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An Empirical Study on the Determinants of Foreign Direct Investment (FDI) in India by Korean firms

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I. Introduction

As per the research report by Goldman Sachs[1], Brazil, Russia, India and China (so called BRICs) will belong to G 7 countries[2] and the sum of U$ GDP of BRICs will be much bigger than that of current G 6 countries[3]

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1) Goldman Sachs, *Dreaming with BRICs ; the Path to 2050*, Golbal Economics Paper No.99, 2003.

2) G 7 countries ; U.S.A., Japan, Germany, U.K., Italy, France, Canada.

3) G 6 countries ; U.S.A., Japan, Germany, U.K., Italy, France.

within the next 50 years. In addition to this, China will become No. 1, U.S.A. will become No. 2 and India will be No. 3 in view of U$ GDP around 2050. As of now, almost 30,000 Korean firms have already entered into China which is occupying No. 1 market in trade for Korea and shows so crowded and serious competition. Due to this phenomenon, many Korean companies are looking for alternative markets with big market potentials.

On the contrary, the measures of reforms undertaken by the Government of India, and its continued efforts toward integration of the economy with the global market in the last decade, have led to a resurgence of interest in foreign direct investment (FDI) on Indian market. Therefore, international agencies like World Bank, IMF and the developed countries consider India would be one of the most emerging and potential markets.

In parallel, Korean firms are also focusing on Indian market so that they want India to be as good as Chinese market. Mainly, they have started investment on Indian market from 1996. In terms of total accumulated actual FDI inflow as of 2004 , Korea becomes the 8^{th} country, which amounts to 678 million U$. In view of export volume for India, Korean firms also show sharp increase as compared before, which means U$ 1.38 billion in 2002, U$ 2.85 billion in 2003 and U$ 3.63 billion in 2004. The FDI inflows into Indian market by Korean firms are increasing dramatically. Among them, several cases like LG Electronics, Samsung Electronics and Hyundai motors are making real success story. One of the remarkable things in FDI is POSCO case. POSCO has made M.O.U to invest U$ 12,000 million on the eastern part of India where the biggest steel mountain is located. This is the biggest case among total India Inflows as a single investment, up to now.

India has mainly started opening up the market from 1996. Before this, India has had a small presence of FDI in the economy. The reason for this small presence could be explained, at least in part, by India's attitude

towards FDI. India, like many other developing countries, had an ambivalent attitude towards FDI till the late seventies. India was not the only one in this regard. Most developing countries regarded FDI with a deep suspicion for fear of economic exploitation and political domination by powerful multinational corporations. Foreign companies were believed to use their wealth and power to secure benefits and privileges not available to the local companies. During the eighties, the attitude began to gradually change from one of antagonism to tolerance to even one of positive feeling. As problems associated with poor economic performance and indebtedness forced governments take a more pragmatic view of FDI, they became more receptive to the idea of foreign investment. India has had a small presence of FDI in the economy so far in spite of favorable geographical position, much natural resources, many cheap labors since India has had shown politically unstable situations, undeveloped infrastructure and closed economic policy.

Likewise, India has begun to emerge as an increasingly important destination of FDI for Korean firms, especially since Chinese markets have become more congested and showed serious competitions. So Korean and Indian government consider concluding CEPA[4] in the near future. But, no study has been undertaken on the determinants of FDI for India by Korean firms up to now, to the best of my knowledge. This study covers finding out the determinants of FDI by Korean firms which has already entered into India since the end of 2004.

The purpose of the study is stated below :

Firstly, this would aim at studying the empirical determinants of FDI in India by Korean firms.

Secondly, after identifying the determinants, this study would endeavor to propose some points in making Korean companies, which are going to enter into India in the near future, invest more successfully and effectively.

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4) CEPA : Comprehensive Economic Partnership Agreement

Thirdly, in this dissertation, an effort would be made to suggest Indian government how to attract more Korean firms, which have some potential to invest in India, by using the determinants which are concluded in this study.

Ⅱ. The scope & method of the Study

This study focuses on the analysis of major determinants on FDI in India by Korean companies. Target Korean companies of this empirical study are most of Korean companies which have already entered into India, irrespective of their types because the Korean companies working in India are not many in number so most of these have been taken for the empirical study. Hence, target Korean companies include liaison, project office and limited companies in the industry of IT, electronics, cars, cellular phones, engineering, construction and pharmaceuticals since many of these companies may invest India in the near future.

As a result, besides small companies which are operated by one man or two men out of about 100 Korean companies which have enrolled Korean embassy in India and KOTRA as of the end of 2004, near about 80 companies have been selected as target data samples. The questionnaires have been sent to these selected 80 companies by email after checking email addresses and persons in charge by telephone.

The methods of empirical analysis are given below.

Cronbach's Alpha coefficient is used to check reliability. Using software package, SPSS 12.0, I have performed regression analysis to identify major determinants of FDI.

III. Review of theories of FDI & related literatures

With the rapid growth of FDI across countries and their importance to the world economic order, several studies of determinants of FDI have appeared. In this section, literatures which are related to the determinants of FDI are presented. The section will be divided into two. (i) Korean literatures which are concerned about the determinants of FDI (ii) Other foreign literatures which are interlinked with the determinants of FDI. In the course of review, empirical variables and results along with theory will be discussed.

1. Theories of FDI

In order to gain better insights into the subject of determinants of FDI, it is necessary to review the major theories relating to FDI inflows that have shaped this subject, in the first place. These theories seek to explain why enterprises invest in foreign countries and what factors influence their decisions. A number of competing theories have examined the determinants of FDI. The theories of FDI may be classified under the following headings : (i) theories assuming perfect markets of nearly perfect competition on factor and/or product markets. These theories focus on portfolio diversification, differential rates of return and host country market size as the determinants of FDI. (ii) Theories assuming imperfect markets make up theories that trade market imperfections[5] take for granted and assume that firms investing in foreign countries have one or more

5) Market imperfections are departures from the assumption of perfect competition (that is large numbers of buyers and sellers, homogeneous products, free access to information and so on). Market imperfections also take the form of barriers to trade, transaction costs, transportation cost and taxes.

competitive advantages over their rivals in the host countries. This category includes the Industrial Organization hypothesis, Internalization hypothesis, Location hypothesis, the Eclectic theory, Product life cycle hypothesis, and Oligopolistic reaction approach. (iii) other theories of FDI that constitutes Currency area hypothesis, the Kojima & Ozawa hypothesis, the Giddy & Young hypothesis, the Wells theory and the theory based on strategic and long-term factors. This classification, which is suggested by Agarwal[6] should only be considered an orthodox categorization of theories. It can be observed that some variables and factors that influence FDI may appear under more than one heading and be used by more than one theory. However, this classification is very useful for explanatory purposes. Moreover, theories of FDI can be classified according to other criteria. For example, they can be classified according to whether the factors determining FDI are macro factors, micro factors and/or strategic factors.[7] Nevertheless, the common denominator in all is that the most important reason for FDI is profit-making.[8]

1) The Portfolio Diversification Theory

When the assumption of risk neutrality is relaxed, risk becomes another variable upon which the FDI decision is made. If this proposition is accepted, then the differential rates of return hypothesis becomes inadequate, in which case we resort to the portfolio diversification hypothesis to explain FDI. The choice among various projects is therefore

6) Agarwal, H.P., "Determinants for Foreign Directs Investment ; a Survey", Weltwirtschaftliches Archiv, Vol.116, 1980, pp. 757~758.

7) The macro factors include such factors as the size of the host economy, interest rates, wages and profitability. The micro factors pertain to the characteristics of firms and industry that confer certain advantages on MNCs compared with other firms. These include product differentiation, technological and advertising effects, the product cycle and the size of firm. The strategic factors include various factors that indirectly affect the decision to invest abroad.

8) Moosa, I.A., "FDI ; Theory, Evidence and Practice", Palgrave, 2002, p.23.

guided not only by the expected rate of return but also by risk[9]. The diversification theory explains corporate direct investment in terms of portfolio choice.[10] It assumes that a firm's situation is analogous to that of an individual investor choosing a portfolio of risky assets. It has been shown by Markowitz[11] that when assets are traded in competitive markets an efficient portfolio is diversified over available assets, such as different types of plant and equipment, plants in different locations, and/or different products and processes. Diversification through direct investment is preferable to portfolio diversification because it widens the manager's scope of discretion.[12] International diversification can be used as a means of reducing average risks faced by investors.

But some flaws are also encountered in this hypothesis. Like the differential rates of return hypothesis, this hypothesis does not explain why MNCs are the greatest contributors to FDI and why they prefer FDI to portfolio investment. One explanation, perhaps, is financial market imperfections, as has shown in developing countries. Calvet[13] argues that, even assuming firms are keen to diversify internationally, this strategy does not necessarily imply direct investment. In other words, additional forms of foreign involvement such as exports or licensing can equally serve the diversification motives of a firm.

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9) Risk in this context includes foreign exchange risk and country risk.

10) Stevens,G.V.G, "Capital Mobility and International Firms" in International Mobility and Movement Capital", Machlup,F.,Salant,W.S.,and Trashis, L.,eds., New York :NBEr, 1972.

Prachowny, M.F.J., "Direct Investment and Balance of Payments of the United States", in International Mobility and Movement of Capital", Machlup,F.,Salant,W.S.,& Trashis,L.,eds. New York:NBER, 1972.

11) Markowitz,H.M., *Portfolio Analysis*, New Haven: Yale University Press, 1970.

12) Singh, A., op. cit. , p.14.

13) Calvet,A.L., "A Synthesis of Foreign Direct Investment Theories and the Theories of Multinational Firm", Journal of International Business Studies 12(1), 1981, pp. 43~59.

2) Market Size hypothesis

Market size hypothesis represents that the volume of FDI in a host country depends on its market size which is measured by the sales of an MNC in that country or by the country's GDP (that is the size of economy).[14] Love and Lage-Hidalgo[15] use GDP per capita as an explanatory variable (a proxy for domestic demand) in an equation designed to explain US FDI in Mexico. The variable turned out to be a significant determinant of FDI flows so this result supports the market size hypothesis.

But Agarwal[16] argues that this hypothesis is based on neoclassical theories of domestic investment that are invariably unrealistic. So the theory from which the estimated relationship are derived are rarely presented. More importantly, size and growth of the host country's market should only matter for FDI meant to serve the host country's market.

3) The Industrial Organization hypothesis

Hymer developed this hypothesis, which was extended by Kindleberger, Caves and Dunning. As per this hypothesis, when a firm establishes a subsidiary in another country, it faces several disadvantages in competing with local firms. These disadvantages come from differences in language, culture, the legal system and other inter-country differences. If the firm engages in FDI, in spite of these disadvantages, it must have some

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14) Agarwal(1980) distinguishes between the market size hypothesis and the output hypothesis. For the output approach , the relevant variables are the firm's sales(output) in a host country, whereas for market size approach the relevant variables are the host country's market size proxied by GDP.

15) Love,J.H. and Lage-Hidalgo,F. " Analysing the Determinants of US Direct Investment in Mexico", Applied Economics, vol.32, 2000, pp. 1259~67.

16) Agarwal, J.P., op.cit., pp. 739~73.

advantages arising from intangible assets like a well-known brand name, patent-protected technology, managerial skills, differentiated marketing tools and other firm-specific factors.[17]

According to Kindleberger, the comparative advantage has to be firm-specific, it must be transferable to foreign subsidiaries and it should be large enough to overcome the above mentioned disadvantages.[18] Lall and Streeten show a comprehensive list of these advantages like superior management in the form of greater efficiency of operation, cheaper cost of capital than local competitors, superior technology, privileged access to raw materials, good level of economies of scale and excellent bargaining and political power.[19]

4) The Internalization hypothesis

The internalization theory is based on the principles outlined in the works of Coase[20] and Williamson[21] who present that FDI arises from efforts by firms to replace market transactions with internal transactions. Coase argued that certain marketing costs can be saved by forming a fir m.[22] For example, if there are problems associated with buying oil products on the market, a firm may decide to buy a foreign refinery. Buckley and Casson claim that firms have an incentive to bypass them by

17) Hymer, S., "United States Investment Abroad, in Peter Drysdale de Direct Foreign Investment in Asia and Pacific", Australian National University Press, 1976, p.41.

18) Kindleberger, C.P.,"American Business Abroad: Six Lectures on Direct Investment", New Haven, Conn : Yale University Press, 1969, p.13.

19) Lall, S. and Streeten, P., " Foreign Investment, Transnationals and Developing Countries", London : Macmillan, 1977.

20) Coase, R. H., "The Nature of the Firm", Economica Vol. 4, 1937, pp. 385~405.

21) Williamson, O.E., "Market and Hierachies : Some Elementary Consideration", American Economic Review, 1975, pp. 316~325.

22) Coase(1937) considered four main types of cost : (i) the cost of discovering the correct price ; (ii) the cost of arranging the contractual obligations of the parties in an exchange transaction ; (iii) the risk of scheduling of goods and inputs ; and (iv) taxes paid on exchange transactions.

creating internal markets such that the activities linked by the markets are brought under common ownership and control, if markets in intermediate products are imperfect.[23] In addition to this, Casson calls normal transactions through exchanging ownership as arm's length transactions and calls transaction by concept as internal transactions.[24] Rugman also represents that internalization takes place to reduce transaction costs in intermediate markets.[25]

The internalization hypothesis explains why firms use FDI in preference to exporting and importing from foreign countries. It also explains why they may avoid licensing. However, Dunning criticizes the internalization theory ignores the importance of locational factors.

5) Location theory

This theory identifies that FDI exists owing to the international immobility of some factors of production such as labour and natural resources. Those location-specific factors that may explain the preference for investment abroad rather than exporting from the home country. These factors include trade barriers, host government policies, business conditions in home and host countries, relative labor costs, market size and growth in home and host countries. Thus, as opposed to the internalization theory's emphasis on firm-specific competitive advantages, locational theories suggested by early trade economists stress country-specific comparative advantages as determinants of FDI.

According to this theory, the level of wages in the host country relative to wages in the home country is an important determinant of FDI. That

23) Buckley, P.J. and Casson, M. C., " The Future of the Multinational Enterprise", London : Macmillan, 1976, pp. 33~45.

24) Casson, M.C., " Alternatives to the Multinational Enterprise", London: Macmillan, 1979, p. 45.

25) Rugman, A.M., "New Theories of the Multinational Enterprise", Cambridge Press, 1982.

is why countries like India attract labour-intensive production (for example, footwear and textiles) from high-wage countries.

The classic economic analysis of the idea that FDI is the result of shifting production to low cost locations comes from Helpman.[26] Locational advantages not only take the form of low wages, they are also applicable to other factors of production. For example, a company may involve in FDI by building a factory in a country where it is cheap to generate hydroelectric power. Similarly, a factory could be located near a aluminium mine in the host country if aluminium is an important input in the production process.

6) The Eclectic Theory

This theory, the ownership-location-internalization(OLI) theory was represented by Dunning[27] in integrating the industrial organization hypothesis, the internalization theory and the location theory without being too accurate on how they interrelate.

According to this theory, three conditions should be required if a company is to indulge in FDI. Firstly, it must have a comparative advantage over other firms arising from the ownership of some intangible assets which is called ownership advantages like the patent right to a

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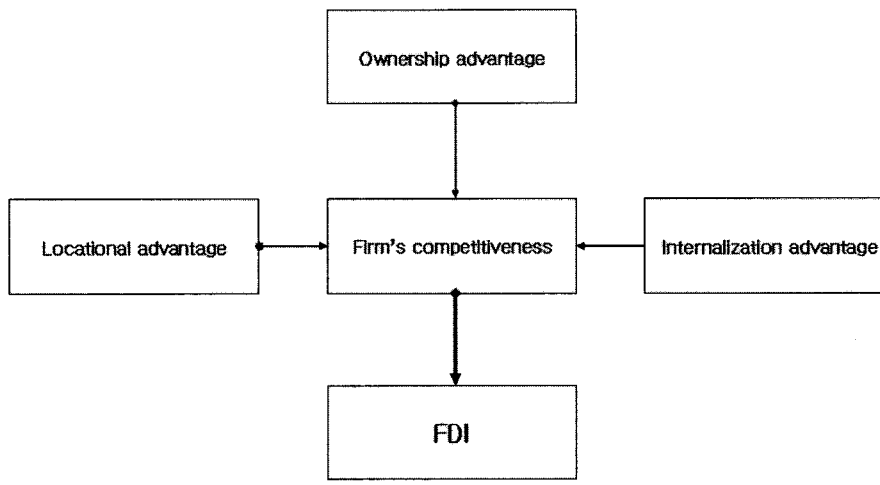
26) Helpman, E., " A Simple Theory of International Trade in the Presence of Multinational Corporations", Journal of Political Economy 92 , 1984, pp. 451~472.
_____, " Multinational Corporations and Trade Structures", Review of Economic Studies 52, 1985, pp. 443~457.

27) Dunning, J.H., " Trade, Location of Economic Activity and the MNE : A Search for an Eclectic Approach" in B. Ohlin, P.O. Hesselborn and P.M. Wijkman eds., The International Allocation of Economic Activity, London: Macmillan, 1977.
_____, "Explaining Changing Patterns of International Production : In Defence of the Eclectic Theory", Oxford Bulletin of Economics and Statistics, Vol.41, 1979, pp.269~295.
_____ , "The Eclectic Paradigm of International Production : A Restatement and Some Possible Extensions", Journal of International Business Studies, Vol. 19,1988, pp.1~31.

particular technology, monopoly power and size, access to raw materials and access to cheap finance. Secondly, it must be more profitable to use these advantages in combination with as least some factor inputs located abroad which is called locational advantages. Third, it must be more beneficial for the firm to use these advantages rather than to sell or lease them which is called internalization advantages.

<Figure III.1> The Summary of OLI Theory



7) The Kojima & Ozawa hypothesis

As per this theory which is presented by Kojima[28], FDI transfers capital, technology and managerial skills from the home country to the host country. In trade-oriented FDI generates an excess demand for imports

28) Kojima, K.," A Macroeconomic Approach to Foreign Direct Investment", Hitotsubashi Journal of Economics Vol. 14, 1973, pp. 1~21.
_____, " International Trade and Foreign Investment : Substitutes or Complements?", Hitotsubashi Journal of Economics Vol. 16, 1975, pp. 1~12.
_____, " Japanese and American Direct Investment in Asia : A Comparative Analysis", Hitotsubashi Journal of Economics, Vol. 26, 1985, pp.1~35.

and an excess supply of exports at the original terms of trade which lead to welfare improvement in both countries. Thus, the comparative advantage creates FDI. This model has developed to explain Japanese firms' FDI. Also, Ozawa claims that FDI take place owing to macroeconomic factors and Japanese FDI mainly focus on trade-oriented transactions.[29] Petrochilos criticize that, according to his study, the direction of Japanese outward FDI take place by the lack of raw materials and other basic resources and desire to use low wages so this theory is not so much a theory explaining FDI but more likely a theory explaining setting up foreign trade.

8) The Giddy & Young hypothesis

As per this theory which is suggested by Giddy & Young[30], multinational firms in developing countries do not have decisive firm-specific advantages and the size of invested company is relatively smaller than that of multinational firms in developed companies so FDI can take place only when they can minimize production cost in host countries. They tend to invest the host countries based on joint ventures or the host countries where have good amount of attractiveness in investment incentives or have similar social and cultural backgrounds. Therefore, the investment for them are more induced by location-specific factors rather than firm-specific factors.

9) The Wells hypothesis

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29) Ozawa, T. " *International Investment and Industrial Structure*", Oxford Economic Paper, Vol. 31, 1979, p.79.

30) Giddy, I. H. and Young, S., " Conventional Theory and Unconventional Multinationas : Do You New Forms of Multinational Enterprise Require New Theories ? in A.M. Rugman (ed.), New Theories of the Multinational Enterprise", London & Canbera : Croom Helm, 1982, pp. 55~75.

According to the Wells[31], the Third World Multinationals are likely to make FDI because there is the gap of technology between the multinationals in developed countries and the Third world multinationals. This means that the Third world multinationals modify and imitate the product to fit more into local situations during the multinationals in developed countries enjoy early movers' advantage on the newly developed product. Thereafter, FDI is taken place by the Third multinationals, using lower labor and overhead cost or more adjusted cheaper technology which is more suitable for local environments.

10) The theory based on Strategic and long-term factors

There are a set of strategic and long term factors which have been used to explain FDI. Reuber et al.[32] list the following factors which are related to invest abroad. (i) The desire on the part of the investor to defend existing foreign markets and foreign investment against competitors. (ii) The desire to gain and maintain a foothold in a protected market or to gain and maintain a source of supply that in the long run may prove useful. (iii) The need to develop and sustain a parent-subsidiary relationship. (iv) The desire to induce the host country into a long commitment to a particular type of technology. (v) The advantage of complementing another type of investment. (vi) The economies of new product development. (vii) Competitors for market shares among oligopolist and the concern for strengthening of bargaining position.[33]

31) Wells, L.T., " The Third World Multinationals : The Rise of Foreign Investment from Developing Countries", The MIT Press, 1983, p. 1.
32) Reuber, G., Crokell, H., Emersen, M. and Gallais-Hamonno, G., " Private Foreign Investment in Development", Oxford : Clarendon Press and OECD, 1973.
33) Moosa, I.A. (2002), op.cit., p.58.

2. Review of related literatures

1) Korean literatures

The major previous Korean studies after 1995 which are related to the determinants of FDI are Kim.H.J , Choi.Y.R., Yoo.H.J., Bae.S.Y., Park.T.S. , Shin. Y.S. and Park.S.I. etc, as far as my best knowledge goes.

Kim.H.J.[34] has studied the determinating factors of FDI coming into Korea, Japan and Taiwan through time series regression analysis using OLS(Ordinary least squares)[35] method. According to this study, (i) market size is supported statistically in all three countries (ii) market size (as a proxy of GDP), the level of technician's skillfulness, wages, the cost of land, exchange rate, tax burden and inflation rate are proved statistically in terms of Korea (iii) R&D capability is chosen as determinants in Japan, while market size is considered as main factor in Taiwan.

Choi.Y.R.[36] represents that market size, market growth, export ratio against total sales revenue, marketing capabilities and country risk are supported statistically as the determinants of developing countries, while market growth, wage, country risk are the factors which are proved statistically in developed countries.

Yoo.H.J[37] presented that tax incentive, ratio of export-responsibility, the extent of internalization, the size of the market and wage are main determinants for investment in China. The limitation of this study do not consider non-measuring factors like political, social and cultural factors.

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34) Kim, H.J. " The Comparative Study on FDI Determinants - the Case of Korea, Japan, Taiwan ", Doctoral Dissertation in Kyungi University, 1995.

35) OLS is used to draw the best fit regression line : a line such that the sum of the squared deviations of the distances of all the points to the line is minimized.

36) Choi, Y.R. " The Empirical Study on FDI by Korean Firms ", Journal of International Study, Vol.1, 1995, pp.241~266.

37) Yoo, H.J., " An Empirical Study on the Determinants of FDI : the Case of Investment into China by Korean Manufacturing Firms", Doctoral Dissertation in Dongguk University, 1995.

According to Bae.S.Y[38], four variables such as company size, economic scale, market size of host country and geographical distance mainly affect FDI in the case of FDI by Korean companies going abroad. The limitation of this study is that target sample only covers big-sized companies.

As per the study by Park.T.S[39] which has empirically studied Korean firms' direct investment for China, location specific factor is significantly affected FDI for Chinese market.

According to Shin.Y.S.[40] which has empirically considered the factors determinating investment for North Korea, companies' inner-factors like company size, management skills, financial stabilities, technology and CEO's capability and companies' outer-factors like political risk, incentive affect FDI, while the characteristic of product, market size and infrastructure have no relations with investment for North Korea.

Park.S.I.[41] finds that two hypotheses which mean (i) The stronger the industry's comparative advantage, the higher its propensity to FDI tendency (ii) The weaker the domestic location-specific advantage, the higher FDI will replace export, are statistically significant in the case of investment for Japan by Korean firms.

2) Other foreign literatures

Location factors affecting FDI by Dunning[42] are (i) resource seeking (access to

38) Bae, S.Y., " An Empirical Study on the Determinants of FDI by Korean Manufacturing Firms ", Doctoral Dissertation in Dongguk University, 1997.

39) Park, T.S., " An Empirical Study of the Determinants on FDI for China by Korean Firms", Doctoral Dissertation in Keimyung University, 1998.

40) Shin, Y.S., " An Empirical Study of the Determinants on Strategy of FDI for North Korea by Korean Firms", Doctoral Dissertation in Kyung Hee University, 2001.

41) Park, S.I. " An Empirical Study of the Determinants on FDI : the Case of Japan", Doctoral Dissertation in Sunkyunkwan University, 2003.

42) Dunning, J.H., "Multinational Enterprises and the Global Economy", Wokingham, UK and Reading, MA, Addison Wesley, 1993., " The Globalization of Business", London and New York, Routledge, 1993.

raw material, cheap labor), (ii) market seeking (market size , faster rates of economic growth), (iii) efficiency seeking (exchange rate, political stability, investment incentives, institutional credibility)

Bandera and White[43] examines US investment on EEC and finds that host country GDP (proxy for market size), growth rate of GDP are major determinants on FDI.

Kwack[44] used US data during 1960~1967. The results show that interest rate of home country was major factors to affect FDI.

Scaperlanda and Mauer, Schwartz[45] used US investment on EEC and LAFTA and found out that size of the market, economic growth, tariff rates are main determinants of FDI.

Goldberg[46] recognized that US investment in EEc mainly depend on the growth of the market.

Root and Ahmed[47] examine determinants of FDI inflows for 70 countries over the period 1966~1970 and they find that 4 Economic variables, namely per capita GDP, GDP growth rate, economic integration & infrastructure (transport, communication) ; 1 social variable namely degree of urbanization ; 1 political variable namely number of changes in government leadership.

Levis[48] tests 25 developing countries from Africa, Asia and Latin America for the period 1965 to 1967 and found out that Balance of payment position, per

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43) Bandera, V and White J.T., " U.S. Direct Investment and Domestic Market in Europe", Economia Internazionale 21, 1968, pp. 117~133.

44) Kwack, S.Y., " A Model of U.S. Direct Investment Abroad : a Neo-Classical Approach", Western Economic Journal, 10, 1972, pp. 376~383.

45) Schwartz, R.H., " The Determinants of U.S. Direct Investment Abroad", Texas University, 1976.

46) Goldberg, M.A. " Determinants of U.S. Direct Investment in the EEC : Comment", American Economic Review, Vol. 62, 1972, pp. 692~699.

47) Root, F.R. and Ahmed, A.A.. " Empirical Determinants of Manufacturing Direct Foreign Investment in Developing Countries ", Economic Development and Cultural Change 27, 1979, pp. 751~767.

48) Levis, M., " Does Political Instability in Developing Countries Affect Foreign Investment Flow ? : An Empirical Examination", Management International Review 19 Weisbaden, 1979, pp. 59~68.

capita GNP (proxy for quality of life) Government capabilities were important determinants of FDI. He concludes economic variables are more important determinants of FDI.

Dunning uses eclectic theory of FDI to test how FDI inflows react to the degree of industrialization in host countries. He studies 67 countries for the period 1967 to 1978. He uses multiple discriminant analysis to determine which of the three variables. (i) organizational variables (human capital, expenditure on R&D), (ii) locational variables (natural resource endowments, infrastructure index, risk), (iii) internalization (royalties) best explain FDI inflows. He concluded that economic variables are more significant determinants of FDI than political variables.

Schneider and Frey[49] examine 54 developing countries over three years, 1976,1979,1980 and use four model. (i) Economic model (GNP per capita, growth rate of GNP, rate of Inflation, balance of payment deficit, wage cost, availability of skilled labor force) (ii) Political model (political instability, government ideology, percentage of aid received from the communist bloc. (iii) Amalgamated model (iv) Politico-economic model He concludes the most important economic determinants are a country's level of development (as measured by per capita GNP) and the balance of payment position. Among the political determinants, the amount of bilateral aid coming from the Western countries is found to have the strongest effect on FDI.

Lucas[50] studies the determinants of FDI inflows into Indonesia, South Korea, Malaysia etc for the period 1960 to 1987. Greater wages and industrial disputes are found to have a negative effect on FDI.

Some studies have focused on single location factor to affect FDI.

Agarwal finds significant positive correlation between German FDI and relative wage cost in Brazil, India, Iran etc

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49) Schneider, F. and Frey, B.S., " Economic and Political Determinants of FDI", World Development 13, 1985, pp. 161~175.

50) Lucas, R.E.B. " On the Determinants of FDI : Evidence from East and South East Asia", World Development 21.3, 1993, pp. 391~406.

Jeon and Moore[51] concludes that Korean and German FDI outflows are related to low wage costs in developing countries.

Political factors including institutional factors like corruption were concentrated in some studies.

Nigh[52] analyzes FDI in manufacturing by US multinationals in 24 countries including 11 developing countries during 1954~75. He identifies there was a significant relationship between FDI inflows and internal conflicts like riots and civil wars occurred in these countries.

Jun and Singh[53] studies 31 countries for the period 1970~93. They find political instability to be a significant determinant of FDI.

Hines[54] show that after 1977, outbound FDI from the USA flowed more rapidly into less corrupt countries.

Wei[55] examines FDI flows from 14 OECD countries to 45 host countries for two years. Corruption and high tax rates are shown to have negative effects on FDI.

Gastanga, Nugent and Pashamova [56] examines 49 developing countries over 1970-95 and find that corruption and other institutional factors such as bureaucratic delays and contract enforcement have deleterious effects on FDI and high corporate marginal taxes exert a significantly negative impact on FDI.

Other studies have attempted to analyze the determinants of FDI for individual countries.

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51) Moore, M.O., " Determinants of German Manufacturing Direct Investment : 1980-1988", Weltwirtschaftliches Archiv. 129, 1993, pp. 120~137.

52) Nigh, D., "The Effect of Political Events on United States FDI : A Pooled Time-series Cross Sectional Analysis", Journal of International Business Studies, 1985, pp. 1~17.

53) Jun, K.W. and Singh, H., "The Determinants of FDI in Developing Countries", Transnational Corporations 5.2., 1996, pp. 67~105.

54) Hines, J.R. Jr. " Forbidden Payment : Foreign Bribery and American Business after 1977", NBER Research Working Paper 5266, 1995.

55) Wei, S.J. "How Taxing is Corruption on Foreign Investment into East Asia", Mimeo Cambridge, MA. Harvard University Kennedy School of Government, 1997.

56) Gastanga, V.M, Nugent, J.B. and Pashamova, B.., " Host Country Reforms and FDI Inflows. How Much Difference Do They Make ?", World Development 26.7, 1998, pp.1299~1314.

Petrochilos [57] use time series data for the period 1955~78 to identify the determinants of FDI in Greece. He finds that the main determinants of FDI in Greece are the size of the market, tariff protection for manufacturers, the Greek interest rate and political stability.

Chen, Chang and Zhang [58] finds a positive relationship between Growth (GNP) and FDI in China.

Stephane Dees examines FDI flows into China from twelve countries which account for about 90 % of the total FDI flows during 1983-1995. The results show that the level of GDP (proxy for market size) has a large positive effect of the inward investment and real wage rate and real exchange rate had a negative relationship with FDI.

Wang and Swain [59] study the determinants of FDI in Hungary and China during 1978-92. They find that, for Hungary, GDP, absolute growthin GDP and cost of capital are significant factors influencing FDI inflows. As for China, they find that GDP, absolute real change in GDP, growth rate of GDP, wage rate, US government long term bond yield, imports into China, political stability affect FDI inflows.

Nishat and Aqeel [60] find GDP, value added in wholesale and retail trade, employment in mining and manufacturing and telephone connection to be important variables in Pakistan.

Chunlai [61] identify the determinants of FDI in 33 developing countries over a period of eight years between 1987~1994 and finds that market size and the

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57) Petrochilos, G. E. "Foreign Direct Investment and the Development Process", Avebury Aldershot Brookfield U.S.A. Hong Kong Singapore Sydney, 1989.

58) Chang, C.C. and Zhang, Y.. " The Role of Foreign Direct Investment in China's Post - 1978 Economic Development", World Development. 23.4., 1995, pp. 691~703.

59) Wang, Z.Q. and Swain, N.., "Determinants of Inflow of FDI in Hungary and China : Time-series Approach", Journal of International Development 9.5., 1997, pp. 695~726.

60) Nishat, M. and Aqueel, A.. " The Empirical Determinants of Direct Foreign Investment in Pakistan", Savings and Development(Italy), 22.4. , 1998, pp. 471~479.

61) Chunlai, C., " The Location Determinants of FDI in Developing Countries" Chinese Economy Research Unit Working Papers University of Adelaide Australia 97/12, 1997, pp.1~59.

degree of development of developing countries are significant determinants of FDI.

Padma Venkatatachalam [62] use time series data for the period 1965-95 and pooled data from 14 countries which includes USA, UK, Canada, Denmark, France, Germany, Japan, Korea, Mauritius etc which account for over 70% of total FDI flows into India as cross section data to identify the determinants of FDI in India. Among all variables namely market size, economic growth, domestic technological capability, openness as an indicator of the extent of India's foreign trade and her integration with the global market, tariff rates, political instability, technological capability of the home country firms and geographical distance, he finds that the main determinants of FDI in India are the size of the market as well as economic growth, technological capability of Indian firms as well as home country firms, high tariff rate and geographical distance but political considerations are not important determinants of FDI.

According to Amitabh Singh.[63] who has studied FDI from developing countries like India, the locational and internalization theories provide only a partial explanation of an Indian firms' decision to invest abroad. The production experience, managerial skills, conglomerate ownership and size are the main factors for Indian firms investing abroad. Industrial rate of growth at home and geographical distances from a host country have not affected FDI by Indian firms to invest overseas. Also, political risk and inflation rate of host country are negatively affected to Indian firms' propensity to invest abroad.

Eric C. Tsai [64] present that financial factors like exchange rate movement, the pattern of internal and external financing, the profile of risk and diversification and agency behavior are as important as strategic factors such as location factors, ownership endowments, internalization determinants in U.S. firms international

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62) Venkatachalam, P., " A Study of FDI in India ", Doctoral Dissertation in Howard University in U.S.A., 2000.

63) Singh, A.., " FDI from Developing Countries : a Case Study of India", Doctoral Dissertation in University of North Carolina at Chapel Hill, 2001.

64) Tsai, E.C.. " Essays on Corporate International Investments ", Doctoral Dissertation in Temple University, 2003.

investments in the 1990s.

R. Anantaram [65] studies state-wise determinants of FDI in India during 1991~2002. According to him, quality of roads, agglomeration economies, incentives given by states in India are statistically significant factors of state-level FDI in the full model.

As the conclusion, almost studies mentioned above have been considered the determinants in view of firm-specific factors and/or location-specific factors. However, the distinguishing points of this study are (i) considering strategic factors including firm-specific and location-specific factors on the ground of supported theories. (ii) checking whether there are differences in the determinants between big-size companies and medium & small-sized companies. (iii) identifying major factors among all variables using regression analysis two times. (iv) first study on finding out the determinants of FDI in India by Korean Firms.

<Table III.1> The Main Features of Previous Related Empirical Studies and the Differences between those Studies and this Study

Writer	The Objective of the Study	Major Applied Theories for Research Design or Descriptive Variables & Test Method
Kim, H.J. (1995)	Comparative study on the differences of determinants in Korea, Japan and Taiwan by Korean Firms during 1970~1994	* Macroeconomic view(Demand aspect) : location theory * Time-series analysis (OLS : Ordinary least square)
Park, J.D. (1995)	Study on the Determinants of FDI in Korea by Foreign Investors	* OLI theory * Logit, Tobit model
Yoo, H.J. (1995)	Study on the Determinants of FDI in China by Korean Firms	* OLI theory * Logit, Tobit model

65) Anantaram, R. " The Empirical Determinants of State-wise FDI in India : Evidence from the Reform Years (1991~2002)", Doctoral Dissertation in University of Pittsburgh, 2004.

	during 1993~1995	
Bae, S.Y. (1997)	Study on the Determinants of FDI by Korean Manufacturing Firms during 1980~1995	* OLI theory and industrial theory * Time-series analysis (Ordinary least square)
Park, T.S. (1998)	Study on the Determinants of FDI in China by Korean Firms	* OLI theory * Regression analysis, Path analysis
Park, C.D. (2001)	Study on the Managerial Activities of Direct Investment in China by Korean Firms	* Firm specific factors, Motivation, Difficulties in China * T-test, Chi-square test
Shin,Y.S. (2001)	Study on the Determinants of Entry Strategies in North Korea by Korean Firms	* Firm specific exterior factors, Firm specific interior factors * Discriminant analysis, T-test
Park, S.I. (2003)	Study on the Determinants of FDI in Japan by Korean Firms	* Location theory * Regression analysis
Venkatachalam P. (2000)	Study on the Determinants of FDI into India by 14 countries (1965~95)	* OLI theory * Time-series analysis
Singh A. (2001)	Study on the Determinants of FDI by Indian Firms during 1980~1990	* OLI theory * Probit model
Tsai E.C.(2003)	Study on FDI from Developed countries: a case study of U.S.A. (in 1990s)	* Financial factors, Strategic factors * Regression analysis
Anantaram R. (2004)	Study on the Determinants of State-wise FDI in India (1991~2002)	* Economic, political and social variables * Time-series analysis (OLS)
This Study	Study on the Determinants of FDI in India by Korean Firms	* OLI theory, Diversification theory, Oligopolistic theory, Theory Based on Strategic factors * Regression analysis, T-test

Ⅳ. Research design, methodology and test results

The review of all hypotheses and related literatures which are mentioned earlier postulates that firm-specific factors, location factors and strategic factors are necessary preconditions for firms to invest in India and the constituents of these three factors would together qualify as determinants of FDI.

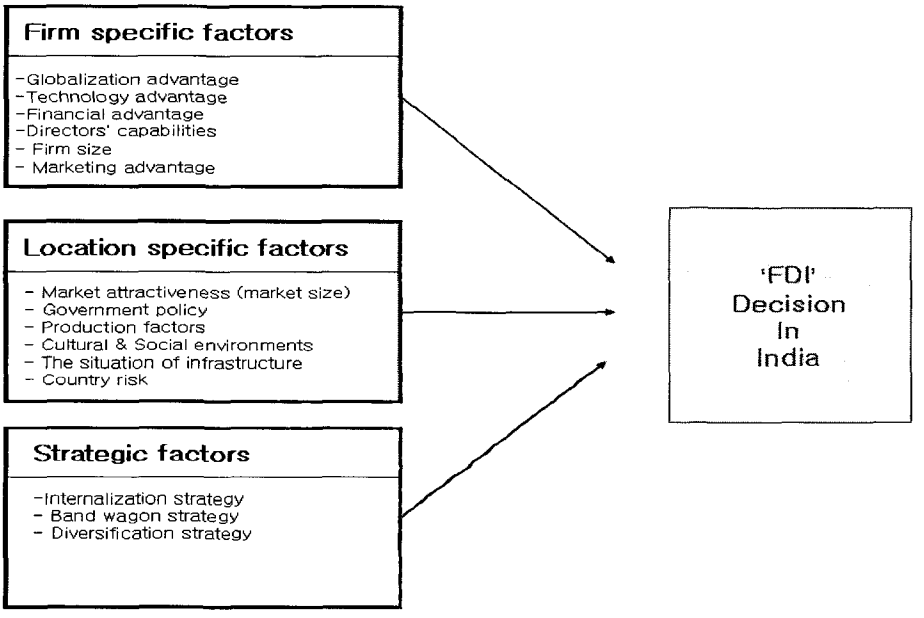
Regardless of the type of companies, almost all Korean companies in India have been taken as Target companies of this empirical study because number of Korean companies working in India are not many numbers so almost all companies are required to have reasonable number of samples for this study, empirically. Hence, target Korean companies include liaison, project office and limited companies in the industry of trading, IT, engineering, construction and pharmaceuticals since many of these companies have already invested in India and remaining companies may invest in India in the near future. As the result, out of about 100 Korean companies enrolled in Korean embassy and KOTRA in India as of the end of 2004, except small sized-companies which are operated by one man or two men , 80 companies have been selected as target data samples. The questionnaires have been sent to these selected 80 companies by email after I check email address and person in charge by telephone. Finally, 74 questionnaires are collected for the empirical test.

1. Research Design

Based on the prior theoretical arguments along with related literatures presented earlier, research design is shown in below mentioned <Figure Ⅳ.1> to find out the determinants of FDI in India empirically. Unlike research design of most of previous studies, this study adopts three factors

as independent variables including strategic factors.

<Figure IV.1> Research Design



2. Hypotheses

On the basis of the prior theories along with concerned literatures which are explained earlier, the major four hypotheses with subordinate 15 hypotheses will be tested to check whether these determinants may give significant impact on FDI in India or not.

1) Firm specific factors

As we've reviewed almost all the theories which are related to FDI, according to the industrial organization hypothesis by Hymer, Kindleberger, Caves and the eclectic theory by Dunning, firm-specific factors like

well-known brand name, patent-protected technology, managerial skills, differentiated marketing tools etc can be explained as a parameter of FDI so it will be hypothesized to see whether it can be also applicable to the determinants of FDI in India.

(Hypothesis 1) Firm specific factors may provide a significant explanation for FDI in India.

(i) The level of globalization advantage

The firms which have little experience in globalization will be very reluctant to make FDI, while the companies which have enough experience in globalization will prefer FDI, relatively.(Caves and Mhera ; Gatignon and Anderson [66] ; Terpstra and Yu ; Kim C.Y.[67]). Therefore, the globalization level like export ratio against total sales revenues is taken a parameter of firm-specific factors in FDI for empirical test so it will be, therefore, hypothesized.

(H 1.1) The advantage level of globalization in Korean firms may affect the decision of FDI in India.

(ii) The level of technology advantage

As per Horst[68], Kim, H.J., Shin, Y.S.[69], the level of technology advantage is presented a determinant of FDI so it will be hypothesized.

(H 1.2) The advantage level of technology in Korean firms may affect the decision of FDI in India.

(iii) The level of financial advantage of the firm

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66) Gatignon, H.A. and Anderson, E., " The Multinational Corporation's Degree of Control over Foreign Subsidiaries : An Empirical Test of a Transaction Cost Explanation", Journal of Law, Economics and Organization 4(2), 1988, pp.305~336.

67) Kim, C.Y., " A Study on the Choice of Entry Mode and Performance for the FDI in U.S., E.U., and Japan by Korean Companies", Doctoral Dissertation in Kyunghee University, 2003, pp. 61~62.

68) Horst, T., " The Industrial Composition of U.S. Exports and Subsidiary Sales to the Canadian Market", The American Economic Review, Vol.62, March, 1972, pp. 37~45.

69) Shin, Y.S., op.cit., p. 100.

According to Hymer[70], Shin, Y.S.[71], the level of financial advantage can be a factor in determinant of FDI so it will be hypothesized in this study.

(H 1.3) The advantage level of financial status in Korean firms may affect the decision of FDI in India.

(iv) The management discretion (Directors' capabilities)

Contractor[72], Davidson[73] and Amitabh Singh[74] have shown the management discretion is a factor in determinants of FDI so it will be hypothesized in this study.

(H 1.4) The management capabilities & discretion by Korean firms' senior managements may affect the decision of FDI in India.

(v) The size of the firm

Horst[75], Buckley and Casson[76], Kumar[77] and Doz[78] claim that the size of the firm is a important factor in determinants of FDI because the bigger companies in size are beneficial in reducing fixed cost, banking cost and credit risk so it will be hypothesized in this study.

(H 1.5) The advantage level of firm size in Korean firms may affect the decision of FDI in India.

(vi) The level of marketing advantage

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70) Hymer, S.H., " The International Operations of National Firms", Cambridge, Mass : MIT Press, 1976, p. 2.

71) Shin, Y.S., op.cit., pp. 99~100.

72) Contractor, H.J., " Choosing between Direct Investment and Licensing: Theoretical Considerations and Empirical Results", Journal of International Business Studies, 1984, pp. 167~188.

73) Davidson, W.H., "The Location of Foreign Investment Activity", Journal of International Business Studies, Fall 1980, pp. 9~23.

74) Singh, A., op.cit., pp.142~198.

75) Horst, T., op.cit., pp. 37~45.

76) Buckley, P.J. and Casson, M.C., " The Future of Multinational Enterprise", Holmes & Meier Pubishers, New York, 1976, pp. 24~32.

77) Kumar, M.S., " Growth, Acquisition and Investment : an Analysis of the Growth of Industrial Firms and Their Overseas", Cambridge University Press. 1984, pp. 8~12.

78) Doz, Y.L., " Technology Partnership between Larger and Smaller Firms : Some Critical Issues", International Studies of Management and Organization 17(4), 1988, pp. 31~57.

According to Grubaugh[79], Root[80], Choi Y.R. , the higher the level of marketing advantage, the more FDI because the firm which has marketing advantage is more likely to invest abroad using this advantage so it will be hypothesized in this study.

(H 1.6) The advantage level of marketing ability in Korean firms may affect the decision of FDI in India.

Herewith, I summarize hypothesis 1 along with its subordinate 6 hypotheses.

(Hypothesis 1) Firm specific factors may provide a significant explanation for FDI in India.

(H 1.1) The advantage level of globalization in Korean firms may affect the decision of FDI in India.

(H 1.2) The advantage level of technology in Korean firms may affect the decision of FDI in India.

(H 1.3) The advantage level of financial status in Korean firms may affect the decision of FDI in India.

(H 1.4) The management capabilities & discretion by Korean firms' senior managements may affect the decision of FDI in India.

(H 1.5) The advantage level of firm size in Korean firms may affect the decision of FDI in India.

(H 1.6) The advantage level of marketing ability in Korean firms may affect the decision of FDI in India.

2) Location-specific factors

As per market size hypothesis by Agarwal and Love and Lage-Hidalgo, location theory by Helpman and eclectic theory by Dunning, Root, Torris i[81] and recent several empirical studies like A.Singh[82], Park S.I.[83] and R.

79) Grubaugh, S.G., " Determinants of Direct Investment", Review of Economics and Statistics LXIX, No.1, 1987, pp. 149~152.

80) Root, F.R., op.cit., pp. 8~15.

Anantaram[84], location-specific factors such as (i) the market potentials like size of the host country market, (ii) government policies like investment incentives, tariffs (iii) production factors like transportation cost, wage (iv) political, social and cultural factors like language and religious difference, political risk (v) quality of infrastructure (vi) country risk can be explained as a parameter of FDI so it will be hypothesized to see whether these parameters can be also applicable to the determinants of FDI in India or not.

(Hypothesis 2) Location specific factors may provide a significant explanation for FDI in India.

The subordinate 6 hypotheses under Hypothesis 2 are ;

(H 2.1) The market potentials like market size may affect the decision of FDI in India.

(H 2.2) The investment policy & system of Indian government may affect the decision of FDI in India.

(H 2.3) The lower production factors may affect the decision of FDI in India.

(H 2.4) The social, cultural and political environments of India may affect the decision of FDI in India.

(H 2.5) The infrastructure of India may affect the decision of FDI in India.

(H 2.6) The country risk of India may affect the decision of FDI in India.

3) Strategic factors

As stated earlier, strategic factors can be also considered as one of main

81) Torrisi, C.R., " The Determinants of FDI in a Small Less Developing Companies", Journal of Economic Development, Vol. 10, No.1, 1985, pp. 29~45.
82) Singh, A., op.cit., pp. 130~134.
83) Park, S.I., op.cit., pp. 89~104.
84) Anantaram, R., op.cit., p. 106.

factors in determinants of FDI. In this study, I explain below mentioned three matters as strategic factors.

(i) Internalization strategy : according to the internalization theory by Coase and Williamson, the desire of internalization to reduce transaction cost in intermediate market and to keep advantage of marketing skills and brand triggers FDI.

(ii) Band wagon strategy : on the ground of Oligopolistic theory by Knickerbocker, FDI by one company attracts other leading companies to take a similar action in FDI as a attempt to maintain their market shares, which is called 'Band Wagon' effect.

(iii) Portfolio diversification strategy : in accordance with portfolio diversification theory, the firm make direct investment based on portfolio choice to avoid risk. Therefore, I hypothesize the above mentioned points as given below.

(Hypothesis 3) Strategic specific factors may provide a significant explanation for FDI in India.

The subordinate 3 hypotheses under Hypothesis 3 show ;

(H 3.1) The internalization strategy between parent company in home country and subsidiary company in host country may affect the decision of FDI in India

(H 3.2) The Band wagon strategy as oligopolists may affect the decision of FDI in India

(H 3.3) The diversification strategy may affect the decision of FDI in India.

In addition to the above mentioned hypotheses, one more matter will be hypothesized to check whether there is a difference in determinants of FDI in India between big sized-companies and medium & small sized-companies or not as given below.

(Hypothesis 4) There will be a difference in determinants between big sized- companies and medium & small sized-companies.

3. Descriptive measures (variables)

To identify whether above mentioned several hypotheses are empirically significant or not, FDI decision is used as dependent variable and it is tested with likert 5 scales. Independent variables consist of major three factors. Firstly, firm-specific factors are composed of globalization advantage, technology advantage, finance advantage, management views, size of company and marketing advantage. Secondly, location-specific factors include market size, government policy, production factors, social and political environments, infrastructure and country risk. Lastly, strategic factors which are applied distinctively in this study consist of internalization strategy, band wagon strategy and market diversification strategy. The details of test items are given below.

<Table IV.1> Test Variables

	Variables		Test items	Scale
independent variables	firm-specific factors	globalization advantage	number of overseas branches, export level, number of people in overseas department, number of people who can speak English, days of overseas business trips	LIKERT 5 SCALE
		technology advantage	R&D expenditure, number of patent application, quality claim, ratio of new products against existing products, intensive level of technology	
		financial advantage	profit, reserve amounts, cash flow, growth rate of sales	
		management discretion	looking at India as the alternative market, evaluation on market potential of India, interest about success story of Korean companies at India, business discretion	
		size of company(firm size)	sales revenues, capital amounts, number of employees, total amount of shares, big-sized companies	
		marketing advantage	market shares, customer satisfaction, brand awareness, number of world best products, promotion capabilities	

	location specific factors	market size	GDP, PPP, economic growth rate, per capita income, number of people with middle level income	E
		government policies related to investment	investment incentives, trade barriers, investment approval systems, currency rate, foreign currency remittance system	
		production factors	labor cost, land for factory, logistic cost, electricity & oil price, raw material cost	
		cultural, social and political environments	political stability, language and religion, caste system, "no problem" culture	
		infrastructure	communication system(internet, phone etc), road and port condition, utilities, electricity	
		country risk	war, reserve of foreign currency, financial deficit of government, credit rank of the country	
	strategic factors	internalization strategy	worrying about duplication, transferring idling facilities to Indian branches, internalizing brand, internalizing management skills, securing raw materials	
		band wagon strategy	Follower strategy for securing market and customers, opportunities loss,	
		diversification strategy	exploring alternative market, considering other markets' situation, securing existing markets and customers	
dependent variable		FDI decision	green field investment, additional investment, direct investment rather than export, more investment than any other Korean companies in same industry, more investment from Korean firms on Indian market	

4. Empirical method & Test results

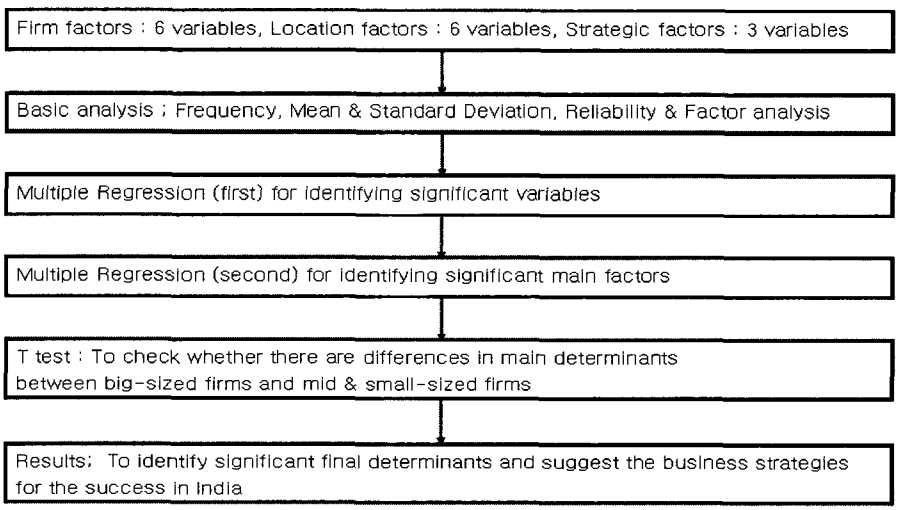
This section discusses the data analysis methods that are used to test the hypotheses stated in this study and covers test results along with general findings including responses, background statistics, reliability and factor loading.

1) Empirical method

The methods of empirical analysis to identify major determinants of FDI are given below. (i) identifying major determinants of FDI ; Regression analysis (ii) software package ; Statistical Package for the Social Sciences (SPSS) 12.0 (iii) reliability ; Cronbach's Alpha coefficient

The procedure of empirical analysis are shown in below mentioned <Figure IV.2>.

<Figure IV.2> The Procedure of Empirical Analysis



2) Empirical Test Results

This study focuses on the analysis of major determinants on FDI in India by Korean companies. Target Korean companies of this empirical study are almost all Korean companies which have already entered into India, regardless of the type of companies because number of Korean companies which have already come to India are not many numbers so almost all companies are required to this study to have reasonable number of samples of companies, empirically.

As the result, out of about 100 Korean companies enrolled in Korean embassy and KOTRA in India as of the end of 2004, except small sized-companies which are operated by one man or two men, 80 companies have been selected as target data samples. The questionnaires have been sent to these selected 80 companies by email after I check email address and person in charge by telephone. Finally, 74 questionnaires are collected for the empirical test so the collection rate is reached to around 93%.

<Table IV.2> The Status of Collecting Questionnaires

NO. of Target samples	No. of Collected samples	%	No. of Complementary Questionnaires	Final No. of Questionnaires
80	74	93	10	74

(1) Background statistics related to success strategies

Localization, investment based on single ownership, sophisticated intra control system and prior occupation of market was regarded as main success strategies as shown in <Table IV.3>.

<Table IV.3> Success Strategies

		localization	diversification	advanced products	single ownership	relationship with Indian government	control system
N	Valid	74	74	74	74	74	74
	Missing	0	0	0	0	0	0
Mean		**4.23**	3.66	3.34	**4.20**	3.11	**4.19**
Median		4.00	4.00	3.00	4.00	3.00	4.00
Mode		4	4	4	4	3	4
Std. Deviation		.653	.647	.727	.662	.900	.541
Variance		.426	.419	.528	.438	.810	.292
Range		2	2	2	2	4	2
Minimum		3	3	2	3	1	3
Maximum		5	5	4	5	5	5

		prior occupation	aggressive marketing	empowerment to Indian Staffs	harmony between Korean & Indian Staff	Challenge spirit
N	Valid	74	74	74	74	74
	Missing	0	0	0	0	0
Mean		**4.14**	3.86	3.12	3.16	3.93
Median		4.00	4.00	3.00	3.00	4.00
Mode		4	4	3	3	5
Std. Deviation		.557	.689	.827	.876	1.151
Variance		.310	.475	.684	.768	1.324
Range		2	2	3	4	4
Minimum		3	3	2	1	1
Maximum		5	5	5	5	5

(2) Factor & Reliability Analysis

In order to reduce data dimensionality and secure independence between factors, this study has carried out factor analysis. Factor analysis was performed based on (i)Rotation : varimax, (ii) Extraction ; Eigen value should show more than 1 (iii) Scree Plot method. At the same time, Cronbach's alpha method was performed to check reliability of factors.

<Table IV.4> The Factor Analysis Related to Firm Factors

Variables	Component					
	Firm Size	Tech nology	Finance Advantage	Management Capability	Marketing Advantage	Globalization Advant age
Stock value	**.885**	-.227	-.018	-.129	.091	-.102
Group company	**.882**	-.074	.028	.113	.142	-.099
Capital amount	**.808**	.160	.122	.000	-.302	-.146
Number of employees	**.784**	.003	-.017	-.449	.002	-.161
Quality claim	.082	**.903**	-.019	.042	-.036	-.068
R&D investment	-.135	**.862**	-.216	-.183	-.002	.082
Number of patent	-.158	**.655**	-.190	-.401	-.203	.132
Surplus reserve	-.047	-.088	**.800**	.137	.206	-.066
Cash flow	-.119	-.361	**.791**	.246	-.111	.153
Growth rate of sales	.330	.036	**.773**	-.245	.265	-.044
Directors' apprehension on the market potential	.018	-.082	.128	**.822**	.183	.164
Directors' apprehension on India as next market	-.250	-.180	-.023	**.782**	.067	-.119

Market share	.077	-.125	.028	.159	**.819**	.014
No. of top brand	-.164	.161	.250	.249	**.765**	.158
Marketing ability	.098	-.334	.527	-.128	**.663**	-.020
Overseas biz trip	-.113	.216	-.057	-.033	-.015	**.875**
No. of persons speaking English	-.395	-.149	.106	-.039	.019	**.797**
No. of overseas operation	.011	-.061	-.049	.492	.296	**.658**
Eigen Value	4.204	3.992	1.998	1.677	1.421	1.136
% Variance	23.354	22.179	11.102	9.318	7.892	6.312
Cumulative %	23.354	45.533	56.634	65.952	73.844	**80.156**
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.						

<Table IV.5> shows the results after performing factor analysis.

<Table IV.5> The Results of Factor Analysis & Reliability Analysis Related to Firm-specific Factors after Deletion(I)

Variables	No. of items before factor analysis	No. of items after factor analysis	Cronbach's alpha
Globalization Advantage	5	3	0.746
Technology Advantage	5	3	0.820
Finance Advantage	4	3	0.754
Management Capability	4	2	0.670
Firm Size	5	4	0.872
Marketing Advantage	5	3	0.751

The variables after factor analysis show eigen value more than 1 and the explanations of total variables which are related to firm-specific factors present 80.2% in <Table IV.4> and Cronbach's alpha value also represents more than 0.6 so the selected variables are found acceptable.[85]

85) Woo, S.M. " SPSS 12.0 for windows " , Inganguabogzi, 2005, pp. 375~384.

<Table IV.6> The Factor Analysis on Locational Factors

Variables	Component					
	market attractiveness	**production factors**	**infra structure**	**social & cultural environments**	**country risk**	**investment policy & system**
Size of medium income group	**.889**	.156	.197	-.119	.140	.120
per capita income	**.837**	.317	.080	-.040	.216	.219
GDP	**.730**	-.085	.257	-.419	-.023	-.207
PPP	**.730**	.087	-.071	-.044	-.450	.238
Economic growth rate	**.635**	.517	-.060	-.001	-.391	.090
Raw material cost	.232	**.825**	.041	.187	-.079	.060
Labor cost	.202	**.803**	.015	-.148	-.186	.199
The price of electricity & oil	.025	**.738**	.300	-.046	.238	.140
Logistic's cost	.010	**.632**	.441	-.035	.300	.219
Seaport condition	.042	.086	**.873**	-.085	.133	.110
Road condition	.200	-.012	**.836**	-.071	.384	.088
Water for industry	.083	.415	**.829**	-.067	.153	-.166
Caste system	-.206	.106	-.090	**.809**	.049	-.018
Different language & religion	-.229	-.193	-.097	**.804**	-.212	-.011
Political stability	.015	-.062	.011	**.792**	.142	-.086
No problem culture	.160	.183	-.373	**.476**	.123	.235
Indian government deficit	.004	.009	.095	.126	**.906**	-.218
Indian foreign currency reserve	-.015	.014	.327	-.027	**.804**	.114
Investment approval system	.099	.234	.262	-.166	-.069	**.850**
Custom tariff	.367	.339	-.167	.265	-.107	**.657**
Eigen value	6.406	3.681	2.771	1.769	1.137	1.031
% variance	30.507	17.527	13.196	8.423	5.412	4.911
cumulative%	30.507	48.034	61.230	69.653	75.066	**79.977**
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.						

<Table IV.6> shows the results of factor analysis. The variables after factor analysis show eigen value more than 1 and the explanations of total variables which are related to location-specific factors present 80%.

<Table IV.7> The Results of Factor Analysis & Reliability Analysis Related to Location-specific Factors after Deletion(II)

Variables	No. of items before factor analysis	No. of items after factor analysis	Cronbach's alpha
Market attractiveness	5	5	0.876
Government policy & system	5	2	0.677
Production factors	5	4	0.855
Social & cultural environments	4	4	0.691
Infrastructure	5	3	0.895
Country risk	4	2	0.802

After deleting items, cronbach's alpha value shows more than 0.6 so the selected variables are found to be reliable.

<Table IV.8> The Factor Analysis on Strategical Factors

	Component		
	diversification	**internalization**	**band wagon**
lower profitability of Chinese market	**.880**	.139	.050
developing alternative market	**.879**	.109	.269
serious competition in China	**.815**	.045	-.133
transferring idling equipments to overseas	-.088	**.872**	-.059
Indian firms' abilities related to duplication	.134	**.787**	.053
Securing raw materials	.269	**.704**	.173
Opportunity loss	-.042	-.068	**.939**
Follower strategy	.144	.206	**.890**
Eigen value	2.847	1.658	1.587
% variance	35.594	20.721	19.839
cumulative %	35.594	56.315	**76.153**
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.			

<Table IV.8> shows the results of factor analysis. The variables after factor analysis show eigen value more than 1 and the explanations of total variables which are related to strategical factors present 76 %.

<Table IV.9> The Results of Factor Analysis & Reliability Analysis Related to Strategical Factors after Deletion(III)

Variables	No. of items before factor analysis	No. of items after factor analysis	Cronbach's alpha
internalization	5	3	0.716
band wagon	4	2	0.829
diversification	4	3	0.838

After deleting items, cronbach's alpha value shows more than 0.6 so the selected variables are found to be reliable.

(3) The Test of Hypotheses Using Multiple Regression

To verify whether several variables are significant or not, I performed multiple regression. The results of stepwise multiple regression are given below.

(i) In terms of variables which are related to firm specific factors, globalization advantage and financial advantage are selected as significant variables as shown in <Table IV.10>.

(H 1.1) The advantage level of globalization in Korean firms may affect the decision of FDI in India. (accepted significantly)

(H 1.2) The advantage level of technology in Korean firms may affect the decision of FDI in India. (rejected)

(H 1.3) The advantage level of financial status in Korean firms may affect the decision of FDI in India. (accepted significantly)

(H 1.4) The management capabilities & discretion by Korean firms' senior managements may affect the decision of FDI in India. (rejected)

(H 1.5) The advantage level of firm size in Korean firms may affect the decision of FDI in India. (rejected)

(H 1.6) The advantage level of marketing ability in Korean firms may

affect the decision of FDI in India. (rejected)

<Table IV.10> The Results of Regression Related to Firm-specific Factors(I)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	**Std. Error**	**Beta**			Tolerance	VIF
1	(Constant)	2.328	.298		7.810	.000		
	globalization	.400	.096	.442	4.176	.000	1.000	1.000
2	(Constant)	1.681	.424		3.962	.000		
	globalization	**.394**	.094	.435	4.206	**.000**	.999	1.001
	finance	**.182**	.087	.217	2.098	**.039**	.999	1.001
a Dependent Variable: FDI decision R Square : **0.242** F value : 11.332 (sig : .000)								

(ii) In terms of variables which are related to location specific factors, market potentials(or attractiveness) and production factors are selected as significant variables as shown in <Table IV.11>.

(H 2.1) The market potentials like market size may affect the decision of FDI in India. (accepted significantly)

(H 2.2) The investment policy & system of Indian government may affect the decision of FDI in India. (rejected)

(H 2.3) The cheaper production factors may affect the decision of FDI in India. (accepted significantly)

(H 2.4) The social, cultural and political environments of India may affect the decision of FDI in India. (rejected)

(H 2.5) The infrastructure of India may affect the decision of FDI in India. (rejected)

(H 2.6) The country risk of India may affect the decision of FDI in India. (rejected)

<Table IV.11> The Results of Regression Related to Locational Factors(II)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.574	.367		4.290	.000		
	market potential	.503	.092	.540	5.444	.000	1.000	1.000
2	(Constant)	1.101	.370		2.977	.004		
	market potential	.356	.097	.382	3.688	.000	.799	1.252
	production factor	.293	.086	.352	3.395	.001	.799	1.252
a Dependent Variable: FDI decision R square : 0.391 F value : 22.749 (sig : .000)								

(iii) In terms of variables which are related to strategic factors, diversification strategy is selected as a significant variable as shown in <Table IV.12>.

(H 3.1) The internalization strategy between parent company in home country and subsidiary company in host country may affect the decision of FDI in India (rejected)

(H 3.2) The Band wagon strategy as oligopolist may affect the decision of FDI in India (rejected)

(H 3.3) The diversification strategy may affect the decision of FDI in India. (accepted significantly)

<Table IV.12> The Results of Regression Related to Strategic Factors(III)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.019	.254		7.946	.000		
	diversification	.438	.071	.587	6.149	.000	1.000	1.000
2	(Constant)	2.652	.283		9.373	.000		
	diversification	.472	.066	.633	7.195	.000	.982	1.018
	band wagon	-.302	.077	-.344	-3.912	.000	.982	1.018

3	(Constant)	2.977	.279		10.662	.000		
	diversification	**.521**	.063	.698	8.316	**.000**	.934	1.071
	band wagon	**-.276**	.072	-.314	-3.823	**.000**	.972	1.029
	internalization	**-.234**	.067	-.292	-3.479	**.001**	.934	1.070
a Dependent Variable: FDI decision R square : **0.540** F value : 27.403 (sig : .000)								

As shown in <Table IV.12>, the impact of internalization strategy on FDI shows a negative effect unlike the hypothesis, (H 3.1) since Korean firms in India may not have strong internalization advantages as such, respectively. The impact of band wagon strategy on FDI also shows a negative effect unlike the hypothesis, (H 3.2) since prior occupation of the market is regarded as one of the important success strategies for Korean firms in India as stated in <Table IV.3>.

(iv) The results of stepwise multiple regression concerning main three factors.

I have performed stepwise multiple regression again with regard to three factors which include only variables which are found to be statistically significant in first multiple regression.

The results are mentioned below.

(H 1) Firm specific factors may provide a significant explanation for FDI in India. (rejected)

(H 2) Location specific factors may provide a significant explanation for FDI in India. (accepted significantly)

(H 3) Strategic specific factors may provide a significant explanation for FDI in India. (accepted significantly)

The regression formula for the result is $FDI = \alpha + \beta_1 X_1 + \beta_2 X_2$ (α = 1.065, β_1 = 0.436, X_1 = Location specific factors, β_2 = 0.242, X_2 = Strategic factors)

The test results to identify main determinants show that the most significant determinant is location specific factor and next is strategic factor as stated in <Table IV.13>.

<Table IV.13> The Results of Regression Related to Major Three Factors(IV)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.130	.361		3.133	.002		
	location factor	.644	.095	.624	6.773	.000	1.000	1.000
2	(Constant)	1.065	.344		3.094	.003		
	location factor	**.436**	.116	.422	3.773	**.000**	.614	1.628
	strategic factor	**.242**	.084	.325	2.900	**.005**	.614	1.628
a Dependent Variable: FDI dicision R square ; **0.454** F value : 29.499 (sig ; .000)								

(v) The results of T test related to Hypothesis 4

(H 4) There will be a difference in determinants between big sized-companies and medium & small sized-companies in main determinants. (rejected)

As explained in <Table IV.14>, there is no significant difference between big sized-firms and medium & small sized-firms in main determinants because most of medium & small sized-firms in India do have relationship with big sized-firms as supply vendors so the determining points of their investment are almost same as those of big sized-firms.

<Table IV.14> The Results of T-Test

	big&mid	N	Mean	Std. Deviation	Std. Error Mean
firm factor	1(big)	43	3.3915	.46131	.07035
	2(mid)	31	3.3172	.37848	.06798

location factor	1(big)	43	3.7907	.51769	.07895
	2(mid)	31	3.7129	.48287	.08673
strategy factor	1(big)	43	3.5426	.70156	.10699
	2(mid)	31	3.4409	.69061	.12404

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	Mean Difference	Std. Error Difference
firm factor	Equal variances assumed	.550	.461	**.735**	**72**	**.465**	.07427	.10102
	Equal variances not assumed			.759	70.725	.450	.07427	.09783
location factor	Equal variances assumed	.020	.887	**.656**	**72**	**.514**	.07779	.11863
	Equal variances not assumed			.663	67.307	.509	.07779	.11728
strategy factor	Equal variances assumed	.002	.968	**.620**	**72**	**.537**	.10178	.16423
	Equal variances not assumed			.621	65.391	.537	.10178	.16380

V. Conclusion

As pointed out earlier, India must become one of the most important markets for Korean companies, followed by Chinese market. In terms of total accumulated actual FDI inflow as of 2004, Korea has become the 8th largest investing country in India amounting to 680 mil. U$. Korean companies' export amounts for Indian market have been sharply increased recently. Which factors can attract Korean companies to invest in India ? What will be the lessons for Korean companies which are willing to invest in India, in the near future ? What will be the recommendations for Indian governments to attract more and more Korean firms ?

The objective of this study is to find out those answers including main determinants of FDI in India by Korean firms. The framework for analysis is based on the eclectic theory as well as oligopolistic, portfolio diversification and strategical theories, using the variables which were suggested in the previous various empirical studies. The results of empirical analysis indicate that location specific factors which are comprised of Indian market attractiveness such as market size and potentials and cheaper production factors are primary determinants which affect FDI. The strategic factors which contain diversification strategy are suggested as secondary factors. In terms of firm specific factors, they are found to be insignificant, statistically. As the summary, as far as the determinants of FDI in India by Korean firms are concerned, Indian market potentials(or attractiveness) and production factors as locational factors are found to be the most important determinants of FDI in India. However, statistically, other factors such as technology advantage, managements' capability, firm size and marketing abilities as firm specific factors and Indian government policies, cultural & political environments, infrastructure and country risk as locational factors and internalization strategy, band wagon strategy as strategic factors which are expected to

become the determinants of FDI in India, are not significant factors. Since the result of T-test, it is also found out that there is no difference of determinants between big-sized companies and medium & small-sized companies because, especially in India, around 70% of medium & small sized Korean firms which have come to India have special relationship with big-sized companies like LG EIL, Hyundai Motor India and Samsung EIL as supply vendors. Suppose these medium & small-sized Korean firms make business directly with local Indian firms, the results of T-test may be changed. At the same time, it is turned out that the main successful points which most of Korean companies in India think are discovered to be localization policy, sophisticated intra control systems, establishment based on single ownership and prior occupation of the Indian market.

As the result, it is recommended that Korean companies which are willing to invest in India and succeed in the business, (i) should analyze locational factors such as market size and production cost which are related to the industry which they are involved in. (ii) should invest in India as a diversification strategy. If the sector for investment is very promising, (iii) they should establish their own Indian limited companies based on single & direct ownership. (iv) should equip with all the necessary arrangements like complete intra control system and localization policy. In view of Indian governments, they should try to maintain current economic growth rate and increase GDP so that Korean companies can feel that Indian market is really attractive to invest more and more. To the best of my knowledge, this study is the first empirical research with a distinctive research design to examine the determinants of FDI in India by Korean firms and provide them with strategical implication and recommendation on the important factors which are related to invest in India. For Indian government, this study can also give some ideas to attract more investment. But, in spite of this contribution, the limitations of this study and the ideas on future study are stated below. (i) There is

no demarcation between actual investing companies and liaison or project office in evaluating the determinants, empirically, although the determinants can be differed depending upon mode of establishment, because there are still limited number of Korean companies operating in India. (ii) Time series analysis can be suggested later on after the history of investment in India by Korean firms has been accumulated more and more. (iii) The comparative analysis on the determinants of FDI between Korean firms and Japanese or American firms may be recommended in the near future.

(iv) Endeavor to verify the differences of the determinants in FDI between manufacturing and service firms will be required as one of future studies if the number of Korean firms in India is much increased in the near future.

Finally, I'm very proud of several success stories of Korean firms like LG EIL, Hyundai motors India and Samsung EIL and I hope this study can contribute to making more number of successful cases of Korean firms in India.

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ABSTRACT

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The objective of this study is to find out the below mentioned answers including main determinants of FDI in India by Korean firms. Which factors can attract Korean companies to invest in India ? What will be the lessons for Korean companies which are willing to invest in India, in the near future ? What will be the recommendations for Indian governments to attract more and more Korean firms ?

In summary, it is clear that Indian market potentials(or attractiveness) and production factors as locational factors are found to be the most important determinants of FDI in India.

Key Words : investment, determinants, India