

# Micro-Evidence on the Strategies of Chinese and Indian Multinationals

## Determinants and Motivations

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# **Micro-Evidence on the Strategies of Chinese and Indian Multinationals: Determinants and Motivations**

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# **Micro-Evidence on the strategies of Chinese and Indian Multinationals: Determinants and Motivations**

## **Abstract**

Using a sample of 603 subsidiaries Chinese Multinational Corporations (MNCs) and 174 subsidiaries Indian MNCs, we explore the regional and industrial pattern of their direct investment strategies. Our analysis reveals several important facts. First, most of outward foreign direct investment (FDI) is directed in finance and real estate and services. Second, by far the majority of investment projects are carried out in the home region of Asia-Pacific. Third, outward FDI is highly concentrated geographically and the average investment project is relatively small. Fourth, establishment of subsidiaries is the most preferred way of carrying out FDI. Finally, firm-specific and location-specific characteristics are important drivers of FDI strategies. Last but not least, a large proportion of Chinese and Indian investments is conducted mainly within those countries themselves, revealing a strong multi- domestic character.

Keywords: Outward Foreign Direct Investment, Chinese Multinational Corporations, Indian Multinational Corporations, Market Seeking, Resource Seeking, Efficiency Seeking, Risk Diversification

## 1. Introduction

Over the last two decades China and India have made significant progress in attracting and promoting Foreign Direct Investment (FDI). For instance, by 1992, China was one of the largest receivers of inward FDI and was experiencing growing outward FDI (UNCTAD 2005). One of the striking features of Chinese and Indian outward FDI is that differently that from the other emerging economies is not limited to the neighbouring countries but spans significantly to industrialized countries (Wang, 2002). Reasons related to possession of more advanced technologies and better management practices help explain this pattern (Deng, 2007).

The “gradualist” approach of economic development with little political changes that China followed has resulted in two main types of enterprises: the state owned enterprises (SOEs), owned by the central government, and the township village enterprises (TVEs), owned by village governments and/or private firms. Since SOEs are under tight government control, they are sometimes more favoured (Deng, 2007). Nevertheless, the Chinese government has played an important role in motivating Chinese enterprises in investing abroad by introducing regulations to improve their competitiveness and supporting investments in R&D. The unique “gradualist” approach to development accompanied by a strong government support indeed has promoted high levels of outward FDI.

In this paper we explore the pattern of Chinese and Indian MNCs’ investment strategies using a sample of 603 subsidiaries of Chinese Multinational Corporations (MNCs) and 174 subsidiaries of Indian Multinational Corporations, especially focusing on the regional and industrial specific effects. In this context, our analysis takes into consideration the multidomestic investment by Chinese and Indian MNCs as well as their overseas operations. Before that, we briefly review the implications of the literature on outward FDI in general and

Chinese and Indian outward FDI in particular. Our analysis shows that Chinese and Indian outward FDI display strong regional and industrial bias, pointing to industry and location being two important determinants of the pattern of outward FDI. The analysis then proceeds with outlining explicit hypotheses on the determinants of different types of FDI, which are then tested using a multinomial logistic approach. A concluding section summarizes the results of the analysis and draws some tentative conclusions.

## **2. Literature Review**

The understanding and study of Chinese and Indian multinationals falls in the wider analysis of MNCs coming from developing countries. Early work by Lall (1983) and Wells (1983) aimed at providing the theoretical foundations of the understanding of MNCs that come from countries that are usually recipients of FDI and not dispatchers of physical capital. Since then, a large empirical literature has investigated inward FDI in developing countries with emphasis on Latin American and South East Asia (for recent research on these issues see, for instance, Lauridsen, 2004; Galan and Gonzalez-Benito, 2006; Trevino and Mixon, 2004). Similarly, empirical work exists on outward FDI that concentrates on domestic MNCs coming from mainly South East Asian countries (Kim and Mah, 2006).

The cases of China and India are not an exception and since the early 1990s has attracted the attention of scholars as the host country of foreign MNCs (Buckley et al. 2007; Cassidy and Andreosso-O'Callaghan, 2006; Wei and Liu, 2006; Xing, 2006). However, the overseas activities and thus the emergence of Chinese and Indian multinationals and outward FDI is still not a very well explored topic. Among the first attempts to explain the phenomenon of Chinese MNCs is that of Young et al. (1996) who provide some initial empirical evidence on the

internationalization process of Chinese multinationals. Their investigation relied on a case study of five state-owned Chinese MNCs involved in manufacturing. Their findings showed that the companies under investigation not only had a strong regional presence in Asia, but also they had a quite strong presence outside Asia and in particular in the North American market. Their choice of entry into new markets included all possible modes ranging from greenfield investment to joint ventures and it was closely related to the type of the host market as well as the motivation to invest abroad. In this line of argument the authors showed that knowledge and market seeking were among the most important motives for Chinese MNCs.

Earlier work by Li (1993) discussed the nature of Chinese investment in Canada. In particular, he claimed that Chinese investment in Canada in the late 1980s and early 1990s was the outcome of economic reforms in China and the emergence of business like and professional Chinese entrepreneurship.

Later research on Chinese MNCs by Ding (2000) discusses the relationship between internationalization and what he calls *informal privatization*. In his paper he demonstrates how publicly owned Chinese companies invested abroad and how through this process public funds were re-baptized as private creating serious issues of corporate governance. Nevertheless, Ding's study confirms Young et al. (1996) in regards to the geographical diversification as well as the motivation of Chinese MNCs.

Similar are the findings of Frost and Ho (2005) whose main concern though is the impact of the increasing volume of Chinese outward FDI on corporate social and thus the export of possibly poor management and labour practices.

Finally, Hong and Sun (2006) discuss the strategies of Chinese MNCs. In their findings they acknowledge the strong domestic presence of Chinese MNCs through joint ventures with

foreign investors. This finding is also confirmed by Liu and Li (2002) in their case study of the Haier Group. Hong and Sun (2006) underline the emerging compel of resource seeking and emphasize the technology seeking nature of Chinese outward FDI which has been the major strategic motivation behind the successful story of the Haier Group (Liu and Li, 2002).

### **3. Investment Patterns and Rationale of Chinese and Indian MNCs**

In this section we first explore the investment trends and patterns of Chinese and Indian MNCs. To this end we use a sample of 777 subsidiaries<sup>1</sup>, of which 603 are Chinese subsidiaries and 174 are Indian subsidiaries. The data are obtained from the Summer 2006 edition of Corporate Affiliation Directory. The average number of subsidiaries is about 5 per parent firm. Nevertheless, it would be misleading to conclude that all firms are engaged in FDI to the same degree. The number of subsidiaries per parent firm differs markedly, ranging from 1 to 60. Further, In the case of China 34% of all subsidiaries belong to only 5 firms, namely China National Chemicals Import & Export Corporation, China Minmetals Corporation, CITIC Group, Gold Peak Industries (Holdings) Limited and Bank of China, while 42% of firms have only one subsidiary. Similarly, in the case of India 43% of all subsidiaries belong to the following 5 firms: Aurobindo Pharma Ltd., HCL Technologies Ltd., Steel Authority of India Limited, The Tata Group and The Aditya Birla Group.

\*\*\* Table 1 and Table 2 approximately here \*\*\*

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<sup>1</sup> At this point we use the generic word subsidiary to include different entry modes in a foreign market. Further on in our analysis we will distinguish among them.

The international business literature identifies, by and large, four different motivations to invest abroad: to gain resources, markets, efficiency and strategic assets (Dunning, 1993). These underlying motivations have implications on the distribution of FDI across industries and regions. Technically the motivations applied should be appropriate for the outward investment part of the analysis. The large size of both countries though, and the consequent variation in the inbound location characteristics could accommodate the application of the four types of motivations in understanding the establishment subsidiaries within China and India. Table 1 and Table 2 show this distribution across fourteen industries defined at 4-digit level and six geographical regions. First, it is clear from Table 1 that most of Chinese FDI is concentrated in financial and real estate (18%) and other services (27%), with trade (15%) being the next popular investment strategy. From the rest of industries FDI seems to go to manufacturing (10%) and electronics (9%) and oil and gas (9%). Indian FDI displays slightly different pattern with 40% concentrated in services and 17% and 18% concentrated in manufacturing and chemicals and pharmaceuticals respectively. Turning to Table 2 we see that distribution of investment for both countries instead of being globally distributed has a strong geographical dimension, with almost 74% of FDI projects going to firms' home region, i.e., Asia-Pacific, with North America being a second distant popular destination with almost 15% and Europe following with about 10%.

\*\*\* Table 3 approximately here \*\*\*

In fully determining the importance of Asia-Pacific as a destination region of Chinese and Indian MNCs one needs to separate the effect of investment within China and India themselves from those in the rest of the region. Table 3 gives the distribution of investment



according to host country. Several points are worth noting. First, there are 38 different countries Chinese and Indian firms have invested in. Second, about 39% of Chinese firms' investment projects are undertaken within China and 57% of Indian firms' investment projects going within India. Third, even accounting for this Asia-Pacific remains the most important destination for both Chinese and Indian FDI with about 36% of total number of investment projects. If, however, Chinese investment in Hong Kong are also classified as mostly domestic than foreign then the importance of Asia-Pacific drops substantially, attracting about 11% of investment projects, making it the second most important region after North America. Fourth, excluding China, Hong Kong and India, the USA is the most important destination of Chinese and Indian investment abroad, attracting about 39% of investment projects, followed by Germany (7%), Singapore (6%) and Australia (5%). These data are in line with previous studies that report the value of outward Chinese FDI as opposed to the number of investment projects. For instance, (Deng, 2004) emphasizes that by the end of 2001 Chinese outward FDI is strongly concentrated in a small number of destinations. Further, UNCTAD (2005) reports that, for the period 1997-2002, about 62% of China's FDI outflows went to four top destinations, that is Hong Kong, USA, Canada and Australia. Finally, the data support the conjecture that Chinese firms invest more in higher income and industrial countries due to their superior investment environment, high technology and advanced management methods.

\*\*\* Table 4 and Table 5 approximately here \*\*\*

Analyzing the scale of investment would have required data on investment spending. In their absence we use sales data as a proxy for the size of an investment projects. For the purposes

of this analysis we have classified subsidiaries into five groups according to sales revenue they generate<sup>2</sup> as follows: those generating up to 100 million dollars in sales, those generating between 100 and 500 million dollars, those generating between 500 million and 1 billion dollars, those generating between 1 and 1,5 billion dollars and those generating more than 1,5 billion dollars. The distribution of firms across these five groups is given in Table 4. Most of investment projects are of a relatively small size, with 40% of projects generating sales of up to 100 million dollars and another 44% generating sales of up to 500 million dollars. This result is again in line with those of Deng (2004) who finds that the average size of an investment in most countries is pretty small. The pattern does not seem to alter when looking at size distribution across regions represented in Table 5. In all major regions, i.e., Asia-Pacific, North America and Europe, dominant investment projects are small. Of note is the fact that big projects, those generating more than 1,5 billion in sales, are predominantly carried out in Asia-Pacific and, except for one investment located in Singapore, are all located in China, Hong Kong or India.

\*\*\* Table 6 approximately here \*\*\*

We have used the term subsidiary to refer to all firms in our sample. Yet, the term might be a misnomer as the establishment of subsidiaries might not be the most preferred form of investment by Chinese firms. This requires a review of modes of entry in foreign markets, reported in Table 6. The table reveals that subsidiaries are indeed the most preferred investment mode as they constitute 76% of all investment projects. Joint ventures are the second most important mode with 11% of investment projects, with the rest of entry modes accounting for the

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<sup>2</sup> We do not possess data on the exact level of sales. Rather we have data on the interval where sales fall. In constructing the intervals have balanced the need to keep their number manageable and not to pool together firms of substantially different size.

remaining 13%. Even accounting for the large number of subsidiaries within China and India, the share of subsidiaries in overall investment projects is still dominant. This finding contradicts that of Deng (2004) who finds that by the end of 2001 joint ventures with local firms were the most preferred form of investment for Chinese firms.

\*\*\* Table 7 approximately here \*\*\*

As already mentioned the industrial distribution of investment projects could be used to understand parent firm's motivation for investing. Often however firms invest having multiple motivations. Alternatively, motivations change subject to evolution of firms, their strategies and the environment they operate over time. The results of Table 1 though could, at least, be indicative of the investment motivations of the firms in our sample. As already discussed a vast majority of investment projects is undertaken within the home countries. One common rationale of establishing subsidiaries abroad is to acquire stable supply of resources for use in own production operations. Given that China and India are countries with relatively low per capita availability of resources, it could be conjectured that resource-seeking motives would constitute an integral part of firms' investment strategies. This implies one would expect to observe a large number of investment projects in natural resource industries such as agriculture, fishing and mining and oil and gas.

A further motive often cited for outward FDI is strategic-asset seeking one. Dunning (1998) emphasizes this motive to be geared less towards exploiting ownership specific advantages and more towards protecting and augmenting that advantage. This will allow firms to accumulate knowledge and skills, which could be eventually turned into strengths. Overall though we expect this motive to be present in Chinese firm strategies in light of Chinese government encouragement, through its 1999 "Go Global" strategy, to firms to invest abroad in

order to increase their international presence, sharpen their competitive edge and expand their technological trajectory.

That is, firms from emerging countries invest in developed countries to acquire technology, which they can then transfer back to their home country to increase competitive advantage, upgrade their domestic manufacturing and develop new products at home.

The FDI literature refers to market-seeking as an additional direct investment motivation. In this analysis we also include a variation of market-seeking i.e. and risk diversification. This variation, often adopted with the encouragement of the state, is driven by the desire to become a multinational through international diversification. It is mainly firms that held monopoly over China's foreign trade in the past that have followed this route towards becoming a multinational. Examples of such firms in our sample are China National Chemicals Import & Export Corporation, China Petrochemical Corporation and Bank of China. With regards to the former motivation, i.e. market-seeking, is driven by the limits of domestic demand and/or barriers to foreign market entry in the form of either price or quantity restrictions. This would imply that investments in industries such as textile and apparel, footwear, food products, paper products, trade, simple manufacturing production would fall into this group.

Another driver of market seeking strategies is to service large expatriate communities in various countries, especially in Asia-Pacific and North America. This would imply investments in finance and real estate and service industries to be driven by market seeking objectives, making these objectives the most important in firm strategies.

A last driver for direct investment is efficiency-seeking and reflects the efforts of a multinational group to organise its international and domestic operations in a more rational way, thus in a way where a more productive use of resources is applied. Thus, efficiency seeking is

reflecting a realistic restructuring of the value chain. Such strategies would require firms to invest abroad as part of a global production and marketing strategy. In the case of Chinese and Indian MNCs efficiency-seeking may be related with the search of a productive and knowledgeable labour force. It could also be related with host environments that exhibit more friendly business environment such as less bureaucracy. At the same time efficiency seeking can be related with the search of new, improved technology in order to upgrade existing production processes. This would imply that one would expect to find Chinese investment in developed countries to be concentrated in industries characterized by the use of advanced technology and know-how such as electronics, chemicals and pharmaceuticals, instruments, automobiles and manufacturing. As we saw in table 1, 25% of firm observations fall into these industries suggesting that efficiency-seeking motives associated with search of improved technology (as well as genuine asset-seeking) are important drivers of firm strategies.

As the aim of this paper is to analyze the determinants of the motives for FDI, we have constructed a categorical motivation variable by comparing the 4-digit industrial classification of each subsidiary in the sample with that of its ultimate parent. Most of the subsidiaries had multiple industrial profiles, i.e. more than one industrial classification. Data allowed us to distinguish the core industry the subsidiary was specialised as well as the core industry of the parent. Based on this information, the motive is deemed to be market seeking if the subsidiary operates in the same core industry as its parent, it is deemed to be resource seeking if investment is made in natural resource industries, it is deemed to be efficiency seeking if the subsidiary and its parent operate in the same industry but at different stages of the value chain and is, finally, deemed to be risk diversification if the subsidiary and its parent operate in unrelated industries.

Table 7 illustrates the distribution of the final 4 categories across countries<sup>3</sup>. Most of investment projects fall into market seeking and risk diversification categories, with efficiency seeking motives being important to Chinese firm investment strategies but not to Indian MNCs.

#### **4. Determinants of Motivations Behind Chinese and Indian MNCs Investment Strategies**

Building upon the four types of investment motives developed in the previous section, this section starts with explicitly outlining a set of hypotheses on the determinants of these motives and then proceeds with econometrically testing them. Based on the frameworks of Dunning (1993) and Narula and Dunning (2000) we divide the determinants of direct investment motives into two categories, i.e. firm-specific determinants or characteristics that capture the MNC's Ownership advantages ( $O_a$ ) and location-specific determinants that capture the advantages or characteristics ( $L_a$ ) of the host-economy. Thus, we assume that different  $O_{as}$  and  $L_{as}$  will stimulate different types of direct investment.

More specifically, following Narula and Dunning (2000), we also conjecture that different levels of  $O_{as}$  and  $L_{as}$  will result in different types of FDI. For example, network type of MNCs with more horizontal or heterarchical structures are expected to generate asset seeking or risk diversification investments in countries that possess advanced  $L_{as}$ . In line with the above core assumptions we outline the following hypotheses:

**Hypothesis 1a:**  $O_{as}$  reflecting an established market position and ease to coordinate remote activities would have a stronger influence on market seeking (MS) investments.

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<sup>3</sup> We also attempted to generate a separate category for technology or knowledge seeking motives behind FDI, if the investment was made in a knowledge-related industry different from the one where the parent is operating. However, we identified only 10 such cases, which do not constitute enough observations to allow for meaningful analysis. As such, these cases were classified in the risk diversification category.

**Hypothesis 1b:**  $L_{as}$  reflecting large market size and potential, existence of a strong competitive environment, large growth potential would have a stronger influence on MS investments.

**Hypothesis 2a:**  $O_{as}$  reflecting flexibility in the production process will tend to favour efficiency seeking (ES) investments.

**Hypothesis 2b:**  $L_{as}$  reflecting advanced local infrastructure, relatively affordable production costs accommodating different forms of productive specialization will tend strongly stimulate ES investments.

**Hypothesis 3a:**  $O_{as}$  reflecting resource based production structure will tend to have a stronger impact on resource seeking (RS) investments.

**Hypothesis 3b:**  $L_{as}$  reflecting relative abundance and specialization in resource exploitation will tend to induce more RS investments.

**Hypothesis 4a:**  $O_{as}$  reflecting a less internalized MNC structure along side with knowledge intensive specialization will tend to favour asset-seeking (AS) investments.

**Hypothesis 4b:**  $L_{as}$  reflecting well-developed infrastructure and a pool of quality oriented created assets will tend to attract AS investments.

\*\*\* Table 8 approximately here \*\*\*

A representation of the above hypotheses is presented in Figure 1 where the set of determinants of firm motivations for direct investment is divided into firm-specific and location-specific ones. In testing the hypotheses we employ a multinomial logistic regression approach where the probability of a firm having a particular motivation for investing is modelled to be a function of firm-specific and location-specific variables. Firm -specific variables are firm type in terms of its legal relationship to its parent, firm size, its hierarchy in terms of its reporting relationship to its parent, and parents' industry affiliation. Location-specific variables are those

related to host countries such as their level of development, growth potential, trade openness, resource abundance, ease of making business and cost of making business. The exact definition of variables used in the analysis is reported in Table 8.

\*\*\* Table 9 approximately here \*\*\*

Table 9 reports the results of the analysis for the whole sample. It is customary in the literature to report the estimates of multinomial regression analysis as relative risk or odd ratios. The coefficients are then interpreted as changes in relative risk of the respective category over the base category. While important in understanding the determinants of firm motivations behind decisions to invest, relative risk ratios are not directly interpretable in terms of incremental impacts on probabilities of respective motives. This is done through the calculation of marginal effects or elasticities, which are reported in Table 9 for all motivation categories. Overall, the results of this table provide evidence that both firm-specific and location-specific factors are important in the determination of the motive when investing.

Focusing on firm-specific variables we see that hierarchy increases the likelihood for efficiency seeking and risk diversification strategies. This result does not validate hypotheses 2a as we expected a more flexible organization structure. Nevertheless, this result could mirror cultural issues related to the management of foreign operations, which reflect the conservative and hierarchical nature of Chinese business. On the other hand, firm type, in the form of joint ventures and subsidiary investment, increases the likelihood of risk diversification strategies, which agrees with hypothesis 4a. Firm size also seems to play a significant role, although not across all potential strategies. Turning to location-specific variables several important facts emerge. First, IDP index shows that more developed countries will be less likely to attract market and efficiency investments, indicating a relationship between development and



investment strategies as assumed in hypothesis 4b. Further, as expected (see hypothesis 1b), trade openness, measured by the level of merchandise trade, increases the likelihood of market seeking investments, while resource abundance, measured by the relative share of ore and metals trade, significantly increases the likelihood of resource seeking investment as hypothesized in hypothesis 3b.

Other important determinants of direct investment strategies are the growth potential of the host economy and the cost of making business. The former significantly increases the likelihood of certain investment strategies such as market-seeking, while the latter lowers the probability of investment. Both these findings are in line with hypotheses 1b, 2b and 4b. Finally, the country of origin also plays an important role in that Chinese firms are more likely to adopt efficiency and resource seeking strategies than their Indian counterparts, while there are no differences in the likelihood of adopting market seeking and risk diversification strategies across firms from both countries.

\*\*\* Tables 10 & 11 approximately here \*\*\*

An important fact that emerged from the data is the strong multidomestic aspect of both Chinese and Indian MNCs' investments. In fact, 64% of Chinese investments are located within China and Hong Kong, while 57% of Indian investments are located within India. This pattern is consistent with the argument of Hong and Sun (2006) who state that, typically, Chinese MNCs start by establishing joint ventures with western companies within China before engaging in overseas investment. Accounting for the impact this strategy on the motivations for FDI we introduce a dummy variable that equals one if the investment is within the country and zero otherwise. The results of estimating the multinomial logistic regression for each country

separately are presented in Table 10 and Table 11<sup>4</sup>. Overall the pattern of results is similar to those in Table 9, although some important country-specific differences arise.

First, looking at the multidomestic dummy variable, from Table 10 we see that Chinese firm's use this strategy mostly for risk diversification purposes, as expressed by the positive and significant effect of multidomestic investment on the likelihood of risk diversification motivation. On the other hand, engaging in multidomestic investment lowers the likelihood of motivation being market or efficiency seeking. The results are somehow different for Indian firms as displayed in Table 11. Indian firms seem to use multidomestic strategy to engage in efficiency-seeking investment and outward investment for market seeking and risk diversification motives.

Another important fact emerging from the tables is that the stage of development of the host country, proxied by IDP Index, does not appear to be relevant in Indian firms' investment motives, while being important determinant in Chinese firms' market and resource seeking motives.

## **5. Conclusions**

Using a sample of 603 subsidiaries of Chinese MNCs and 174 subsidiaries of Indian MNCs, we have explored the motivation of Chinese and Indian MNCs direct investment strategies. There are some important facts that emerge from our analysis. First, most of outward FDI is directed in non-productive industries, with finance and real estate and services being the most attractive ones. Second, by far the majority of investment projects are carried out in the home region of Asia-Pacific. Third, outward FDI is highly concentrated geographically and the average investment project is relatively small. Fourth, establishment of subsidiaries is the most

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<sup>4</sup> We also attempted to estimate the models separately for the sub-samples of Chinese and Indian outward and multidomestic investments separately. This estimation approach is constrained by the small number of observations within some motivation categories.

preferred way of FDI. Finally, FDI strategies are driven by a host of firm-specific and location-specific factors. Last but not least, a large number of Chinese and Indian investments are conducted mainly in within the countries themselves revealing a strong multi- domestic character. Regarding multidomestic investment the application of the four types of motives seems to be justified as Chinese multidomestic investment seems to be motivated by risk diversification whilst Indian inbound direct investment seems to be motivated by market and efficiency seeking.

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## Appendix

**Table 1. Industrial Distribution of Investment by Chinese and Indian Firms**

Industry	Number of Chinese Firms	Number of Indian Firms
Agriculture, Forestry and Mining	2	7
Oil and Gas	55	1
Construction	2	0
Food Production	14	8
Textile and Apparel	5	3
Wood and Paper Products	17	1
Chemicals and Pharmaceuticals	19	32
Manufacturing	62	31
Electronics	55	1
Transport Equipment	7	5
Instruments	5	2
Services	162	70
Trade	89	6
Finance and Real Estate	109	7

**Table 2. Regional Distribution of Investment by Chinese and Indian Firms**

Region	Number of Chinese Firms	Number of Indian Firms
Africa	2	1
Asia - Pacific	451	121
Europe	63	13
Middle East	1	1
North America	83	37
South America	3	1
Total	603	174

**Table 3. Geographical Distribution of Investment by Chinese and Indian Firms**

<b>Host Country</b>	<b>Number of Firms</b>
Australia	13
Austria	1
Belgium	1
Brazil	4
Canada	10
China	236
China (Hong Kong)	157
China (Macau)	3
Cyprus	1
Denmark	1
Fiji	1
Finland	1
France	4
Germany	19
India	100
Indonesia	3
Italy	4
Japan	9
Korea (South)	3
Malaysia	6
Mauritius	1
Nepal	1
Netherlands	7
New Zealand	4
Norway	2
Philippines	1
Russia	1
Singapore	17
South Africa	3
Spain	2
Sri Lanka	1
Sweden	6
Switzerland	2
Taiwan	9
Thailand	6
USA	111
UAE	2
United Kingdom	23
Total	777



**Table 4. Size Distribution of Investment by Chinese and Indian Firms**

<b>Sales</b>	<b>Number of Chinese Firms</b>	<b>Number of Indian Firms</b>
Up to 100 million dollars	253	56
100 - 500 million dollars	262	78
500 million - 1 billion dollars	43	15
1 – 1,5 billion dollars	5	3
More than 1,5 billion dollars	40	22
Total	603	174

**Table 5. Size and Regional Distribution of Investment by Chinese and Indian Firms**

<b>Sales</b>	<b>Regions</b>					
	<b>Africa</b>	<b>Asia-Pacific</b>	<b>Europe</b>	<b>Middle East</b>	<b>North America</b>	<b>South America</b>
Up to 100 million dollars	2	195	53	2	56	1
100 - 500 million dollars	1	265	20	0	51	3
500 million - 1 billion dollars	0	50	0	0	8	0
1 – 1,5 billion dollars	0	7	1	0	0	0
More than 1,5 billion dollars	0	54	2	0	6	0
Total	3	571	76	2	121	4

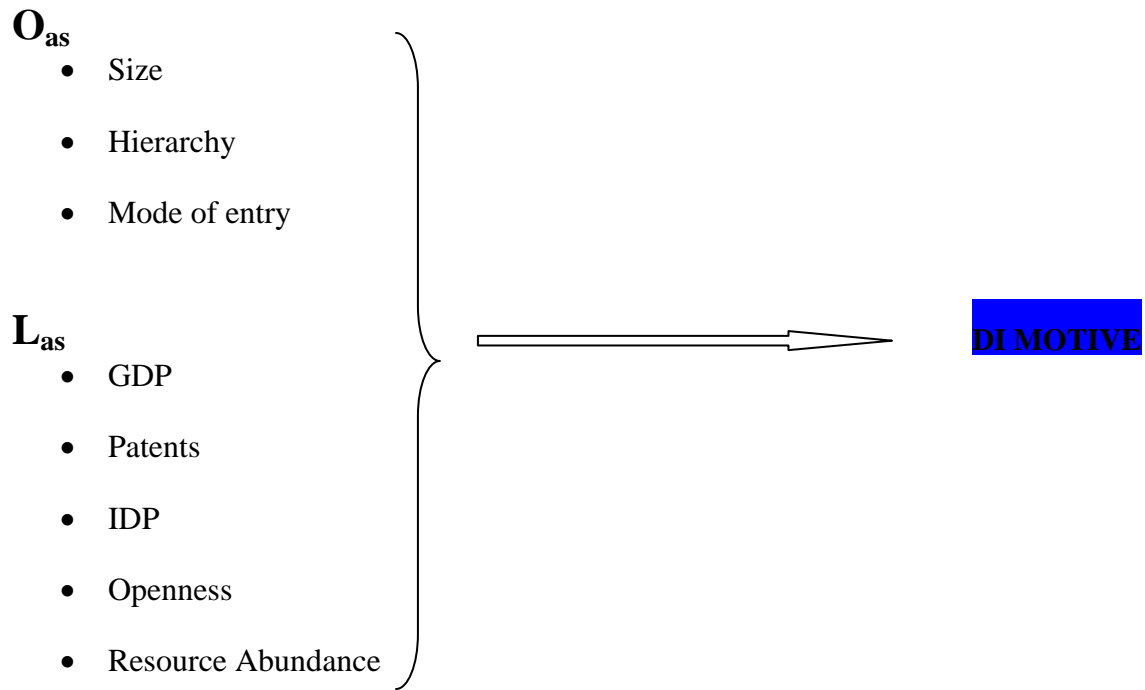
**Table 6. Distribution of Firms by Entry Mode**

<b>Type</b>	<b>Number of Chinese Firms</b>	<b>Number of Indian Firms</b>
Affiliate	9	0
Branch	18	3
Group Insurer	34	3
Joint Venture	53	33
Subsidiary	475	113
Unit	3	8
Other	11	14
Total	603	174

**Table 7. Distribution of Firms by Motivation**

<b>Type</b>	<b>Number of Chinese Firms</b>	<b>Number of Indian Firms</b>
Market Seeking	183	69
Resource Seeking	57	0
Efficiency Seeking	84	18
Risk Diversification	279	87

**Figure 1. Determinants of Motivation for Direct Investment (DI)**



**Table 8. Variable Definitions**

Variable	Definition
Motivation	A categorical variable defined as follows: 1 – Market seeking motive, 2 – Efficiency seeking motive, 3 – Resource seeking motive, 4 – Risk Diversification motive. Constructed by comparing the 4-digit industrial classification code of the relevant company and that of its ultimate parent.
Type	Classifies companies by their legal relationship to their parent as affiliates, branches, divisions, joint ventures, operations, group insurers, plants, subsidiaries or units. 3 dummy variables were constructed as follows: 1 if the company is a subsidiary and 0 otherwise, 1 if the company is a joint venture and zero otherwise, and 1 if the company is any other form than subsidiary and joint venture and zero otherwise.
Employment	The natural logarithm of the average number of employees per year.
Sales range	An interval measure of yearly company sales as follows: 1) Up to 100 million USD in sales 2) between 100 and 500 million USD in sales 3) between 500 million and 1 billion USD in sales 4) between 1 and 1,5 billion USD in sales and 5) over 1,5 billion USD in sales.
Hierarchy	Classifies companies by the reporting hierarchy within the multinational.
Host country GDP	Measured in constant 2000 dollars. Obtained from World Development Indicators.
Host country GDP per capita	Measured in constant 2000 dollars. Obtained from World Development Indicators.
Host country real GDP growth rate	Measured as annual percentage change. Obtained from World Development Indicators.
Merchandise Trade	Measured as percentage of GDP. Obtained from World Development Indicators.
Ore and Metal Exports	Measured as percentage of merchandise exports. Obtained from World Development Indicators.
R&D expenditure	Measured as percentage of GDP. Obtained from World Development Indicators.
R&D researchers	Measured as number of researcher per million people. Obtained from World Development Indicators.
Ease of doing business index	The index takes values from 1 to 138, with 1 denoting the most business friendly environment.
Economic freedom index	The index takes values between 1 and 10, with 10 denoting the country with the most liberal economic environment
Patents Granted	Number of patents granted by host countries in 2005, obtained from World Intellectual Property database.
Unit labor cost	Constant 2000 dollar hourly labor cost. Obtained from ILO database.
UNCTAD inward FDI Potential index	The index takes values 1 through 137, with 1 denoting the country with the highest inward FDI potential
Index on FDI performance and potential	The index takes the following values: 1 – host countries characterized by high FDI potential and performance, 2 – for countries low potential and high performance, 3 – for countries with high potential and low performance, 4 – for countries with low potential and performance. Constructed from World Investment Report 2006.
Investment Development Path (IDP) Index	Constructed as the difference between outward and inward FDI normalized by host country's GDP.
Parent industry dummies	6 industry groups were defined based on ultimate parents 4-digit industry classification as follows: 1) Oil and Gas 2) Construction, Food Production, Textile and Apparel and Wood and Paper Products 3) Chemicals and Pharmaceuticals and Manufacturing 4) Electronics, Transport Equipment and Instruments 5) Services and Trade and 6) Finance and Real Estate
Country Dummy	1 for China, 0 for India.

**Table 9. Marginal Effects of Explanatory Variables on Motivation for DI for the Whole Sample<sup>1</sup>.**

	<b>Market Seeking</b>	<b>Efficiency Seeking</b>	<b>Resource Seeking</b>	<b>Risk Diversification</b>
Joint Venture	-0.2974*** (0.0000)	-0.0604 (0.1754)	-0.0001*** (0.0000)	0.3578*** (0.0000)
Subsidiary	-0.2517*** (0.0000)	0.0181 (0.6589)	- 0.0012*** (0.0003)	0.2335*** (0.0001)
Hierarchy	-0.5059 (0.2320)	0.0182** (0.0443)	0.0023 (0.3258)	0.0324** (0.0343)
Sales/Firm Size	-0.4099** (0.0180)	-0.0073 (0.5145)	-0.0005 (0.3498)	0.0483*** (0.0091)
GDP Growth Rate	-0.2192 (0.1254)	0.0132** (0.0213)	0.0213 (0.2138)	0.0086** (0.0234)
Merchandise Trade	0.0011** (0.0172)	- 0.0007** (0.0455)	- 0.0023 (0.1129)	- 0.0004 (0.4134)
Ores and Metals Trade	-0.0123** (0.0272)	-0.0187 (0.1598)	0.0023** (0.0047)	0.0062 (0.6302)
Patents	0.0265 (0.2298)	- 0.0335** (0.0225)	- 0.0110 (0.5423)	0.0068 (0.7786)
Economic Freedom Index	- 0.1445*** (0.0032)	0.0702** (0.0382)	- 0.0102 (0.1267)	0.0738 (0.1692)
IDP Index	-0.4607*** (0.0007)	- 0.3533 (0.4723)	- 0.325** (0.0021)	0.8139 (0.3481)
Unit Labor Cost	-0.2136*** (0.0024)	0.0213 (0.4328)	0.0983 (0.2134)	-0.0319** (0.0197)
Country Dummy	-0.0811 (0.2734)	0.0851** (0.0132)	0.0047*** (0.0009)	-0.0039 (0.9601)
CFTW Dummy	0.4199*** (0.0000)	0.1018 (0.2554)	0.0032 (0.1973)	-0.5218*** (0.0000)
ETI Dummy	-0.3591*** (0.0000)	0.1259* (0.0687)	0.1003 (0.3267)	- 0.4850*** (0.0000)
CPM Dummy	0.3970*** (0.0000)	0.1517** (0.0363)	0.0007 (0.2285)	- 0.5487*** (0.0000)
TS Dummy	0.2878*** (0.0000)	0.1019** (0.0101)	0.0904 (0.6749)	- 0.3898*** (0.0000)
FRE Dummy	0.1569*** (0.0000)	0.1138** (0.0428)	0.0117 (0.3814)	0.2176*** (0.0000)

<sup>1</sup> \*\*\* denotes significant at 1%, \*\* significant at 5%, \* significant at 10%

**Table 10. Marginal Effects of Explanatory Variables on Motivation for DI from Chinese Companies<sup>1</sup>.**

	<b>Market Seeking</b>	<b>Efficiency Seeking</b>	<b>Resource Seeking</b>	<b>Risk Diversification</b>
Joint Venture	-0.3313** (0.0000)	-0.0311 (0.5732)	-0.0880** (0.0172)	0.4012*** (0.000)
Subsidiary	-0.2087*** (0.0012)	-0.0698 (0.1033)	-0.0337*** (0.0032)	0.2399*** (0.0046)
Hierarchy	-0.0012 (0.8938)	0.0201*** (0.0016)	0.0197 (0.4324)	0.0189*** (0.0033)
Sales/Firm Size	-0.0277*** (0.0032)	-0.0119 (0.3281)	-0.0127 (0.3561)	0.0396** (0.0136)
GDP Growth Rate	0.0535 (0.1683)	0.0082** (0.0341)	0.0152 (0.4106)	0.0018*** (0.0015)
Merchandise Trade	0.0001* (0.0871)	-0.0006* (0.0716)	-0.0005 (0.2401)	0.0004 (0.6532)
Ores and Metals Trade	0.0030 (0.8253)	-0.0196 (0.2224)	0.0191** (0.0122)	0.0166 (0.3123)
Patents	- 0.0111 (0.7802)	-0.0338** (0.0402)	-0.03019 (0.1033)	0.0450 (0.2319)
Economic Freedom Index	-0.0242** (0.0243)	0.0564** (0.0398)	0.0552 (0.1544)	-0.0322 (0.6882)
IDP Index	-0.6218*** (0.0012)	-0.5116 (0.2393)	-0.2849** (0.0455)	1.1335 (0.3365)
Unit Labor Cost	-0.0127*** (0.0045)	- 0.0037* (0.0832)	0.0437 (0.7201)	-0.0437*** (0.0002)
Multidomestic Dummy	-0.2844*** (0.0002)	-0.0125*** (0.0001)	0.0264 (0.2071)	0.2718** (0.0121)
CFTW Dummy	0.3813*** (0.0001)	0.1622** (0.0437)	0.1490 (0.1275)	-0.5436*** (0.000)
ETI Dummy	0.2582*** (0.0041)	0.2369*** (0.0007)	0.2320 (0.2009)	-0.4952*** (0.000)
CPM Dummy	0.2161*** (0.0032)	0.3376*** (0.0035)	0.3258 (0.4004)	-0.5536*** (0.000)
TS Dummy	0.2412 (0.9983)	0.1629 (0.7296)	0.1596 (0.6354)	-0.4038 (0.8372)
FRE Dummy	0.1435** (0.0381)	0.0264*** (0.0009)	0.0168 (0.4038)	- 0.2178 (0.2289)

<sup>1</sup> \*\*\* denotes significant at 1%, \*\* significant at 5%, \* significant at 10%

**Table 11. Marginal Effects of Explanatory Variables on Motivation for DI from Indian Companies<sup>1</sup>.**

	<b>Market Seeking</b>	<b>Efficiency Seeking</b>	<b>Risk Diversification</b>
Joint Venture	-0.0314** (0.0244)	-0.0027*** (0.0031)	0.0314** (0.0254)
Subsidiary	-0.0799*** (0.0019)	-0.0004 (0.8823)	0.0799** (0.0149)
Hierarchy	-0.8552 (0.3905)	0.0013*** (0.0032)	0.8552 (0.6805)
Sales/Firm Size	-0.0037** (0.0274)	0.00009 (0.4845)	0.0037** (0.0294)
GDP Growth Rate	0.0296 (0.2937)	0.0017** (0.0197)	0.0296** (0.0137)
Merchandise Trade	-0.0001*** (0.0007)	-0.0004 (0.4099)	0.0001 (0.5956)
Ores and Metals Trade	-0.0016** (0.0448)	-0.0082 (0.2135)	-0.0016*** (0.0009)
Patents	-0.0320 (0.2930)	0.0011 (0.4283)	0.0320 (0.5930)
Economic Freedom Index	-0.1341** (0.0393)	0.0152** (0.0222)	0.1341 (0.3933)
IDP Index	0.5660 (0.4914)	-0.4217 (0.1272)	-0.5655 (0.2614)
Unit Labor Cost	-0.2123*** (0.0014)	-0.4567*** (0.0031)	-0.5655** (0.0214)
Multidomestic Dummy	-0.6992*** (0.000)	0.9968*** (0.000)	-0.0007* (0.0721)
CFTW Dummy	0.4848 (0.5848)	-0.0022 (0.4368)	0.4848** (0.0348)
ETI Dummy	0.9915*** (0.000)	-0.0033 (0.2733)	0.9915*** (0.0002)
CPM Dummy	0.4462 (0.3866)	-0.0040 (0.3602)	0.4462 (0.3866)
TS Dummy	0.1445** (0.0135)	-0.0094 (0.1971)	-0.1445 (0.6415)
FRE Dummy	0.0999*** (0.0000)	0.0001 (0.7776)	0.0121** (0.0132)

<sup>1</sup> \*\*\* denotes significant at 1%, \*\* significant at 5%, \* significant at 10%