

ABSTRACT

The pattern of international trade has been changing due to the contraction of world trade volume and the prominent inclination of increasing value of trades and investments among developing countries. The share of outward foreign direct investment from the developing countries in Asia is also significantly growing. This shifts in the pattern of international trade has the direct impacts on Thailand's economy in terms of employment, industrial outputs throughout the supply chain, the alteration of skilled and unskilled labor input in a production structure, etc. This leads to the necessity of policy design package for both public and private agencies to deal with these structural change effectively and efficiently.

The main research question of this study are how the structural shifts in international trade and direct investment pattern affect the world and Thailand economies, which sectors will benefit or lose, and how the transportation and logistics sectors in Thailand must adjust its production technology to cope with these changes. This research aims to find the answer with regard to the changes in a cost of transportation services, a structure of labor input requirement and a value-added creation. These findings will finally give hints to the policy recommendation and strategic plan for the transportation and logistics operators in Thailand.

We develops the recursive dynamic computable general equilibrium (CGE) model based on the GTAP version 9 database of Global Trade Analysis Project, which describes the bilateral trade pattern among 140 countries in the world with 57 sectors of commodities and services. The database is principally compiled from the input-output tables of each country/region with the year 2011 as a base year. We then use the General Algebraic Modeling System (GAMS) to run the program code of our model.

Additionally, the research team has conducted the in-depth interview survey with 8 government agencies and 4 private organizations. We asks them to answer 5 important issues relating to our research questions; i.e. shortage of labor supply, technological change in transport and logistics business, concerns for environmental harm, trade liberalization and investment liberalization. The interview results are processed to investigate the underlying problems of market and organizational efficiency and used as a scenario setting reference for the simulation with the recursive dynamic CGE model.

The simulation results with the Free Trade Agreement (FTA) scenario reveal that the elimination of import duty among the member countries of ASEAN+6 will intensely help boost Thailand economy by increasing its competitiveness in the international trade market. The transportation and logistics operators, therefore, will benefit from the increment of import and export trade volumes. When looking closely at the labor input requirement of these sectors, however, we found that they must prepare themselves to deal with the potential deficiency in a skilled labor supply. The operational management is also one of the crucial problems that the operators in Thailand must face. Due to the technological disadvantage, the small and medium enterprises (SMEs) in Thailand may lose its profit gain to the gigantic investors from abroad. There is also a possibility that the unskilled labor, such as truck drivers, will be scarce in the future due to the limited wage and social welfare. The regulation not allowing alien workers in this restricted job makes the situation worse. Moreover, the Trade Facilitation Agreements (TFA) under the World Trade Organization (WTO), which had been entered into force recently, will induce more foreign operators to share the profit gain in Thailand as the trade volume increases. The shipping agencies and freight forwarders, moreover, might gain less margin due to alleviation of documentational complexity in the import and export declaration process.