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**Determinants of Japanese FDI in
the United States and China:
A Comparative Study**

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ABSTRACT

Theories of foreign direct investment suggest that firms make substantial investment abroad to seek additional markets, secure key resources and also for internalization. This study attempts to compare the pattern of Japanese FDI in the United States and China and examine whether diversification of investment is a driving force in investments. It is desirable for Japan to maintain a balance between a mature and an emerging economy. This paper includes factors that contribute to the explanation of outward FDI for Japan and tests whether the variables do really influence the flow of FDI into the U.S. and China.

Introduction

Japan's foreign direct investment (FDI) has been beneficial to the United States in increasing labor productivity and economic performance of its affiliates, particularly in the manufacturing sector. Similar investments in China have created competitiveness in both manufacturing and non-manufacturing sectors. In the post 9/11 period, FDI outflow from the United States has been restrained because the US multinational corporations are trying to keep the supply side of their logistics in close vicinity. The sudden decrease of FDI by 57 percent between 1999 and 2003 by the US multinational corporations paves way for new competitors in low-wage economies on a large scale [Koudal, 2005]. During the same period, Japan has registered significant economic recovery, specifically battling fears of disinflation and writing off nonperforming assets. China is undergoing major structural reform to fulfill its obligations as the newly admitted member of the World Trade Organization (WTO).

We expect Japan to consider both United States and China as its favorable destinations of FDI. US being a fully mature market, future investments may happen mostly through acquisitions. China's emergence will provide very attractive avenue for diversification of Japanese future investments, especially if /China's exchange rate regime undergoes a market reform. Competitive advantage may be realized only with sustained R&D capability to enhance success of affiliates in China [Shu-Hua, 2005].

Literature Review

All of the traditional motives of FDI in seeking resources, market and knowledge are true for Japanese FDI [Park, 2003]. Usually, developing countries lack technological capabilities and human capital and so are unable to register significant productivity growth whereas industrialized economies do [Elmawazini et al, 2005] but Suzuki Motor Corporation is a classic example to make systematic pattern of FDI to help the company to grow in size, profitability and global presence besides contributing to the host economy [Nayak, 2005].

Acquisitions through FDI have enhanced labor productivity and so transfer of firm-specific assets to such foreign subsidiaries is smooth only to make them perform better than competitors in the home country [Piscitello, 2005]. The expectation that foreign firms may assist several indigenous firms in increasing their performance levels through productivity spillovers is sometimes not true in specific instances of Irish manufacturing industry [Ruane, 2005]. Similarly, Barry et al in their study of Irish firms show that the presence of foreign firms may have different effects on wages and productivity in the host country's firms [Barry et al, 2005]. The spillover effects may also vary based upon the technological competence of domestic firms according to an empirical study of manufacturing industry in Greece [Dimelis, 2005].

Despite a deep structural transformation in the 1980s, the developing economies still display a gap both in technology and institutions in comparison with developed countries [Durán et al, 2005]. Investment incentives and development of human resources will lead to knowledge-transfer and thus the host countries are rendered competitive on a global scale [Kottaridi, 2005]. In spite of differences in fiscal policy and industrial development,

countries in East Asia have shown common financial sector development due to inward FDI in other sectors [Chee-Keong Choong et al, 2004].

Trend and Pattern of FDI in the United States and China

FDI inflow in Japan and the U.S. have been slow as indicated in Table 1 during this decade primarily due to the terrorist attack in the U.S. and Japan's economic recovery after a period of disinflation.

Table 1 FDI Flows in Recent Years in Japan, China and the U.S.

Japan

	2002	2003	2004	2005
FDI Inward	9,239	6,324	7,816	2,775
FDI Outward	32,281	28,800	30,951	45,781

China

FDI Inward	52,743	53,505	60,630	72,406
FDI Outward	2,518	-152	1,805	11,306

United States

FDI Inward	74,457	53,146	122,377	99,443
FDI Outward	134,946	129,352	222,437	12,714

Source: UNCTAD

China, on the other hand, is well placed to receive significantly higher inflows indicating its potential for an increased outward FDI in future. China's significant inflows thanks to its privatization in stages and market reform efforts have paved way for the country's outward FDI in the recent years [Xiaohui, 2005].

Japan's FDI stock is unique in that the inward stock is on the decline at a rapid pace but that of China has increased multifold, as shown in Table 2.

Table 2 FDI Stock for Select Years for Japan, China and the U.S.**Japan**

	1980	1990	2000	2005
FDI Inward	3,270	9,850	7,816	2,775
FDI Outward	19,612	28,800	30,951	45,781

China

FDI Inward	1,074	20,691	193,348	317,873
FDI Outward	n.a.	4,455	27,768	46,311

United States

FDI Inward	83,046	394,911	1,256,867	1,625,749
FDI Outward	215,375	430,521	1,316,247	2,051,284

Source: UNCTAD

Empirical Study of Japanese FDI in the United States and China

Our study focuses on Japanese's FDI in manufacturing industry, non manufacturing sector and branches. The manufacturing industry comprises food, textile, lumber & pulp, chemical, metal, machinery, electric, transport and other sectors. The non-manufacturing industry includes farming, fishery, mining, construction, trade, finance, service, transportation, real estate and other sectors. Japanese FDI consists of investment in branches as well.

We expect the number of cases in each activity to reflect significant investment. We have included the macro economic variables for both home and host countries, such as exchange rate, gross domestic product per capita, inflation, interest rates for deposits and loans, international trade and balance of payment. The changes in per capita GDP in the home country will result in opportunities for additional FDI. Similar changes in the host economy will guarantee location-specific and firm-specific advantages .Deficit balances

in the host economies will increase opportunities for investment incentives and policy changes. We expect the home economy to carry a positive balance of payments to warrant the flow of additional future FDI. We attempt to study the pattern and determinants of Japanese FDI in /the United States and China, using panel data from 1990 to 2002.

Hypothesis 1:

Outward Foreign Direct Investment (FDI) = α (constant) + β_1 (number of cases of additional investment) + β_2 (host country's balance of payments) + β_3 (host country's per capita GDP) + β_4 (outward FDI performance index) + β_5 (inward FDI performance index) + β_6 (inward FDI potential)

Hypothesis 2:

Outward Foreign Direct Investment (FDI) = α (constant) + β_1 (number of cases of additional investment) + β_2 (host country's balance of payments) + β_3 (host country's per capita GDP) + β_4 (outward FDI performance index) + β_5 (inward FDI performance index) + β_6 (inward FDI potential) + $\beta_{7,8}$ (country dummy variables for United States and China)

Hypothesis 3:

Outward Foreign Direct Investment (FDI) = α (constant) + β_1 (number of cases of additional investment) + β_2 (host country's balance of payments) + β_3 (host country's per capita GDP) + β_4 (outward FDI performance index) + β_5 (inward FDI performance index) + β_6 (inward FDI potential) + $\beta_9, 10$ and 11 (dummy variables for manufacturing industry, non-manufacturing sector and branches)

Data and Methodology

We use the outward FDI performance index as the proxy variable to identify ownership-specific and location-specific advantages. This helps us address advantages from access to natural and financial resources, information, managerial and organizational skills, firm size, relative market size, logistics and all costs. Similarly, we use inward FDI potential and performance indices to represent economic activity, knowledge development through sustained R&D efforts, business climate and country risk.

Discussion of Empirical Evidence

Our results indicate proof of very interesting developments in the U.S. and China in all sectors. In most cases, our results provided the expected signs and all the indices for outward FDI performance, inward FDI performance and potential turned out to be very significant. The variable representing the number of cases of FDI also turned out to be highly significant explaining the higher levels of investment directly associated with the number of investments. Both the host countries clearly bear the necessary potential to attract FDI inflow from Japan but the inward FDI performance of the U.S. is found relatively weak as indicated by its negative sign. The same results for China are obtained with a positive sign suggesting that Japan may weigh its options in future and change the course and direction of its outward FDI.

We tested the same results with a dummy variable for manufacturing activity, non-manufacturing sector and branches for the whole sample and also for each country separately. The number of cases and all the three indices again turned out to be significant. Our regression results are presented in tables 3 and 4 and the correlation matrix is also shown in table 5. Japanese outward FDI is slated to increase if the outward investments are providing positive results of performance. Similarly, if the inward FDI potential is high and results of performance for such investments are positive in both host countries Japan will continue to consider both hosts strong and viable targets for future investments. Based on future potential and close proximity China is poised to be a choice for creation of diversification of portfolios.

Conclusion

The U.S. has consistently shown very high inward FDI potential but its performance in that area has been relatively weak whereas the same for China are positive. If Japan's outward FDI has to perform effectively in seeking resources, market and knowledge, it may seek all benefits of FDI through a systematic pattern of diversification. This may also suggest further policy developments for all developed and developing countries besides redefining investment development path through policy oriented incentives to attract Japanese FDI.

Table 3 REGRESSION RESULTS ON OUTWARD JAPANESE FDI

Independent Variable	Complete Sample	United States	China
Constant	3.186 (0.548)	-262.644 (-1.853)*	-16.850 (-2.919)
Cases	0.143 (22.506)***	0.182 (20.225)***	0.039 (29.965)***
Host country's BOP	0.0000723 (0.109)	-0.006 (-1.645)	-0.000016 (-0.895)
Host country's per capita GDP	0.001 (0.147)	0.00000156 (0.000)	0.000 (0.092)
Outward FDI performance index	-18.734 (-3.217)**	-45.804 (-4.049)***	4.571 (1.692)*
Inward FDI performance index	-1.822 (-1.976)*	-37.232 (-1.167)	0.662 (2.605)*
Inward FDI potential	21.086 (1.161)*	452.532 (1.873)*	60.065 (25.751)*
Adjusted R ²	0.56	0.63	0.80
Number of Observations	487	251	235

t-statistics appear in parentheses for each variable in

* = significant at 90% confidence level

** = significant at 95% confidence level

*** = significant at 99% confidence level

Table 4 REGRESSION RESULTS ON JAPANESE OUTWARD FDI FOR MANUFACTURING INDUSTRY, NON-MANUFACTURING SETOR AND BRANCHES

Independent Variable	Complete Sample		
Constant	3.697	1.249	1.118
	(0.617)	(0.213)*	(0.213)
Cases	0.143	0.141	0.134
	(22.332)***	(21.964)***	(19.665)***
Host country's BOP	0.0000774	-0.0000106	-0.00000313
	(0.116)	(0.159)	(-0.895)
Host country's per capita GDP	0.001	0.000	0.000
	(0.155)	(0.111)	(0.041)
Outward FDI performance index	-18.840	-18.861	-17.946
	(-3.228)**	(-3.251)**	(-3.109)**
Inward FDI performance index	-1.838	-1.821	-1.655
	(-1.989)*	(-1.1983)*	(-1.810)
Inward FDI potential	20.811	21.613	24.747
	(1.144)	(1.195)	(1.374)*
Manufacturing Industry	-0.726		
	(-0.358)		
Non-manufacturing Sector		4.443	
		(2.195)*	
Branches			12.239
			(3.231)**
Adjusted R ²	0.56	0.56	0.56
Number of Observations	487	487	487

t-statistics appear in parentheses for each variable in

* = significant at 90% confidence level

** = significant at 95% confidence level

*** = significant at 99% confidence level

Table 5 Correlation Matrix for Select Variables

	FDI	JDEPRATE	JLENDRATE	JBOP	CHGBOP	JCPI	JCHINFL	JENP	JIMP	JTRADE	JBOT	CHGTR	JGDP	JPERCAPG	CHGGDPP	OFDIPERF	HDEPRATE	HLENDR	HBOP	CHGBOP	HCPI	HINFL	HENP	HIMP	HTRAD	HBOT	CHGHTRAD	HGDP	HGDPP	CHGGDPP	FDINPER	FDINPOT					
FDI	-																																				
JDEPRATE	0.019	-																																			
JLENDRATE	0.028	0.990	-																																		
JBOP	0.022	-0.580	-0.573	-																																	
CHGBOP	-0.016	0.422	0.315	-0.182	-																																
JCPI	0.034	0.827	0.832	-0.795	0.348	-																															
JCHINFL	0.017	0.654	0.681	-0.189	0.306	0.487	-																														
JENP	0.010	-0.816	-0.782	0.674	-0.366	-0.750	-0.302	-																													
JIMP	-0.011	-0.845	-0.797	0.578	-0.442	-0.739	-0.238	0.870	-																												
JTRADE	-0.001	-0.860	-0.817	0.644	-0.424	-0.770	-0.277	0.962	0.971	-																											
JBOT	0.041	0.261	0.223	0.027	0.300	0.162	-0.056	0.017	-0.478	-0.255	-																										
CHGTR	-0.015	0.361	0.300	-0.424	0.101	0.459	-0.461	-0.332	-0.500	-0.443	0.459	-																									
JGDP	-0.002	-0.910	-0.888	0.334	-0.477	-0.569	-0.602	0.762	0.761	0.787	-0.187	-0.188	-																								
JPERCAPG	0.066	-0.306	-0.287	0.560	-0.110	-0.366	-0.271	0.485	0.098	0.288	0.664	-0.084	0.260	-																							
CHGGDPP	0.017	0.351	0.288	-0.058	0.217	0.222	-0.470	-0.454	-0.711	-0.621	0.679	0.597	-0.387	0.496	-																						
OFDIPERF	0.009	0.868	0.890	-0.564	0.280	0.756	0.638	-0.769	-0.594	-0.699	-0.165	0.337	-0.831	-0.542	0.066	-																					
HDEPRATE	-0.031	0.352	0.379	-0.159	0.242	0.359	0.324	-0.111	-0.282	-0.209	0.373	-0.078	-0.269	0.246	0.071	0.199	-																				
HLENDRATE	-0.003	0.216	0.265	-0.085	0.150	0.284	0.321	0.038	-0.107	-0.041	0.284	-0.204	-0.113	0.274	-0.085	0.106	0.967	-																			
HBOP	-0.179	-0.258	-0.252	0.138	-0.119	-0.225	-0.224	0.148	0.290	0.231	-0.325	-0.054	0.123	-0.118	-0.125	-0.058	-0.067	-0.054	-																		
CHGBOP	-0.110	-0.111	-0.127	-0.075	-0.120	-0.165	-0.060	-0.094	0.049	-0.014	-0.231	-0.270	-0.013	-0.150	-0.121	-0.120	0.138	0.111	0.197	-																	
HCPI	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-																
HINFL	-0.070	0.290	0.298	-0.007	0.273	0.162	0.229	-0.056	-0.240	-0.162	0.379	-0.095	-0.324	0.307	0.143	0.107	0.869	0.799	0.084	0.390	-																
HENP	-0.245	-0.329	-0.332	0.191	-0.149	-0.317	-0.220	0.241	0.311	0.288	-0.202	-0.036	0.256	-0.035	-0.114	-0.220	-0.212	-0.209	0.811	0.047	-0.088	-															
HIMP	-0.247	-0.309	-0.317	0.208	-0.109	-0.326	-0.195	0.230	0.297	0.275	-0.193	-0.050	0.220	-0.035	-0.107	-0.209	-0.178	-0.183	0.817	0.058	-0.044	0.996	-														
HTRAD	-0.246	-0.320	-0.325	0.199	-0.131	-0.321	-0.209	0.236	0.305	0.282	-0.198	-0.042	0.239	-0.035	-0.111	-0.215	-0.197	-0.198	0.814	0.052	-0.068	0.999	0.999	-													
HBOT	-0.208	-0.383	-0.365	0.086	-0.323	-0.238	-0.312	0.264	0.341	0.315	-0.221	0.034	0.399	-0.033	-0.133	-0.247	-0.348	-0.310	0.685	-0.015	-0.286	0.902	0.859	0.883	-												
CHGHTRAD	0.075	-0.326	-0.252	0.086	-0.430	-0.160	-0.162	0.349	0.403	0.394	-0.251	-0.020	0.377	-0.066	-0.314	-0.110	-0.371	-0.230	0.128	-0.241	-0.440	0.034	-0.027	0.006	0.522	-											
HGDP	0.069	-0.812	-0.812	0.472	-0.411	-0.738	-0.528	0.604	0.727	0.692	-0.399	-0.190	0.678	0.041	-0.290	-0.611	-0.696	-0.563	0.162	0.076	-0.552	0.155	0.131	0.144	0.253	0.457	-										
HGDPP	0.265	-0.229	-0.232	0.136	-0.098	-0.212	-0.149	0.168	0.204	0.194	-0.114	-0.042	0.190	0.003	-0.072	-0.174	-0.346	-0.264	-0.540	-0.032	-0.359	-0.724	-0.733	-0.729	-0.596	0.253	0.552	-									
CHGGDPP	-0.098	0.203	0.203	0.020	0.415	0.176	0.294	-0.075	-0.104	-0.095	0.087	-0.082	0.178	-0.055	-0.104	0.197	0.488	0.486	0.015	-0.390	0.301	0.145	0.179	0.161	-0.623	-0.160	-0.455	-0.425	-								
FDINPER	-0.189	-0.006	0.003	0.029	0.151	0.023	-0.051	0.078	-0.047	0.012	0.235	-0.064	0.006	0.280	0.097	-0.157	0.692	0.657	0.467	0.241	0.793	0.442	0.460	0.451	0.303	-0.279	-0.416	-0.726	0.458	-							
FDINPOT	0.300	-0.053	-0.050	0.027	-0.042	-0.037	-0.028	0.045	0.051	0.050	-0.024	-0.011	0.057	0.010	-0.023	-0.031	-0.311	-0.229	-0.580	-0.129	-0.361	-0.767	-0.777	-0.773	-0.628	0.265	0.422	0.962	-0.423	-0.698	-						

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