Trade Effects of Foreign Direct Investment: 
Evidence for Taiwan with Four ASEAN Countries

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I. Introduction

Foreign direct investment (FDI) has long been practiced by multinational corporations in developed countries. It has also increasingly become a way of expansion or relocation for firms in newly industrialized countries such as Taiwan. Like Japan in the past, Taiwan has experienced a huge currency appreciation and rapid increases in production costs in recent years, causing many domestic firms to invest abroad. The impact of FDI on the domestic economy then becomes an important issue when considering if the restrictions on FDI should be further curtailed. This paper examines one aspect of the impact, namely the trade effect, and presents some empirical evidence as information for policy deliberation.¹

Will outward FDI benefit a home country’s exports? Although Mundell (1975) presented a case in which product trade and FDI can be substitutes, Schmitz and Helmberger (1970) and Markusen (1983) argued that they are generally complements. Adler and Stevens (1974) pointed out the complexities of export displacement involved, while Lipsey and Weiss (1981) found that U.S. foreign manufacturing in-

¹ Large-scale and continued increases in FDI should have important effects on a home country’s economy. Two of these are the effects on domestic investment and foreign trade. According to an analysis (Lin et al. 1994) based on a dynamic econometric model of Taiwan with 29 industrial sectors, it is found that about $76 (in Taiwan dollars) of domestic investment was displaced for every $100 of investment made abroad during the period 1986–1991 examined. This is a substitution effect of outward FDI. On the other hand, FDI was found to have stimulated exports. The effect of outward FDI on Taiwan’s economic growth is thus mixed.

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vestment tended to promote U.S. exports. Ozawa (1971) and Kojima (1973, 1982) also characterized Japanese overseas investment as trade-oriented FDI.

Thus, the exact relationship of trade and FDI is essentially an empirical one. Although the total effect of FDI on trade should be measured in terms of world trade, the purpose of this paper is much more limited. To present statistical evidence, it focuses only on the effect of FDI on aggregate exports and imports between two countries. Specifically, we estimated the effect of Taiwan's outward FDI in a host country on exports to and imports from the host country and the trade effect of inward FDI from that country based on time series data. The countries considered are: Indonesia, Malaysia, the Philippines, and Thailand, all in Southeast Asia.²

In the following, we discuss the relationship of trade and FDI in Section II and the statistical model to be used in Section III. Regression results and the conclusions are given in Sections IV and V, respectively.

II. FDI and Trade

Table 1 summarizes the possible effects of FDI on trade between countries A and B, devised from the standpoint of A investing in B and receiving investment made by B.³ The effects depend on whether the investment is made to produce services (S), final goods (F), or materials including parts (M) for markets A, B, or C (other countries). Tradable goods are classified into three categories: equipment and machinery (E), materials (M), and other goods (G).

To explain the table we consider three cases. First, if country A (say, Taiwan) invests in country B (say, Indonesia) to establish a trading company, a banking business, or a retail store, trade between A and B is expected to expand.

Second, country A invests in country B to produce final goods because of low wages, market proximity, trade barriers, or internaliza-

² In recent years Taiwan has increased its FDI tremendously in the People's Republic of China. The latter reports that the actual amount of investment made by Taiwanese firms had exceeded $11 billion in US dollars by the end of 1993. Unfortunately the People's Republic of China was not included in our study due to lack of time-series data.

³ The effects of outward (or inward) FDI on bilateral trade are complicated. They will depend on what products are produced in the host country, for which market they are produced, and then which tradable goods are being considered. Table 1 lists all the possible cases which may arise.