

Indian Multinational Investment Decisions: Outside India

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Abstract.

The outward foreign direct investment (FDI) & foreign direct investment (FDI) in the economic development is very crucial as it creates new jobs, provides skilled technical and managerial labor and transfers the technology. But Such effects could be in the form of allocative efficiency, technical efficiency and technology transfer (Caves, 1974). Much of the FDI has been taking place through MNEs of the developed countries that possess advance technology, abundance of capital, strong production, advertisement and distribution networks but emergence of the third world multinational enterprises (TWMNEs) at international level is a relatively new and captivating phenomenon.

Thus, the study will provide in-depth knowledge about Indian Multinational Investment Decisions Outside India on outward FDI on Indian Economy in India to the researchers and academicians through this Paper.

Introduction:-

Indian firms investing abroad during the restricted phase were mostly conglomerates (Lall, 1982) competing into those sectors that required simple technology², low product differentiation and more labor intensive techniques (Lall, 1983; Pradhan 2004) but they have worked in the developing countries more efficiently than the developed countries MNEs. During the liberalized phase, continual industrialization in the domestic market, experience attained from home and abroad, financial relaxation and local government supports³ paved the way for Indian MNEs to invest globally. The current study will fill the gap after focusing on those country specific advantages (CSA) like market size, macro economic indicators of the host country, business policies and environment which have attracted Indian MNEs to invest abroad (Pull factors).

Along with others, some of the important pull factors are market size, growth rate, inflation, physical distance, taxes and investment treaties of the host country. Gastanaga et al, (1998) have studied by collecting the pooled cross-section and time series data for 49 less developed countries over the period 1970-1995 and concluded that GDP growth rate is a highly significant determinant in attracting FDI into the host countries. Indian MNEs have established their subsidiaries and joint ventures in growing markets and the current study expects that real GDP growth of the host country is positively associated with Indian OFDI. The current study expects that real exchange rate of the host country against US dollar is negatively associated with Indian OFDI.

It is true that firms prefer to invest into those locations they have already covered through exports even the results provided by some of other studies (e.g. Pradhan, 2007c; Lipsey and Weiss; 1981; Lipsey and Weiss, 1984; Yamawaki, 1991) indicate that OFDI by MNEs again enhances exports from home countries. A significant but negative relationship is observed between real GDP per capita of the host country and Indian OFDI. Real exchange rate of the host country is positively associated with Indian FDI but not significant i.e. Indian firms invested into those countries with stronger currencies. As a policy guideline our results have important implications for multinationals and policy makers working with government in the developed and in developing countries to take into consideration these factors while formulating policies in relation to overseas foreign direct investment

Builds on previous research

An interesting explanation and surprising results are provided by (Filippaios et al, 2003) that market growth is significant but negatively related in a study on US FDI into pacific region of OECD (Australia, New Zealand and Korea). Explanations for such a negative relationships is justified on the basis that growing markets provide equal microeconomic environment which discourage FDI entry in to the countries. Kumar, (1982) confirms that Hong Kong and Taiwanese firms have set up their subsidiaries and joint ventures in the growing Asian markets.

Rate and prior work

Only a few studies (e.g. Scaperlanda, 1974; Aqeel and Nishat, 2005) have shown that depreciation in the currency of host country discourages FDI inflows. Gastanaga et al, (1998) have concluded that exchange rate distortions in the host country do not significantly impact on the decision of FDI inflows into the country. Buckley et al (2007) have found that exchange rate of the host country has played an insignificant role in overall Chinese OFDI but significant and positive effect when the destinations are developed countries

Confirmation of earlier findings

This finding was contrary to the theory and expectations of the authors and might be due to the reason that most number of Chinese projects have been initiated into developing countries where there are more chances of inflation. Similar results are provided by Asiedu (2006) on an empirical analysis by taking the data on 22 sub Saharan African countries during 1984-2000 and confirm that low inflation attracts FDI inflows into the region.

Differs from previous work

However, it is difficult to determine whether trade follows investment or investment chases trade. Although, it is true that firms prefer to invest into those locations they have already covered through exports even then the results provided by some of other studies (e.g. Pradhan, 2007c; Lipsey and Weiss; 1981; Lipsey and Weiss, 1984; Yamawaki, 1991) indicate that OFDI by MNEs again enhances exports from home countries.

Counterpoint to earlier claims

An ordinary least square (OLS) as well as Tobit are used to analyze the factors that affect the flow of Indian Multinational volume of foreign direct investment. However due to the zero observation on the dependent variables (Indian OFDI), the ordinary least square (OLS) will give inconsistent and biased estimates (Gujarati, 2003) and the appropriate techniques is Tobit (Tobin 1958) using maximum likelihood estimation and hence a Tobit regression was employed to analyze the influencing factors affecting the decision of the Indian Multinationals to invest in the host country.

The role of foreign direct investment (FDI) in the economic development is very crucial as it creates new jobs, provides skilled technical and managerial labor and transfers the technology. FDI transfers the technology at international level (Caves, 1971) while multinational enterprises (MNEs) have been working as development agents in the world (Ozawa, 1992). Over the last three decades, industrialization has been much faster as compared to 1950s and 1960s due to active participation of MNEs at international level. Multinationals are vehicles for providing new technology, productive capacity, knowledge transfer, natural resources and managerial skills (UNCTAD, 2005b). They generate spillover effects that help the domestic enterprises to increase their ownership advantages. Such spillover effects could be in the form of allocative efficiency, technical efficiency and technology transfer (Caves, 1974). Although, much of the FDI has been taking place through MNEs of the developed countries that possess advance technology, abundance of capital, strong production, advertisement and distribution networks but emergence of the third world multinational enterprises (TWMNEs) at international level is a relatively new and captivating phenomenon. Indian firms are also amongst those that have been investing since many years but their immense growth at international level occurred especially after late 1990s (UNCTAD, 2004, 2005, 2006; Pradhan 2005, 2007b; Sauvart 2005). Indian outward foreign direct investment (OFDI) has accounted on average \$ 1.1 billion annually during 2001-2003 (UNCTAD 2004; Kumar 2006).

Model , Methods and Calculation :-

In the light of above discussion, the relationship among Indian OFDI and its determinants that are likely to influence the flow of FDI in the host country, the following equation is specified to show the relationship between OFDI and other explanatory variables.

$$\log Y = f + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \mu_i$$

Where \log , is the log of the volume of foreign direct investment (OFDI) in year I

X_1 = Real GDP in (Billions of US \$)

X_2 = Real GDP Per capita (Units of US \$),

X_3 = Real GDP growth of the host country (% change)

X_4 = Real Exchange rate US Dollar (in Units)

X_5 = Distance of the host country Capital from New Delhi (in KM)

X_6 = Real GDP Deflator of the Host countries (% change) f , = is the intercept terms.

β_1, \dots, β_6 = are the coefficients to be estimated.

μ_i = is the error term in the model, (which accounts for all the omitted variables that may affect the OFDI).

Table 2 OLS estimate of the Determinants of Indian OFDI during 1970-1990

Explanatory variables	Notation	Coefficient	t	P value
Constant	β_0	-.670* (.367)	-1.826	.074
Log of Real GDP of the Host countries (Billions of US \$)	X1	.000* (.000)	2.190	.034
Real GDP Per Capita of the Host countries (Units of US \$)	X2	-3.00e-05** (.000)	-2.667	.009
Real GDP Growth of the Host countries (% change)	X3	.013 (.032)	.422	.675
Real Exchange Rate of the Host countries with US Dollar (in Units)	X4	.005** (.002)	2.539	.014
Distance of the host country Capital from New Delhi (in KM)	X5	.000* (.000)	-2.459	.018
Real GDP Deflator of the Host countries (% change)	X6	.009* (.005)	1.898	.064

Note: Figures in Parentheses are standard errors
 R= 0.5575 R-square=.311 Adjusted R-square = 0.223
 Durbin-Watson=1.589 F= 3.533 Significance=0.0057
 ***, **, *, significant at 1 %, 5% and 10 % respectively

An ordinary least square (OLS) as well as Tobit are used to analyze the factors that affect the flow of Indian Multinational volume of foreign direct investment. However due to the zero observation on the dependent variables (Indian OFDI), the ordinary least square (OLS) will give inconsistent and biased estimates (Gujarati, 2003) and the appropriate techniques is Tobit (Tobin 1958) using maximum likelihood estimation and hence a Tobit regression was employed to analyze the influencing factors affecting the decision of the Indian Multinationals to invest in the host country. For estimation we write The Tobit Model as;

$$y_i^* = \begin{cases} y_i^* = \beta X_i + \mu_i & \text{if } y_i^* > 0 \\ 0 & \text{if } y_i^* \leq 0 \end{cases}$$

$$\mu_i \sim \text{IN}(0, \sigma^2)$$

Where Y_i is the Indian OFDI in million S. β is the coefficient associated with a particular explanatory variable X;

Table3. Tobit estimates of the determinants of Indian OFDI Based on the date 1970-1990.

Explanatory variables	Notation	Coefficient	t	P value
Constant	β_0	.6735 (1.2153)	0.55	0.583
Log Real GDP of the Host countries (Billions of US \$)	X1	.4369* (.2467)	1.77	0.084
Log GDP Per Capita of the Host countries (Units of US \$)	X2	-1.0166*** (.2873)	-3.54	0.001
Log of GDP Growth of the Host countries (% change)	X3	1.126* (.5226)	2.15	0.037
Log Real Exchange Rate of the Host countries with US Dollar (in Units)	X4	.02164 (.313)	0.07	0.945
Log Distance of the host country Capital from New Delhi (in KM)	X5	-.2418* (.1517)	-1.59	0.099
Log Real GDP Deflator of the Host countries (% change)	X6	.9056* (.4333)	2.09	0.043

Note: Figures in parenthesis are standard errors.

***, **, * Indicates significance at 1 %, 5% and 10 % probability level

Dependent Variable is Indian OFDI (millions of US\$).

No of observation = 46

Log Likelihood = 51.184428

LR chi square (6) = 21.61

Prob>Chi square = 0.0014

Pseudo R-square = 0.1743

The results of OLS regression are indicated in Table 2 while the results the Tobit model is given in table 3. Here only the results of the Tobit will be discussed as we have already explained that our data is censored and Tobit model is the appropriate techniques in our case.

Table 3 shows that the OFDI of the Indian multinationals is positively and significantly affected by the value of the real GDP of the host country. The relationship is significant at 5%. An increase of 1% in the real GDP of the host country will increase FDI inflows from India by 0.43 %. Our results are consistent with previous findings (e.g. UNCTAD, 2006; Artige and Nicolini, 2005; Chandrapalart, 2000; Mosa and Cardak, 2006; Wheeler and Mody, 1992; Svetlicic, 2004; Loree and Guisinger, 1995; Cassou, 1997; Chakrabarti, 2001 and Buckley et al, 2007)

That host country GDP is a significant factor that affects the flow of OFDI. The plausible explanation for such positive relationship is the growth associated as a result of the GDP of the country which is an indication of the growing opportunities that motivate the multinational to invest their funds in such rapidly growing economics and hence to reap the benefits of such growth. From our results we conclude that during the period 1970-1990, one of the major determinants of the Indian multinationals in the host destination is real GDP growth rate of these countries that pulled the investment of these multinational towards the host countries. An increase in real GDP of the host country by 1% will enhance Indian FDI inflows by 1.126 %.

A significant but negative relationship is observed between real GDP per capita of the host country and Indian OFDI. This is inconsistent with the theory; however the reason behind such an inverse relationship is that most of Indian OFDI during the period. (1970-1990) is in developing countries where real per capita income is generally tended to decrease rather than increase. Real exchange rate of the host country is positively associated with Indian FDI but not significant i.e. Indian firms invested into those countries with stronger currencies. Such results are surprising and contrary with the theoretical background but similar as observed in some studies. (e.g. Scaperlanda, 1974; Aqeel and Nishat, 2005). The coefficient of the distance of the host..country capital is negative and significant which is consistent with the theory. Indian firms during the period mostly invested into neighboring countries. Our results further show that, real GDP deflator of the host country has positively influenced the volume of the Indian OFDI. An increase in the GDP deflator of the host country by 1 % is likely to increase Indian OFDI by 0.90 %. This is similar to the study of Buckley et al, (2007) that shows a positive and significant relationship between inflation and the Chinese OFDI. The contrary outcome with the theory and expectation is due to lack of

sufficient data (limited observations) and as mostly Indian projects have been initiated into developing countries where there are more chances of real GDP inflation.

Results:-

The results of OLS regression are indicated in Table 2 while the results the Tobit model is given in table 3. Here only the results of the Tobit will be discussed as we have already explained that our data is censored and Tobit model is the appropriate techniques in our case.

Dependent variable is the volume of Indian OFDI in million, while independent variables are real GDP of the host country in billion, per capita GDP of the host country in units, GDP growth of the host country. %, real exchange of the host country in units, distance in KM of the host country from the capital of India (New Delhi) and real GDP deflator in. %.

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Conclusion:-

Over the last three decades, there is an increasing trend in the outward investment of multinationals of the third world- growing and emerging economies and their destinations are mostly the developed countries. The growth of OFDI of TWMNEs such as India is much greater than the corresponding OFDI of some of the developed countries MNEs like Austria, Belgium..and Ireland. Mostly the increase in the Indian OFDI is attributed to the merger and acquisition. (M&A) in host countries in different sectors such as primary sector, services and the manufacturing sector. These M&A also enhance the bargaining power of TWMNEs to get loans, customer credit insurances and financial supports on easy terms and conditions because financial institutes measure theirs strength and capabilities from M&A in advanced countries. In addition to firm specific characteristics, which have played an important role for OFDI from TWMNEs, the host country related factors. (pull factors) are not easy to ignore. The most important pull factors are the market size, real GDP growth, real exchange rate, GDP deflator, and distance from the host country, political stability, natural resource, market openness, investment treaties and tax incentives provided by the host country. Taking the case of the Indian multinationals, it is concluded that liberalization of home as well as host country has shifted the direction and location of investment. Indian firms are investing more in the developed economies as compared to developing ones. The choice of investment destinations of the Indian multinationals is influenced by a number of host country characteristics. It is concluded from our empirical analysis that real GDP, real GDP growth, and real GDP deflator of the host country are the influencing factors determining the flow of Indian multinationals' OFDI in the country of destination. The negative relationship between the real GDP per capita and OFDI in our study requires further analysis. Similarly the impact of the natural resource stock,

political stability, investment treaties and market openness need to be tested empirically across countries. Due to data limitations during the study period, we are unable to perform such statistical analysis. As a policy guideline our results have important implications for multinationals and policy makers working with government in the developed and in developing countries to take into consideration these factors while formulating policies in relation to overseas foreign direct investment.

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