CHAPTER 6
Determinants of Foreign Direct Investment in Developing Countries

As has been mentioned elsewhere also, foreign direct investment (FDI) has registered a significant growth over the past 3 decades. According to one estimate, the global stock of FDI increased from $ 67.7 billion in 1960 to $ 713.5 billion in 1988\(^1\). Whereas during the early 60s the United States and the United Kingdom were by far the main source of FDI, the entry of other European and the Japanese firms into this field has since then considerably increased the international competition for overseas investment opportunities. The growth of FDI has, however, been excelled by the plethora of literature specially on the determinants of these investments. An attempt will be made in this chapter to survey this literature which will be followed by an empirical estimation of the politico-economic model of the determinants of FDI in a developing economy like India. Accordingly, this chapter is divided into five sections. Section 1 presents a number of competing theories of foreign direct investment which explain FDI in an economy. Section 2 gives a brief review of literature on the determinants of FDI in the developing countries. Section 3 deals with the politico-economic model of the determinants of FDI in India. Section 4 is
devoted to the empirical estimation of the aforesaid politico-economic model for Indian economy. And finally, Section 5 contains the concluding remarks.

1. Theories of Foreign Direct Investment

The theories of FDI have mainly been developed to explain the source of evolution of foreign direct investment. Attempts have been made to investigate the fundamental determinants of multinational investment abroad. Since the main participants in such investments are the home countries from where these investments originate and host countries to whom they are directed, a complete theory should embrace the elements of both. Undoubtedly, the basic factors which motivate a firm to look for investment opportunities abroad are significant, attracting factors on the part of host countries which determine the national territory and location where investment has to be undertaken, are no less important, for, the economic environment, the stage of development and the negotiating power of the host country, all affect the inflow of FDI. In this light, we will examine the following theories:

   (1) Differential Rate of Return Theory

According to this theory, FDI is a function of international difference in rates of return on capital investment. The FDI tends to flow out of countries with
low returns to those expected to yield higher returns per unit of capital. This theory is derived from the traditional theory of investment which assumes that the objective of a firm is to maximize profits by following the marginalist principle of equating the expected marginal return with marginal cost of capital. This theory gained a good deal of popularity in the fifties when the American FDI increased very rapidly, especially in Western Europe where the profits earned by American firms were considerably higher than those accruing in the U.S.A. Later in the sixties it faced a setback when the relation between the profit rates between Western Europe and the U.S.A. turned in the opposite direction but the growth of American FDI continued.

This theory suffers from a number of weaknesses: First, it is faced with serious statistical problems. The underlying hypothesis of the theory is that the FDI is a function of "expected profits" but the available statistics are on "reported profits". Reported profits need not necessarily be the same as actual profits earned by the subsidiaries, mainly because their purchases and sales to the parent company or other subsidiaries are subject to transfer pricing, which is likely to be influenced by efforts to minimize the tax burden for the company as a whole, to avoid the onus of exchange restrictions and the demand of trade unions for wages and other benefits higher than
those which may appear to be justified by the general economic conditions of the host countries. Although it is very difficult, if not impossible, to get systematic evidence on the divergence of reported profits from the actual profits of the subsidiaries, yet the evidence, whatever available, tends to support the view that reported profits do not reflect accurately the actual profits. Moreover, the theory refers to the profits during the whole period of investment whereas the reported profits are related to the shorter time period, generally a year, and that too, to a group of investments of different vintages. Second, it is doubtful that investors, especially the MNCs, always aim at maximising profits. Even if they do, their strategy need not necessarily be to earn higher profits on FDI than on domestic investment. An investor may, for example, accept a lower rate of profit on a particular FDI in order to achieve higher economies of scale in the domestic market. There may be, at least in the short run, many reasons other than that of profit maximisation by firms investing abroad, e.g. to create barriers to entry of new competitors or as a reaction to the competitors move in a foreign country. As far as the profit maximisation objective in general is concerned, it has been a very controversial issue even in the theory of domestic investment, where it has received more attention than in the literature on FDI. The major challenge to it has come
from managerial and behavioural schools of thoughts and the views of Berle and Means\textsuperscript{2}, Clark\textsuperscript{3}, Baumol\textsuperscript{4}, Marris\textsuperscript{5}, Galbraith\textsuperscript{6} and Cyert and March\textsuperscript{7} are quite well-known in this regard.

(2) Portfolio Choice Theory

This theory assumes the FDI as closely analogous to that of an individual investor choosing a portfolio of risky assets. The individual usually invests in financial assets, such as Government bonds, equities, and industrial debentures, whereas the firm tends to invest in real assets, such as different types of plant and equipment or plants in the different locations. The principle underlying the choice of asset are alleged to be the same in both cases.

The portfolio choice theory postulates that investors consider not only the rate of return but also risks in selecting their portfolios, and investment is a positive function of the former and a negative function of the latter. Although this theory is to be found in the works of authors on International Capital Movement in the thirties, its theoretical formulation was done by Tobin\textsuperscript{8} and Markowitz\textsuperscript{9}. Their theory of Portfolio Choice is based on the observation that although security returns within a country move in unison over time, they are not perfectly correlated. Accordingly, diversification of portfolio may help to reduce the total risk involved.
The theory is not free from flaws as it concentrates only on one determinant of FDI. The basic objections raised against the theory are briefly summed up as follows: First, the theory fails to explain why the MNCs are the greatest contributors to FDI and why they prefer direct investments to portfolio investments, which could eventually provide a better instrument of geographical and sectoral diversification of their portfolios. Second, the theory does not explain the differences in the propensities to invest abroad of industries. Some industries are more internationally oriented than others and these differences cannot be explained in terms of risks and returns alone. Third, the statistical tests of the theory have met failure in establishing the expected findings, as actual (ex ante) rates of return diverge from estimated (ex post) rates of return. The estimate of risk in the theory is based on the variance of rates of return. Thus, the risk variable also cannot be measured very reliably.

(3) The Hymer-Kindleberger theory

This theory was propounded by Hymer. Kindleberger refined and publicized Hymer's idea. They argued that in establishing and operating production plants in a country, foreign firm necessarily has some disadvantages compared with local firm. Firstly, the local firm has a
knowledge of consumer tastes, the legal and institutional framework of business and local business customs which the foreign firm can acquire only at a cost. Secondly, the foreign firm has to incur costs of operating at a distance, costs not only of travel, communication and time lost in communicating information and decisions, but also costs of misunderstandings that lead to errors. According to this theory, if in spite of that foreign firms do invest directly in that particularly country, they must possess some advantages to which the existing or potential local competitors have no access and which more than compensate the foreign firms for the costs of disadvantages faced by them in that country. These advantages should enable the firms not only to earn more than at home but also to earn more than local firms of the host country. Kindleberger lists a number of potential advantages which include cheaper sources of financing, brand name, patented or non-marketable technology, marketing skills or special access to market, Government restrictions on output or entry and economies of scale. In order to enable a firm to undertake FDI, these advantages have to be firm specific and transferable to the subsidiaries.

The theory, however, suffers from following limitations: Firstly, in the theory the comparative advantages of a firm are taken as given. The theory fails to explain how these advantages are generated. They appear in the theory
as windfall gains, or "Manna from Heaven". In other words, the theory altogether ignores the costs of acquisition of the advantages of a firm. Secondly, the presence of any one or more of the market imperfections or oligopolistic advantages is a necessary but not sufficient condition for foreign operation of a firm. A firm may have these advantages and yet serve the foreign markets with exports, or by licensing, renting or selling the technical, managerial or marketing skills rather than with FDI.

(4) Behavioural Theory

This theory was put forward by Aharoni. Drawing on the behavioural theory of the firm by Cyert and March (1963), he outlined 3 factors of fundamental importance in initial investment decision - uncertainty, information and commitment. The managers of a firm tend to overestimate the risk and uncertainty involved in foreign investments. Therefore, there has to be some initial force or forces which motivate the management to consider the possibility of investing abroad. The initiating forces may be internal, such as a strong interest of one or several high-ranking executives inside the firm, or external, such as proposals from foreign Government, distributors of the company's products and clients, or fear of losing a market, or the band wagon effect or strong competition from abroad in the home market. Once the possibility of investment abroad is considered by the management, it may
lead to search for information, depending upon the strength and frequency of initial forces. During this process of information collection, one or more members of the search team become personally interested in the realisation of the project because of the time and effort which they have already devoted to it. The decision to invest abroad (FDI) depends upon their commitment and persuasive skill in removing the natural pessimism of top management. Aharoni believes that the goals followed by different persons or agencies involved in the decision making process are likely to be quite conflicting and far from the traditional assumption of profit maximisation. Aharoni's behavioural theory is interesting as it throws light on the process of foreign investment decisions. However, the theory and the generalisations thereof are based on the interviews of a limited number of new firms not quite representatives of the population of US firms with longer history of FDI.

(5) Product Cycle Theory

This theory was given by Raymond Vernon\textsuperscript{14} which arrives at the conclusion that US firms develop new products at home and seek to exploit them in foreign markets. It also explains why new products are developed in certain countries. Thus, the approach largely concentrates on the behavioural pattern of US multinationals exploiting the
monopoly advantages of inventions as well as innovations. It has also received modest empirical support in case of US multinationals. In its original version, the theory distinguishes three main phases in the life cycle of a product. The first phase is concerned mainly with that determines the initial location of production. The second phase focuses on whether emerging foreign markets are serviced by export or by foreign investment, while the third phase concentrates on the competitiveness of foreign production vis-a-vis local firms.

The first phase of the cycle is the innovative new-product stage. Here the product is new and is produced by the innovating firm in its home market, i.e. the US, because of the greater need for efficient coordination between R & D and production units as well as the availability of the demand for it there. The second phase is that of the maturing product. This stage is characterised by the maturity and export of the product to European countries having the next higher level of incomes. Increase in demand and growing competition in these markets lead eventually to FDI of the innovator into these countries for local production of the product. The final phase is that of standardised product. This stage is marked by a complete standardisation of the product as well as its production techniques which is no longer an exclusive possession of its innovator. Price competition from other producers now forces him to invest in developing
countries to reap the benefits of cost advantages there especially labour costs.

There are two main objections to this theory: Firstly, although the theory looks dynamic, in the sense that it concerns evolution through time, it is in fact only programmatic. In other words, it predicts the sequence in which events occur, or the time-lags which separate them. It is therefore easily fitted to data by suitably adjusting the time periods associated with each phase of the cycle. Correspondingly, although it can be used to predict the future, yet it does tell us how soon the predicted event will occur. Secondly, the theory considers each of the three decisions - how much to invest in product development, how to service a foreign market, and how to compete with overseas firms - as quite separate decisions made at different stages of the cycle. But a rational investor cannot isolate the three decisions in this simplistic way. These decisions are all interdependent, so that a rational investor must consider them all simultaneously. Thus, the programmatic decision process of the theory is a considerable oversimplification of the problems facing the international firm.

(6) Oligopolistic Reactions Theory

This theory, propounded by KnickerBocker\textsuperscript{15}, hypothesizes that FDI is a result of oligopolistic reaction, i.e.
reaction to competitors investments. According to him, the optimal strategy for firms in an oligopolistic industry is to match their rivals move for move. Once one firm invests in a particular region the optimal strategy for the other firms is to follow the latter even if this does not benefit the follower, but simply spoils the market for the latter. Knickerbocker's theory implies that the initial investment of foreign enterprises in a given market will tend to be "bunched" in time, and, that this bunching will tend to be greater the more oligopolistic the industry. In order to test his theory, Knickerbocker takes data on the manufacturing FDI of 187 American MNCs and constructs an entry concentration index (ECI), which is used as an index of oligopolistic performance. He compares his ECI with the US industrial concentration index and finds a significant positive correlation between the two indices, from which he concludes that increased industrial concentration cause increased oligopolistic reaction in the field of FDI except at very high levels, where the oligopolistic structure is very stable and the firms are able to avoid the over-crowding of the host country market. He also finds that profitability of FDI is positively correlated to entry concentration and that the latter is negatively correlated to product diversity.

The theory has the following limitations: Firstly, the conclusion of the theory that FDI is a function of oligopolistic reaction is self-limiting since the initial
(US) FDI and the responding (European and Canadian) FDI tend to reduce the industrial concentration in the respective host countries. The recent experience also confirms that with increasing FDI from Japan, Germany and other countries, international competition has increased in many industries. According to this theory, this competition should lead to a decrease in total flow of FDI, which, however, is not the case. Thus, the value of the theory for future prediction is very limited. Secondly, the theory is only a partial explanation of FDI since it does not explain why the leading investor sets the ball rolling. Thirdly, the theory does not account for FDI of firms having a wide dispersion of their investments.

(7) Currency Area Theory

This theory was propounded by Aliber.\textsuperscript{16} It explains the pattern of FDI in terms of the existence of different currency areas. Some of the currencies are harder when compared with others at a point of time and the market is subject to a bias in evaluating the currency premium on weaker currencies. According to the theory, portfolio investors tend to ignore the exchange risk on the foreign earnings of a firm. As a result the firms from harder currency areas are able to borrow at lower costs and capitalise the earnings on their FDI in softer currency areas at higher rates than local firms. The higher the
share of capital in value added and the size of premium on local currency, the greater the comparative advantage which the foreign investors would enjoy over local firms.

Aliber's theory explains both the existence and direction of FDI between currency areas, more particularly US FDI during the fifties and sixties into Europe, but is unable to explain anything about capital flows within currency areas, e.g. the investment of US firms within the dollar area. Nor can it account for cross investments between currency areas - the fact that US firms invest in Europe at the same time as European firms invest in the US.

\(8\) Internalisation Theory

This theory is associated with Buckley and Casson. They believe that the markets for key intermediate products such as human capital, knowledge, marketing and management expertise are imperfect, therefore, linking different activities through these markets involves significant time lags and transaction costs. As a result, the firms are encouraged to replace these external markets by their own internal markets for these products. The internalisation of markets across national frontiers leads to FDI, and this process continues till the benefits and costs of further internalisation are equalised at the margin. Benefits include avoidance of time lags, bargaining and
buyer uncertainty, minimisation of the impact of Government intervention through transfer pricing and the ability to use discriminatory prices. Cost of internalisation arise, e.g. from administrative and communication expenses.

The approach of Buckley and Casson is valuable as it stresses the need for a systematic general theory of FDI and multinational enterprise. However, the theoretical framework developed by them does not apply in the short turn and especially to FDI by smaller firms operating in one or two foreign countries. The statistical tests conducted by them under very simplifying assumption lead to the conclusion that the process of internalisation in concentrated in industries with relatively high incidence of R & D expenditure, a conclusion reached in many other studies.

(9) Eclectic Theory

This theory has been recently developed by Dunning. His eclectic theory of international direct investment is based on the theories of industrial organisation, of location and of the firm. According to Dunning, FDI is a function of ownership, internalisation and locational advantages. He puts these variables in the form of three conditions which a firm has to satisfy in order to undertake a particular FDI. First, it must possess exclusively some comparative (ownership-specific)
advantages over other firms in the host country, e.g. proprietary technology, patented trade marks, managerial or marketing know-how, control on market entry, etc., and these advantages must outweigh the firm's disadvantages in operating in a foreign environment. Second, the benefit of internalising the above advantages through FDI must be viewed by the firm to be greater than any other means of their exploitation, e.g. licensing or outright sale of a patent. Third, the host country must have some locational advantages over the home country of the firm, e.g. lower wage costs, cheap raw materials, investment incentives, etc.

Dunning's eclectic approach is a promising step towards the development of a general theory of FDI. However, more efforts are needed to transform it into an operational model.

To conclude, none of the above theories is able to explain all kinds of FDI. Therefore, there is a need for a kind of general theory which is able to integrate the existing relevant knowledge on the determinants of FDI.

2. A brief Review of Literature

In this section we shall discuss the major contributions explaining the FDI. In order to familiarise ourselves with the main line of empirical research, we select some prominent studies.
One of the most important studies about the determinants of FDI is by Green. The main focus of his study is whether political instability has a deterrent effect as claimed by Basi and Aharoni, who found in several surveys that executives report political instability to be the most important variable influencing their foreign investment decisions apart from market potential. Green finds that the allocation of United States FDI is not affected by political instability in the host countries. However, the study and the strong conclusions of Green are doubtful as he does not consider the simultaneous influence of a whole set of political and economic determinants, but rather works with simple correlations controlling only for differences in per capita income of the host countries.

Dunning while studying the determinants of FDI laid stress on economic factors. On the basis of surveys among entrepreneurs engaged in international production, he distinguishes three sets of influences on FDI: (i) market factors, such as size and growth of markets measured by the GNP of the host country; (ii) cost factors such as the availability of labour, low labour costs and inflation; (iii) the investment climate, as measured by the degree of foreign indebtedness and the state of the balance of payments. It is here that the political factor enters. The investment climate is considered partly to depend on
Kraska and Taira\textsuperscript{23} in their cross-section study of 13 Latin American countries for the period 1950-68, attempt to explain FDI with the help of four economic variables, namely economic growth (GDP growth rate), foreign aid, gross domestic capital formation and labor force increase. In other words, FDI is a function of the above four variables, i.e.

\[ \text{FDI} = f(\text{economic growth, foreign aid, gross domestic capital formation, labor force increase}) \]

where FDI is measured as percentage of GDP, economic growth is the rate of growth of GDP at constant prices, gross domestic capital formation as percentage of GDP, labor force increase is the annual rate of growth of the labor force.

The reason why economic growth enters into the explanation of FDI is that foreign enterprises, which make investments in an economy, are concerned about the profits they can make from such investments. The indicator of the easiest access would be the rate of growth in various countries, because economic growth suggests how fast the markets for goods and services are expanding. It is also an indicator of good development potential in the future.
Foreign aid is another factor on which FDI depends. Although politically determined and not quite susceptible to economic explanation, yet the firms investing in another country might consider their respective host country's ability to obtain aid as an indicator of safety and trust which they might enjoy in the host country. In other words, the aid receiving country probably meets the criteria of "good behaviour" by the standards of the country where the investing firms are based.

The statistical results show that economic growth alone explains more than 40% of the inter-country differences in the hosting of FDI in Latin America. Of the other variables that can be combined with economic growth to explain FDI, only one, namely, foreign aid, is found to be statistically significant. Economic growth and foreign aid explain nearly 70% of the inter-country differences in FDI. In terms of economic reasoning of the investing firms, it seems natural that they should invest in growing countries, but it somehow eludes the economic rationale that they should be found investing in countries which are receiving more foreign aid, even though these are not fast-growing countries. The results also suggest that FDI does not respond to the rate of domestic capital formation or increase in labour force.

Another study concentrating on the influence of political instability has been undertaken by Thunell. He tests the
hypothesis that investments in a country decrease when it is unstable and increase when it is stable. He finds that (i) political events and instability therewith are not directly associated with short term fluctuations, but only with trend changes in foreign investment flows; (ii) the relationship is asymmetric, i.e. the investing firms do not react in the same way when a country becomes more stable as when it becomes more unstable. While a large number of statistical tests are made, Thunnel is not able to develop a regression equation in which a variety of economic and political determinants are simultaneously included, and can be controlled for when the effect of political instability is tested.

Levis\textsuperscript{25} in his study of FDI in developing countries, tests two hypotheses, that (i) economic considerations are the prime determinants of FDI; and (ii) political variables are of secondary importance. The political variables include political instability, a political competition index and the relations with COMECON countries. The model is tested by a stepwise regression for 25 developing countries from 3 continents - Africa, Asia and Latin America - and for the period 1965-67. The results show that economic variables are more important than the political ones: quality of life (GNP per capita), the balance of payments, government capabilities (as measured by the share of taxes and by social services
in GNP) and economic conditions are the prime determinants of FDI flows. The economic condition factor, measured by the per capita energy consumption, investment and export shares, GNP growth and inflation has, however, a theoretically opposite sign, because the estimate suggests an improvement of economic conditions in the host country reduces FDI inflow. Only one political variable, the index of political competition, is statistically significant. These five factors (four economic and one political) together account for 55% of the variance.

Root and Ahmed²⁶ empirically analyse the determinants of non-extractive FDI flows for 70 developing countries over the period 1966-70 with the help of discriminant analysis. They test whether 16 economic, 5 social (degree of education, size of the middle class, degree of modernisation of outlook, strength of labour movement, extent of urbanisation), 7 political (frequency of government change, number of internal armed attacks, degree of administrative efficiency, degree of nationalism, per capita foreign aid, colonial affiliation and role of government in economy) variables have a significant effect. As compared to other studies on the subject, these two authors include a variety of political variables into their analysis, though their main emphasis is on the economic factors. The statistical results suggest that among the six variables which were selected as essential discriminators at the 5% level of
significance, four are economic (per capita GDP, GDP growth rate, economic integration, importance of commerce, transport and communication), one social (degree of urbanisation) and one political (the number of constitutional changes in government leadership over the period 1956-67).

Agarwal\textsuperscript{27} while classifying the determinants of FDI, mentions two political factors, political stability and the threat of nationalization, along with a number of economic factors such as investment incentives, size and growth of host country's market, degree of economic development (e.g. infrastructure), market distance and economic stability in terms of inflation, growth and balance of payments. In his extensive survey of literature on determinants of FDI, he finds mixed evidence with respect to the impact of political instability.

Dunning\textsuperscript{28} in a recent study, develops an eclectic theory of international direct investment based on the theories of industrial organisation, of location and of the firm. The general proposition is that a country's enterprises are likely to engage in FDI abroad:

(i) the more ownership-specific advantages, relative to enterprises of other nationalities, are possessed; (ii) the greater the incentive the firms have to internalize rather than externalize these specific advantages; (iii) the more the enterprises are interested in exploiting
these advantages from foreign location.

A theory of a cycle of outward investment flows comprising of four stages is developed, with the purpose of explaining how these three factors depend on the level of economic development and on the structural conditions (e.g. the extent of industrialization) of the countries. For the purpose of formal statistical testing for the period 1967-78, the 67 countries are divided into three groups by cluster analysis, the dominant influence being the GNP per capita. The group of countries are then subjected to a stepwise multiple regression analysis in order to determine the most important organization internalization and location variables for outward, inward and net outward investment flows. The organization variables consist of human capital (measured by skill levels) and of expenditure on R & D; the internalization variables consist of the royalties and other fees received by local enterprises from unaffiliated firms as a percent of such fees received from foreign affiliated and unaffiliated firms; the location variables consist of the average hourly earnings, the growth of output, an infrastructural index, tax burden and the Business Environmental Risk Index (BERI), which is composed of various sub-indices such as political stability (weight 12%), attitude to foreign investors and profits (weight 6%) and quality of bureaucracy (weight 4%). The
statistical results are difficult to summarize. No clear structure emerge because different variables have a statistically significant effect, depending on the country cluster and the direction of the FDI flow. While the locational factors are statistically significant in many cases, the Environmental Risk Index, which also captures political risk, never is. Dunning's statistical analysis thus suggests that the FDI flows are influenced by economic rather than political factors.

Thus, the various studies dealt with in our brief review try to capture the influence of economics and politics on FDI by specifying appropriate variables. Another possibility is to introduce the investment climate in a host country by using the country risk indicators which have been developed by various institutions. The reference has already been made to the Business Environment Risk Index (BERI). Others are the World Political Risk Forecast (WPRF), the Political System Stability Index (PSSI) or the Institutional Investors Credit Rating Index (IICRI). If we relate these risk indicators directly to FDI flows, we need not introduce additional economic or political factors because the risk indicators are supposed to take care of them adequately. However, none of the studies mentioned in our review, except Dunning (1981), made use of these indices. Dunning (1981) used BERI Environmental Risk Index in his analysis but did not get any significant results. This may be due
to the fact that he simultaneously included many other economic and political factors in the regression analysis to capture similar influences on FDI behaviour.

From a brief review of some of the important contributions to the empirical analysis of FDI, no clear picture emerges as to what factors are the main determinants. More particularly, it is not known what role the economic factors, and what role the political factors play. The unsatisfactory state of research pertains both to matters of content and statistical procedures. With respect to content, the studies show a very large variance of economic and especially political factors which are introduced as prospective determinants. The studies hardly give any satisfactory reasons based on theoretical notions of why they include a particular variable and why another one is excluded. The statistical procedures used in the studies on the determinants of FDI are also not satisfactory. They are in many cases unnecessarily complicated and difficult to interpret. We, therefore, conclude that the existing state of research shows serious conceptual and statistical weaknesses. We try to overcome these deficiencies by (i) formulating testable hypotheses on the basis of existing theories of FDI; (ii) testing them by multiple regression technique; (iii) emphasizing the simultaneous influence of economic and political factors. In order to do this, we make use of
the politico-economic model fitted by Schneider and Frey, for the empirical analysis of the determinants of FDI in India for a 25-year period, from 1955-56 to 1979-80.

3. A Politico-economic model of Foreign Direct Investment

The decision of an enterprise in a developed country to invest directly in a developing country is motivated by a higher expected (future) profitability as compared to the alternative investment opportunities at home or in other advanced countries. Even if the present economic conditions seem conducive and suggest good prospects for the future, it is quite possible that they may not materialize due to unsatisfactory political conditions. It is, therefore, imperative to consider economic and political determinants of FDI simultaneously.

The model to be estimated is presented below.

\[
\text{FDI} = a_0 + a_1 G + a_2 \text{INF} + a_3 \text{BOP} + a_4 \text{WAGE} + a_5 \text{WCAID} + a_6 \text{POLINS} + u
\]

where, FDI = net foreign direct investment inflow as % of GNP; G = annual growth rate of GNP; INF = rate of inflation, measured as % change of GNP deflator; BOP = balance of current account as % of GNP; WAGE = wage cost per worker per year, measured in rupees at constant prices; WCAID = amount of aid coming from Western countries as % of GNP and POLINS = political instability, measured as number of riots in a year; u = stochastic error term.

Following economic theory, we test the following
hypotheses:

1) A high rate of growth of GNP is an indicator of good development potential in the future. This suggests a positive influence on FDI from abroad.

2) A high rate of inflation is a sign of internal economic tension and of the inability of a Government and the Central Bank to balance the budget and to restrict the money supply. As a rule, the higher the rate of inflation, the less are FDI decision makers inclined to engage in the country. A negative relationship is hypothesized.

3) This hypotheses relates to external economic condition of the host country. A large deficit in the balance of payments indicates that the country lives beyond its means. The danger increases that free capital movement will be restricted and that it will be more difficult to transfer the profits from the direct investments into the investing country. With a deficit in the balance of payments being measured positively, and a surplus negatively, the testable hypotheses is that there is a negative effect on the inflow of FDI.

4) This economic hypothesis deals with the relative advantage the labour market offers compared to alternative investment opportunities. The lower the wage costs, the more profitable it is to directly invest in the country concerned. A negative relationship to FDI is hypothesized.
The two final hypotheses deal with political variables, the theory underlying the political determinants of FDI is less well developed. There is less consensus among researchers of what the relevant factors are. Here two testable hypotheses will be put forward.

5) Political instability may disrupt the economic process and affect in particular FDI. Internal political troubles may be projected outwards and create additional difficulties for foreign-owned firms including the threat of partial or total nationalization. It is hypothesized that increased political instability induces marginal decision makers to undertake less direct investment; a negative relationship is expected.

6) The final political hypothesis takes aid as an indicator of the closeness of relationships with the communist and with the Western bloc of countries. Neither of the blocs grant aid for purely altruistic reasons, evidence rather suggests that they do it to influence the host country's political position. The amount of aid may, therefore, be taken as an indicator of the host country's dependence on either the Communist or the Western bloc. A large amount of aid from Western Countries is conducive to more FDI. A positive relationship is hypothesized.
4. Empirical Estimation

The politico-economic model described above was econometrically tested by multiple regression technique for the Indian economy for which data were available from 1955-56 to 1979-80. The table 6.1 shows the result.

Table 6.1: Empirical Estimation of Politico-economic Model of Determinants of FDI in India

<table>
<thead>
<tr>
<th>Term</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI</td>
<td>0.317*</td>
<td>0.00062</td>
<td>2.317</td>
</tr>
<tr>
<td>G</td>
<td>0.0013</td>
<td>0.435</td>
<td>0.479</td>
</tr>
<tr>
<td>INF</td>
<td>-0.0533*</td>
<td>0.179</td>
<td>0.435</td>
</tr>
<tr>
<td>BOP</td>
<td>0.0434*</td>
<td>0.0000039</td>
<td>2.509</td>
</tr>
<tr>
<td>WCAID</td>
<td>-0.000039</td>
<td>0.0000025*</td>
<td>3.316</td>
</tr>
<tr>
<td>WAGE</td>
<td>-0.0000025</td>
<td>0.478</td>
<td>0.478</td>
</tr>
<tr>
<td>POLINS</td>
<td>1.749</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R² = .65, R² = .54, d = 1.749

Note: t-ratios are shown in parentheses below the coefficients.
* shows the significance at 5% level.

Our results show that the model explains about 65% of the variance. Only half of the coefficients of the model are statistically significant at 5% level of significance. All the coefficients except the growth rate of GNP and the rate of inflation, have theoretically expected sign. The latter result supports the conclusion of Levis (1979) and might suggest that an improvement of economic conditions in the host country reduces the inflow of FDI.
5. Concluding Remarks

It may be concluded that the inflows of FDI in developing countries are determined simultaneously by economic and political factors. Our results for the Indian economy suggest that the most important economic determinant is the balance of payments. The lower the balance of payments deficit, the more the inflow of FDI. The less important economic influence is the wage costs, reducing the inflow of FDI. Among the political determinants, the relevant variable is political instability, which significantly reduces the inflow of FDI. Another significant political determinant is the amount of bilateral aid coming from western countries, which has shown a strong stimulating effect on FDI.

However, a second set of factors determining FDI lies in the policies and attitudes of the host country with respect to foreign investment. We have not included any of these policy variables in our model. This is due to the fact that the Indian Government has, since independence, followed a restrictive foreign investment policy. It is only very recently, more particularly, since mid-80s that it has liberalized its policy regarding foreign investment.
Notes and References


19. Green, Robert T., Political Instability as a Determinant of U.S. Foreign Investment (Bureau of Business Research), Graduate School of Business, University of Texas at Austin, 1972.


21. See Aharoni, Yair (1966) op. cit.


31. Two other variables, the GNP per capita, depicting a nation's economic health and the Literacy Rate, as a proxy for Skilled Labour Force, were dropped from the original model as they were found to be strongly correlated and negatively correlated with foreign direct investment variable.