional Science Conference, and as the editorial board member for many prestigious journals including International Journal of Sustainable Transportation, Annals of Regional Science, Transportation Research B, Papers in Regional Science.

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All are welcome!