The main purpose of this dissertation is to investigate the determinants of inward FDI in the Thai manufacturing sector. It also examines the impacts of FDI inflows to the economic growth of Thailand. The FDI determinants model collected the data from 14 source countries and 9 manufacturing industries during 1990 to 2008. The analysis results suggest that good host economic factor such as source country GDP, industrial production, FTA, infrastructure, economic stability, and government policies for both industrial and investment promotion positively attract the inward FDI. The analysis also examines the relationship between the economic crisis and the manufacturing FDI inflows. The results indicate that the structure of industrial FDI has been changed after the economic crisis. Also, the depreciation of Thai currency and urgent government policies play an important role to attract industrial FDI and restore the Thai manufacturing growth. Finally, the empirical analysis finds the evidences indicating that the inward industrial FDI positively affect Thai real wages and support total factor productivity of Thailand.