

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

**Two studies on the computable equilibrium analysis:
Trade liberalization and iron ore international market**

by

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(Conducted in English)

Abstract:

In this thesis, we concern about the improvement of computable equilibrium modelling and application of computable equilibrium analysis in different economic and trade fields.

The first study was mainly focused on the application of computable general equilibrium (CGE) model in Chinese trade liberalization. We used a standard CGE model to simulate the impacts of continuous reduction of Chinese importing tariff on Chinese macroeconomy based on the initiatives from One Belt One road and the development of Free Trade Agreements. Within Chinese macro-economic data of 2012, the model results show that, subject to a balanced international payment, such a reduction can increase GDP, resident consumption, both imports and exports, and reduce GDP price, trade surplus, and government revenue. The results ease the concern that further import tariff reduction may harm the domestic production. Rather, it points out that there are still rooms to improve national economy and increase the consumer utility by trade liberation.

In the second study, we focused on the iron ore international market. we built a Partial Equilibrium model to describe the relationships among iron ore exporters, importers, port operators and dry bulk carriers. Based on this model, we could simulate the interactions between iron ore international market and sea transportation market by setting appropriate market clearing conditions and exogenous variables. As an example, we simulated the impact of trend of larger-sized vessel on the performance of iron ore trade. The results show that the trend of larger-sized vessel can be effective to reduce the voyage cost in iron ore sea transportation, but the promotion to trade development is limited.

Bio:

ZHANG Lingge is a Ph.D. candidate in Department of Logistics and Maritime Studies, The Hong Kong Polytechnic University. His research interest is Maritime Economy obtained his BE in Tianjin University (2014), Tianjin, China. His Master degree in International Shipping and Transport Logistics was from The Hong Kong Polytechnic University.

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All are welcome!