

CHAPTER 1

INTRODUCTION

1.1 Statement of the Problem

Multinational corporations (MNCs) are now regarded as the key players in the process of global economic integration even though there are pessimistic attitudes toward MNCs and their involvement in the early periods of their existence in the host economy (Kohpaiboon, 2006a). The reason is that most developing countries treated MNCs as a modern form of economic colonialism and exploitation and imposed restrictions on MNC involvement in their economies. Nonetheless, there are successful experiences in some developing countries from opening the door to MNCs, thus enabling the change in those pessimistic attitudes. The optimistic views of MNC involvement in recent years are accounted for the crucial role of MNCs in assisting the host countries, especially in developing countries, to access advanced technology, to upgrade their production structure, to penetrate the global market successfully and to facilitate the industrialization process (Borensztein et al., 1998).

Foreign direct investment (FDI) is the outcome of a firm's decision to diversify some or all operational activities across countries. One can consider FDI and MNC involvement as the same meaning since FDI inflows are widely used to measure MNCs' cross-border activities. FDI has become one of the main vehicles for the increasing integration of the world economy. Its significant role has been assessed from the fact that FDI inflows have grown much faster than the global trade which in turn has increased faster than the world output (Opartpunyasarn, 2007). FDI is considered as a composite bundle of capital stock, knowhow and technology and can augment the existing stock of knowledge in the host economy through labor training, skill acquisition and diffusion and the introduction of alternative management practices and organizational arrangements (Li and Liu, 2005). FDI has several benefits that help support economic development, both directly and indirectly. Thus, MNCs have the potential to generate considerable and positive impacts on the host economy, i.e. development in the host country. Some benefits of FDI are as follows.

Firstly, like other forms of capital inflows, FDI provides the host economy additional capital funds thereby lowering the cost of capital and encouraging domestic production, thus leading to an expansion of output, capital formation, employment and exports. This is regarded as its direct effects (Blomström et al., 2000).

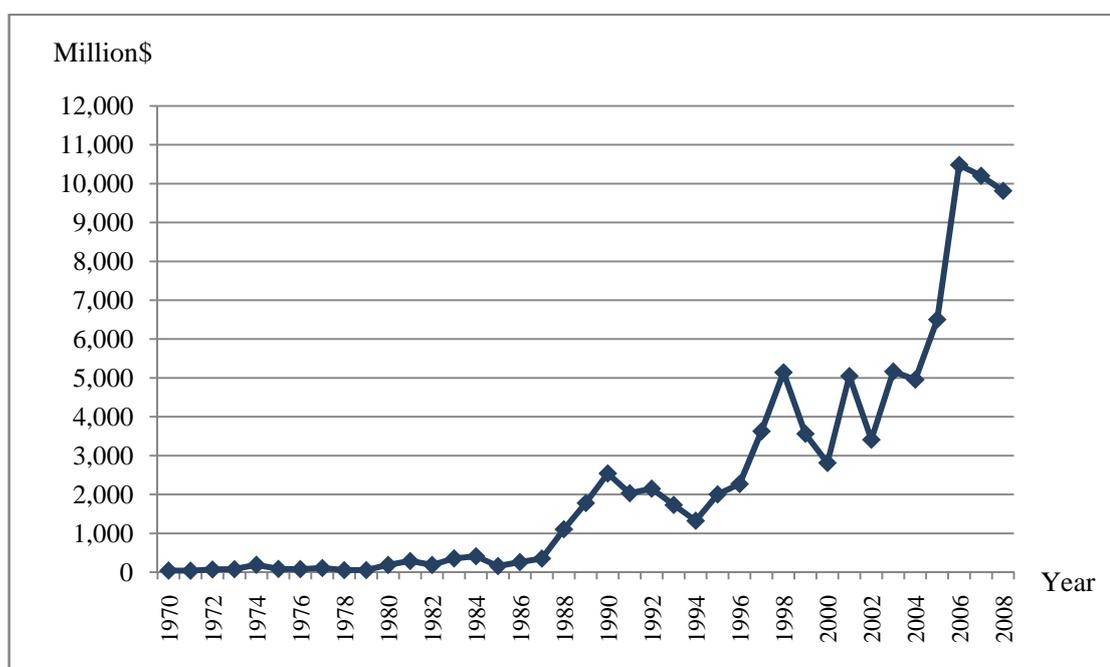
Secondly, FDI can indirectly benefit the host country through the realization of external economies. In general, this kind of benefits is referred to as 'spillovers' which indicates the importance of how its influence is transmitted. It is likely to influence the industrial structure of the host country economy and conduct the performance of domestically-owned firms.

Among developmental benefits from FDI, the role of FDI in international technology spillovers and economic or productivity growth has long been of interest to academics and policy makers. Though technology can be diffused by various means, it was suggested that the most significant and accepted channel for the dissemination of modern technology in recent years are external effects or spillovers from FDI rather than formal technology transfer agreements (Liu et al., 2000). This statement is in accordance with the role of MNCs being the principal bearers of technology across international borders such that 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. As a result, FDI is regarded as an important vehicle for the dissemination of technology contributing relatively more to growth than domestic investment since FDI provides a way for the host country to access to technology it no longer produce. This explains why most developing countries have resorted to encouraging FDI as a means to promote their economic development through the positive effects of external technological diffusion.

Once FDI brings in foreign capital flows and introduces advanced technology to domestic firms in the host country, there will be an enhancement of technological capabilities of the host country firms, thereby generating long term and sustainable economic growth (Kohpaiboon, 2006b). It should be noticed that one of the most frequently referred to positive effects of FDI on the host country economy is the presence of technological externalities generated from MNC involvement which can lead to productivity spillovers from MNCs to domestic firms in the host country (Görg and Strobl, 2001). Generally, FDI productivity spillovers are said to take place

when the entry or presence of MNC affiliates leads to productivity or efficiency benefits in the host country firms and MNCs are not able to internalize the full value of these benefits (Blomström and Kokko, 1998). The simplest example of such spillovers is the case when domestic firms improve their productivity by copying some technology used by MNC affiliates operating in the local market. To put it briefly, if there are FDI productivity spillovers, the presence of MNCs leads to productivity increases in domestic firms allowing them to become more efficient.

Figure 1.1
Net Flows of FDI in Thailand in 1970-2008 (million\$)

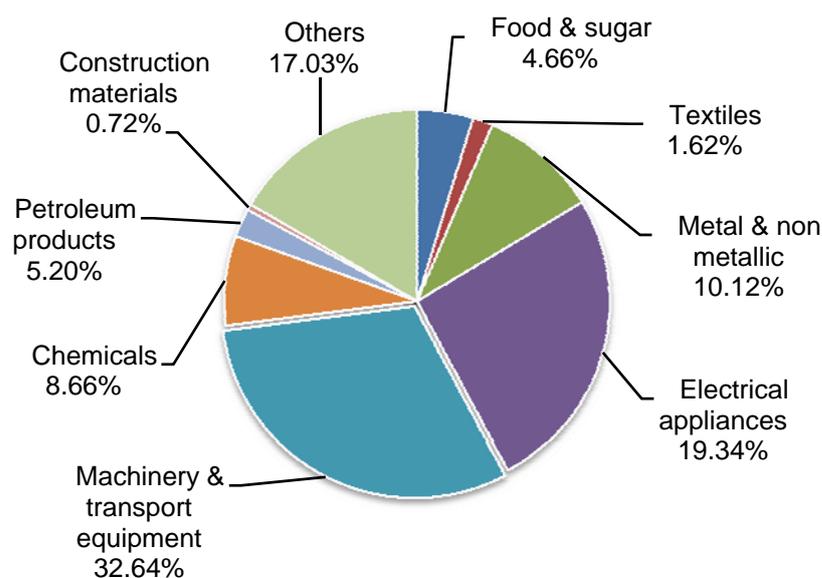


Source: Bank of Thailand (2009)

The role of MNCs has been realized in Thai economy over the past four decades and it has increased continuously. Figure 1.1 shows the net flows of FDI into Thai economy for the period 1970 to 2008. FDI inflows in Thai economy have increased significantly in the second half of the 1980s after the Plaza Accord which resulted in currency appreciation in Japan and NIEs such as Taiwan, Hong Kong and Korea and the change of industrialization policy in Thailand from import substitution towards export promotion. Due to the significant role of FDI in Thai economy and the

fact that FDI is recently treated as the main conduit for the transfer of technology from foreign countries to the host economy, therefore this study is aimed to analyze the indirect effects of FDI focusing on international technology spillovers and their impacts on Thai economy. Such superior technology associated with MNCs can spill over to the rest of the economy and benefit the host country, thereby generating productivity improvement to local non-affiliated firms. Hence, this kind of benefits from FDI is referred to as FDI productivity spillovers.

Figure 1.2
Net Flows of FDI in Thailand Classified by Sector in 2001-2008
(%share in total net flows of FDI in manufacturing sector)

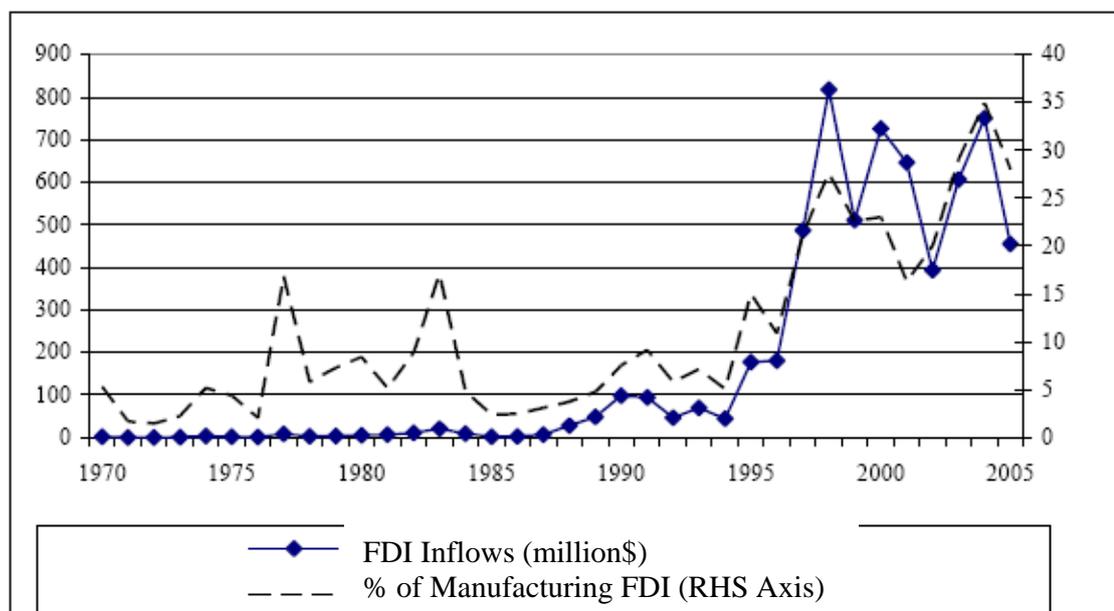


Source: Bank of Thailand (2009)

This study focuses on the Thai manufacturing sector and tries to analyze the impacts of FDI productivity spillover occurred in the Thai automotive industry. From Figure 1.2, in the period of 2001 to 2008, the manufacturing sector is a large recipient of FDI inflows accounting for 47.76% of total net flows of FDI and 32.42% of those are in the sector of machinery and transport equipment. The surges of FDI inflows in the sector of machinery and transport equipment are derived mainly from the automotive industry. The automotive industry covering car assembly industry

and its component manufacturing industry is the successful case in promoting FDI and has long been protected by the government by providing protection for vehicle manufacturing as well as imposing local-content requirements (LCRs) to promote local parts manufacturing during the period 1970-2000. The reason behind is that the car assembly industry has a high potential to promote linkages to the rest of the economy in which promoting the car assembly industry could lead to the development of its supporting industries.

Figure 1.3
FDI Inflows in the Thai Automotive Industry in 1970-2005



Source: Kohpaiboon (2008)

According to Kohpaiboon (2008), Figure 1.3 shows that there was a considerable change in the pattern of FDI inflows in the Thai automotive industry between 1970 and 2005. Dollar value of FDI inflows in the automotive industry were more or less unchanged from 1970 to 1985, with annual inflows amounting to less than \$5 million. Its share of total manufacturing FDI inflows was around 5%. Following this, the annual average value of inflows increased dramatically to \$37 and \$87 million during the periods 1986–1990 and 1991–1995, respectively. FDI inflows in the Thai automotive industry further increased after the 1997 financial crisis and

reached the record high by 1998 with dollar value of \$818 million. Its dollar value of FDI inflows slightly declined during the period 1999-2005, averaging out at \$600 million per annum. As a result, a share of FDI inflows to the automotive industry accounted around a quarter of total FDI inflows for the manufacturing sector between 1999 and 2005. As indicated by the huge increase in FDI inflows, the increased degree of MNC involvement in the Thai automotive industry took place in both car assembly and parts manufacturing industries.

As a result of the significant role of FDI in the Thai automotive industry, this study is meant to analyze the impacts of FDI productivity spillover focusing on the automotive industry in which the technological benefits diffused from MNC affiliates to domestic firms in the automotive industry can result in the productivity improvement of domestic firms in the automotive industry. The automotive industry has been targeted because it has a number of characteristics thought to be conducive to the overall industrial development. First, the automotive industry is a large industry which accounts for a large portion of employment. Second, it is a synthetic industry with strong linkages to other industries, i.e. upstream and downstream industries. Therefore, technological progress in the automotive industry can affect both the automotive industry itself by the increased level of its productivity and any other industries through the transference of productivity advantages via the potential backward and forward linkages to its relevant industries.

Due to the increase of productivity of the automotive industry, the research on FDI productivity spillover effects is conducted in the Computable General Equilibrium (CGE) framework, thereby implementing the computer-based simulation of various scenarios to evaluate the economic impacts of FDI productivity spillover on Thai economy. The CGE analysis is performed in order to capture the most important features of spillover effect, i.e. the spillover effect is a cross-industry phenomenon rather than a sector-specific one, while the conventional econometric analysis tends to underestimate or ignore this feature. As a result, the CGE model is implemented with an attempt to evaluate the economic impacts of exogenous productivity increase of the automotive industry (source sector) caused by FDI productivity spillovers on any other destination sectors through the transmission mechanism of productivity effects assumed in the model, thus generating impacts on the overall economy.

1.2 Objective of the Study

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. By implementing the CGE analysis, the economic impacts of FDI productivity spillover are examined considering on how FDI-generating productivity advantages occurred in the automotive sector can spill over across sectors and affect the overall economy.

1.3 Scope of the Study

This study focuses on quantifying the impacts of FDI productivity spillover on Thai economy using the Input-Output Table of the year 2000 provided by National Economic and Social Development Board as the base data in modeling an economy in the CGE framework. In this study, the existence of FDI productivity spillovers is referred to the case when domestically-owned firms become more productive with the increased productivity level in response to the spillover effects of technological knowledge from MNC affiliates to local non-affiliated firms.

The automotive sector is regarded as an outstanding recipient sector of FDI productivity spillovers; therefore there will be an increase in productivity of domestic firms in the automotive sector. The productivity increase of the automotive sector as a result of FDI productivity spillovers will be transferred to the destination sectors classified by the supply chains of the automotive sector including Metal and metal products, Rubber and plastic products, Components, Engines, Electrical machineries, Agricultural and mining, Other manufacturing and Services.

1.4 Organization of the Study

This study is divided into six chapters as follows.

Chapter 1: Introduction, this chapter consists of the statement of problem, the objective of study, the scope of study and the organization of study.

Chapter 2: Literature Review and Theoretical Framework, this chapter provides the summary of previous studies related to this study and also provides the theoretical framework about FDI and its spillover effects.

Chapter 3: Methodology, this chapter provides some descriptions about the research methodology of this study which is the Computable General Equilibrium model (CGE model). The model descriptions and the theoretical structure of the CGE model performed in this study are also included in this chapter.

Chapter 4: Data Base of the Model, this chapter contributes to the model data base including the input-output data file and the elasticity file.

Chapter 5: CGE Simulation Results, this chapter is accounted for the interpretation and discussion of the simulation results.

Chapter 6: Conclusion and Limitation, this chapter provides summary and conclusion of the study and limitations of the study.