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Foreign direct investment and vertical integration of production by Japanese multinationals in Thailand

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We test the vertical model of foreign direct investment (FDI) empirically using firm level information on Japanese multinational activity in Thailand. These data allow us to investigate the effects of both home country (Japan) and host country (Thailand) characteristics on the inter-industry pattern of FDI. For 85 manufacturing industries over the period from 1985 to 1995, we find a positive influence of industry variation in skill intensity and market size in the host country and a negative effect of transport costs on the amount of FDI. These results provide strong direct econometric evidence of vertical integration of production across the countries. *Journal of Comparative Economics* **32** (4) (2004) 805–821. School of Economics, University of Nottingham, Nottingham, NG7 2RD, UK; Ministry of Finance, Thailand.

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1. Introduction

Only a small portion of the empirical literature on the determinants of foreign direct investment (FDI) in developing countries including from Japan, e.g. Fung et al. (2002), focuses on factors that influence the inter-industry distribution of FDI (Lall and Mohammad, 1983; Aswicahyono and Hill, 1995). Data on FDI are often poor or limited in coverage and cross-industry information on structural and policy characteristics is usually not available. This paper addresses the specific case of Japanese FDI in Thailand, in which differences in host and home country characteristics lead us to expect to find vertical multinationals. By concentrating on these two countries, we are able to construct a data set that includes industrial characteristics from both countries. We produce three alternative measures of Japanese investment in Thailand across 85 manufacturing industries based on information compiled from company-level data. These micro-level data allow us to investigate directly the factors determining inter-industry variation in FDI in an industrializing country.

Figure 1 records the number of Japanese firms that operated in different manufacturing sectors in Thailand in 1995 and distinguishes between those established before 1986 and those established throughout the period from 1954 to 1995. The number of firms established after 1985 in the post-import substitution development stage in Thailand has increased by 805 from a total of 156. In addition, intensification of the concentration of this inward investment in specific sectors is obvious from the figure. Before 1986, 64 (41%) of the firms were located in the classification ISIC 38, which consists of fabricated metals, machinery and equipment. By 1995, this number had grown to 422 firms or 52% of the Japanese companies in Thailand. Interestingly, a similar level and pattern of concentration emerges in Thailand's trade with Japan. Non-electrical and electrical machinery, vehicles, and iron and steel accounted for about 80% of Thailand's imports from Japan in 1989.

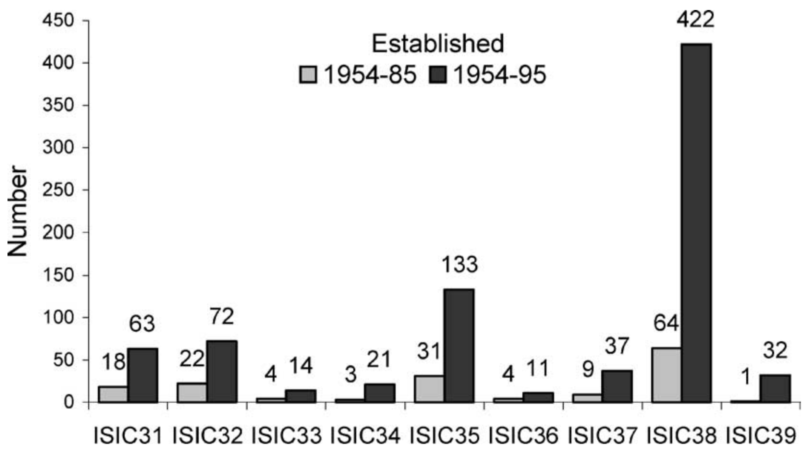

Fig. 1. The number of Japanese companies operational in Thailand's manufacturing sector.