# ABSTRACT

The presence of multinational corporations (MNCs) in the host country via the inflow of foreign direct investment (FDI) has the potential to generate considerable and positive impacts on the host economy, i.e. help supporting economic development in the host country. Among developmental benefits from FDI, the role of FDI in international technology spillovers and economic or productivity growth of the host country has long been of interest to academics and policy makers.

In recent years, FDI is considered to be an important vehicle for the dissemination of advanced technology from overseas to the host country economy. This statement is in accordance with the role of MNCs being the principal bearers of technology across international borders. When MNCs become involved in the host economy, their involvement is likely to be associated with advanced technology that can benefit both their affiliates and other firms in the host country. Therefore, the diffusion of technology from MNC affiliates to domestic firms in the host country will result in the increase of productivity of domestic firms. These kinds of benefits generated from FDI are referred to as 'FDI productivity spillovers'.

As a result of the significant role of FDI in the Thai automotive industry, this study is meant to analyze the economic impacts of FDI productivity spillover focusing on the automotive industry in which technological advantages diffused from MNC affiliates to domestic firms in the automotive industry can result in the productivity improvement of domestic firms in the automotive industry.

This study is aimed to evaluate the economic impacts of FDI productivity spillover on Thai economy by considering on the overall effects as well as the sectoral effects due to the exogenous productivity increase of the automotive industry. Since the automotive industry is considered as the synthetic industry of any other industries through the potential linkages, therefore the increase of productivity of the automotive sector may yield results on the destination sectors' productivity level. Due to the fact that the destination sectors are different in terms of technological absorptive capability and production structure, this study tries to investigate the role of destination sectors' specific factors in absorbing the productivity advantages transferred from the automotive sector. The Computable General Equilibrium (CGE)

model is implemented in order to quantify the economic impacts of FDI productivity spillover or the effects of exogenous productivity increase of the automotive industry on any other destination sectors through the transmission mechanism of productivity effects assumed in the model, thus generating impacts on the overall economy. The CGE analysis of FDI productivity spillover effects is classified into the two simulation experiments disaggregated by different assumptions about the destination sectors' capture abilities of the productivity advantages.

The CGE model in the Johansen class of the percentage change forms of variables has been constructed to capture the effects of exogenous productivity increase of the automotive sector on the overall economy as well as the sectoral production which can be disaggregated into nine sectors of production by production activity, namely Metal and metal products, Rubber and plastic products, Components, Engines, Electrical machineries, Agricultural and mining, Other manufacturing, Services and Motor vehicle. The model contains 501 equations and 571 variables in explaining the behavior of all economic agents which are producers, household, government, exporter and investor. The main data base used in performing the CGE analysis is the Input-Output Table of the year 2000 provided by National Economic and Social Development Board. Hence, the computer-based simulation of the two experiments is solved by using program GEMPACK.

The CGE simulation results show that the spillover effect of productivity advantages from the automotive sector (source sector) via FDI productivity spillovers to the destination sectors can generate positive impacts on the overall economy reflected by the increase of gross domestic product. By considering on the sectoral effects of FDI productivity spillover, the increase of productivity of all production sectors will normally enhance the output production, thereby lowering the primary input requirement. Furthermore, it can be conclude that the absorptive capability of the destination sectors and the congruence of production structure between the source and destination sectors are crucial factors in determining the magnitude of positive effects of FDI productivity spillover on the overall economy as well as the sectoral production. Therefore, by considering the role of destination sectors' specific factors, an economy will gain more benefits with the increased output production, lowered commodity prices and increased gross domestic product.