Literatur

Determinants of Foreign Direct Investment: A Survey

By

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I. Introduction

Foreign direct investment (FDI) has registered an enormous growth over the past three decades. Whereas during the fifties and early sixties the United States and the United Kingdom were by far the biggest exporters of FDI, the entry of German and 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 growth of publications specially on the determinants of these investments. An attempt is made in this paper to survey this literature[1]. Attention is focused on the main currents of thought rather than on coverage of all the publications.[2]

This survey is selective also in the sense that the marxist and dependencia schools of thought are not covered here. There are two reasons for this. Firstly, the explanations offered by them for FDI are dominated by ideological argumentation and as such cannot be fruitfully compared with the explana-

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[1] Particularly interesting among the surveys already available are those by Dunning [1973], Stevens [1974] and Hufbauer [1975]. Stevens' survey is very useful for those interested in the heritage of the theories of FDI. Spitäller [1971] and Ragazzi [1973] have dealt with theories giving special importance to monetary aspects of FDI. Among the books containing a review of the literature, Buckley and Casson [1976] as well as Lall and Streeten [1977] are worth mentioning.

[2] Literature before the fifties is not reviewed here. FDI did not enter the domain of the writings of the classical economists. They were mainly concerned with the causes of trade between nations. The resulting theory of comparative costs assumed that factors of production like capital did not move internationally. The observation of productive capital moving from Great Britain into mining, plantations and even into some of the related manufacturing activities in other countries was for them, if anything, only embarassing. They tended to treat it at par with events like crop failures [Nurkse, 1966] or at best

tions based on conventional economic thinking and tools of analysis. Secondly, both of them, especially the dependencia approach, are relatively more concerned with the consequences of FDI which do not constitute the subject matter of this survey.

Since there is not one but a number of competing theories with varying degrees of power to explain FDI they are treated in this survey as hypotheses. In order to facilitate the discussion these hypotheses are classified in four groups. Those hypotheses which assume full or nearly full competition on factor and/or product markets are included in the first group. The second group is constituted by the hypotheses which take market imperfections for granted and assume that the firms investing in foreign countries have one or more comparative advantages over their rivals in the host countries. The third group includes some selected hypotheses on the propensities of countries, industries or firms to undertake FDI and the fourth on the propensities of countries to attract these investments. This classification may be somewhat arbitrary and is likely to prove controversial. But any other classification did not appear to be better for the purpose of this survey. The final section draws some conclusions on the present state of knowledge on the determinants of FDI.

II. Hypotheses Assuming Perfect Markets

In this section four hypotheses based on the assumption of perfect competition on national factor and/or product markets are covered. They are the differential rate of return hypothesis, the portfolio hypothesis, the output and market size hypotheses.

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ignored it with the argument that such investments were undertaken by the British in the British dominions and for British use and as such need not be distinguished from domestic investments. They further maintained that if factors of production moved between nations, the trade between them should be treated as domestic and not as international trade. The dropping of the factor immobility assumption in trade theory in the thirties did not lead to any significant theoretical or empirical discussion of FDI either. Analyses of capital movements in the writings of the then leading economists in this field like Ohlin [1933], Haberler [1933], Iversen [1935] and Nurkse [1935] continued to cluster around portfolio investments, in addition to reparation payments which attracted considerable attention of economists after the First World War. The inter-war period after the economic crisis of 1931 was marked by exchange controls, international financial crisis and the loss of mutual political confidence among the countries leading almost to a cessation of international capital movements [UN, 1949]. As Nurkse [1966, p. 121] put it, by the time Ohlin's book came out in 1933, the classical assumption of international immobility of productive factors had become a reality. Then came the Keynesian revolution, concentrating economists' attention on the "short run" rather than on the "long run" with which foreign direct investments are really associated. The immediate post-World War II period, no doubt, experienced an acceleration of international transfers of capital, but they were primarily composed of portfolio lending and governmental aid coming mostly from the U.S.A. for the reconstruction of Europe. It was in the fifties and sixties that FDI registered an enormous growth which attracted the interest of economists in research on the causes of these investments.

1. Differential Rate of Return Hypothesis

This hypothesis postulates that FDI is a function of international differences in rates of return on capital investment. FDI flows out of countries with low returns to those expected to yield higher returns per unit of capital. It is derived from the traditional theory of investment which assumes that the objective of a firm is to maximise profits by adopting the marginalist approach of equating the expected marginal return with marginal cost of capital. This hypothesis gained a strong popularity in the fifties when the American FDI increased very quickly, 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 [Hufbauer, 1975].

Attempts to test this hypothesis statistically have failed to produce conclusive results. Whereas a few studies have either partially or wholly supported it, many others could not find any association between the flow of FDI and international differences in returns on investment. Among the supporters of this hypothesis Popkin [1965], for example, found the relationship between the ratio of the firm's FDI to its domestic investment and the ratio of its foreign to domestic profits to be statistically significant. Stevens' [1969a] results supported the hypothesis for Latin America at a regional level but not for individual countries except in the case of Brazil. A simple regression analysis by Reuber *et al.* [1973] showed that U.S. manufacturing investment in Argentina, Brazil, Chile, India, Indonesia, Mexico and the Philippines (1956—1969) was positively correlated with the rate of return with one year time lag but this relation was statistically significant in only two cases at a 5 per cent level. However, on the basis of the interviews of firm executives he concluded that profitability is a fundamental determinant of investment when considered from the standpoint of the enterprise as a whole and defined in terms of the life-period of an investment and not in terms of yearly accounting profits emerging from company income statements. He could not find any quantitative estimate of the elasticity of FDI with respect to changes in profit or profit prospects. Blais [1975] demonstrated in the case of manufacturing FDI from the U.K. and Canada in the U.S.A. during the period 1950—1971 that the relative rates of return had a significant influence on the stock of FDI. Such an influence was visible with a time lag of two years on Canadian FDI and of only one year in the case of the U.K. When applied to investment flows his model performed better for the period 1950—1967 than for the entire period of 1950—1971, since the latter four years were marked by international monetary disturbances.

The results of the studies which could not find evidence in favour of the differential rate of return hypothesis are relatively more straightforward. Weintraub [1967] tested it on the U.S. data and could not discern any meaningful relation between the intercountry differences in the rates of return and the

flow of U.S. capital. A year later the statistical tests by Bandera and White [1968] on American investments in European countries (1953—1962) rejected the differential rate of return hypothesis, though they stressed that the adequacy of return is a precondition for the movement of capital. Bandera and Lucken [1972] tried to find out the connection between relative earnings and allocation of U.S. investments between EEC and EFTA but no such relation was supported by their econometric tests. Hufbauer [1975] compared the yearly difference between foreign and domestic rates of asset expansion with the difference between foreign and domestic rates of return for the period 1955 through 1970 and found no connection between the two series. Walia [1976] used different measures of profitability but he also did not find sufficient support for his hypothesis that the U.S. based firms undertake foreign direct investment in search of higher profits abroad.

The relation between international differences in returns on investment and the flow of FDI has, of course, been investigated also by most of the surveys conducted on motives and determinants of FDI[1]. But this approach has also in essence not furthered the cause of the differential rate of return hypothesis. Some of the surveys have included questions on profit motives in their questionnaires and received positive answers but not from all firms. For example, in the U.S. Department of Commerce Survey [1954] 28 per cent of the companies said that they expected higher profits abroad and 37 per cent said they did not expect higher profits in foreign countries. Other surveys have not even put such a question to the firms interviewed but have concluded that many of the other investment motives such as taking part in the expanding market are nothing but indirect expression or extensions of the profit motive. Business surveys usually include a number of questions on motives and determinants of FDI and fail to identify a quantifiable relation between them [Dunning, 1973].

Before passing a judgement on this hypothesis one must, however, consider that it is faced with serious statistical problems. Its underlying theory hypothesises that 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, primarily because their purchases and sales to the parent company or the other subsidiaries are subject to intra-company pricing, which is likely to be influenced by efforts to minimise 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 country. It is very difficult, if not impossible, to obtain systematic evidence on the divergence of reported profits from the actual profits of the subsidiaries. But whatever evidence has become available so far, it tends to support the impression that reported profits

[1] See U.S. Department of Commerce [1954]; Barlow and Wender [1955]; Robinson [1961]; Behrmann [1962]; Basi [1963]; Brash [1966]; Kolde [1968]; Deane [1970]; Forsyth [1972]; Jungnickel *et al.* [1974]; Baumann *et al.* [1977].

fail to reflect accurately the actual profits[1]. Efforts of customs and tax authorities in host and parent countries to force MNCs to eliminate the differences between market and intra-company prices appear to have achieved only a limited success. Difficulties are faced not only by the national authorities but sometimes also by the MNCs concerned in arriving at correct prices, especially if the goods involved are new having relatively high R&D costs. Further, the rate of return hypothesis refers to the profits during the whole period of an investment whereas the reported profits are related to a shorter time period, usually a year, and to a group of investments of different vintages. A satisfactory solution of the vintage problem in empirical tests of this hypothesis requires a vast amount of statistical information, which is not available at any level. Thus it is not surprising that a majority of the studies on this hypothesis have failed to discover a significant association between the international differences in profit rates and flows of FDI among the countries.

Moreover, it is doubtful that investors, especially MNCs, always try to maximise 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. As discussed later in Section III, there can be — at least in a short and medium run — many reasons other than of profit maximisation why firms invest abroad, e.g., to create barriers to entry of new competitors or as a reaction to a competitor's move in a foreign country. As far as the profit maximisation objective in general is concerned, it has proved to be very controversial even in the theory of domestic investment where it has received greater attention than in the literature on FDI. The major challenge to it has come from managerial and behavioural schools of thought. Berle and Means argued in 1932 that owners of firms do not control their managers. On account of this belief in the divorce of ownership and management in the modern form of industrial organisation it is thought that what is maximised is the utility function of the managers which need not coincide with profit maximisation. Clark [1940] introduced the concept of sales maximisation subject to a profit constraint. Baumol [1959] formalised this idea and applied it to oligopolistic market structure. He maintained that managers try to maximise sales revenue because their earnings are more closely related to sales, financial institutions are more willing to co-operate with firms having a relatively larger sales growth, growing sales enable managers to solve personnel problems more easily and because the goal of sales maximisation offers better prospects for steady profits and strengthening of competitive power. Marris [1964] incorporates financial

[1] See Polk *et al.* [1966]; Bhagwati [1967]; Keegan [1969]; Greene and Duerr [1970]; Horst [1971]; Tugendhat [1971]; Arpan [1972]; Canadian Government [1972]; Duerr [1972]; Musgrave [1972]; Lall [1973; 1979]; Monopolies Commission [1973]; Olivier [1973]; U.S. Tariff Commission [1973]; Vaitsos [1974a; 1974b]; Robbins and Stobaugh [1974]; Kopits [1976a; 1976b]; Adam and Whalley [1977]; Barrett [1977]; Booth and Jensen [1977]; UNCTAD [1978a; 1978b]; OECD [1979].

policies of a firm into its decision making process and concludes that managers try to seek a maximum balanced growth rate of both sales and capital assets. Thus in a state of equilibrium the utility functions of managers and shareholders are compatible. Galbraith [1967] has pleaded that the "technostructure" of modern industrial corporations tries to maximise sales subject to a profit constraint since earnings below a minimum level mean loss of autonomy for managers and autonomy is a prerequisite for the survival of the "technostructure." The behavioural theories of the firm [Simon, 1959; Cyert and March, 1963] have suggested that uncertainty, lack of enough accurate information, limitation of time and ability of managers and other such constraints force a firm, which is a coalition of groups like shareholders, managers and workers with conflicting interests, to seek satisfactory profits, etc., rather than attempt to maximise profits, sales or anything else. Thus it appears reasonable to conclude at this stage that MNCs are faced with a multiplicity of goals in their investment decisions for their worldwide operations and the rating of these goals is very likely to change from time to time depending on market conditions as well as actions and reactions of competitors. Managers do have some discretion to deviate from the profit maximisation objective. But this discretion is not unlimited. A minimum profit constraint does exist, although at times it may prove to be very difficult to draw a line between profit constraint and profit maximisation.

2. Portfolio Hypothesis

The portfolio hypothesis postulates that investors consider not only the rate of return but also the risk in selecting their portfolios, and investment is a positive function of the former and a negative function of the latter. Though this hypothesis is to be found in the works of earlier authors on international movement of capital in the thirties [Iversen, 1935], its theoretical formalisation was done by Tobin [1958] and Markowitz [1959]. Markowitz and Tobin's theory of portfolio selection is based on the observation that though 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. Since this correlation is likely to be much smaller or even non-existent between countries, this theory has been empirically tested in a number of studies related to international portfolio selection [Grubel, 1968; Lee, 1969; Miller and Whitman, 1970; Levy and Sarnat, 1970][1] whereas its application to FDI has not been as frequent. Among the few economists who have attempted to apply Markowitz-Tobin's theory to FDI are Stevens [1969b], Prachowny [1972], Cohen [1975] and Blais [1975][2].

[1] For a survey of the related literature see Spitäller [1971] and Rugman [1977].

[2] Rugman [1979] has applied portfolio hypothesis to total foreign operations of a firm defined as sales by overseas subsidiaries plus exports from the parent company. He demonstrated on the basis of the U.S. data that international diversification of foreign operations stabilises profits of a firm over time.

Stevens' empirical work was confined to Latin America. He did find empirical support for this theory so far as the aggregate direct investment was concerned. At country level where some support for portfolio hypothesis was discerned, the results proved to be inferior to those based on the output hypothesis, which will be discussed below. Prachowny seems to detect more empirical evidence in favour of this hypothesis in his attempt to explain FDI in the U.S.A. and American direct investment abroad. However, his choice of empirical proxies does not appear to be quite appropriate and the significance of the risk term as an explanatory variable of FDI appears to be questionable. Cohen's statistical results supported the hypothesis that large U.S. corporations with more extensive foreign manufacturing activities showed smaller fluctuations in global profits and sales in the sixties, but according to him this could also be an unintended result of corporate actions taken for other reasons. Blais [1975] has tested this hypothesis on the FDI of Canada and the U.K. in the manufacturing sector of the U.S.A. during the period 1950—1971 in the framework of a broader model, taking into account the effect of market size, output, general price level, wage rates and capital price index besides the effect of past rates of return on the investors' expected rate of return. He found that the relative risks showed a significant influence in the case of Canada but not in the case of the U.K. It seems impossible to find out how much of the intercountry differences in Blais' results are due to differences in the statistical specifications and how much are due to differences in investors' behaviour between Canada and the U.K.

On the whole the empirical evidence in favour of the portfolio hypothesis seems to be weak. Its main advantage, as Prachowny says, lies in its capability of being generalised, if generalisation is to be considered as an advantage. Further, this hypothesis offers a plausible explanation of cross investment between the countries and industries and does not depend on the assumption of certainty as does the differential rate of return hypothesis. What the portfolio hypothesis does not explain, however, is why MNCs are the greatest contributors to FDI and why they prefer direct investments to portfolio investments which could eventually provide a better instrument for geographical and sectoral diversification of their portfolios. Ragazzi [1973] has argued that the preference for FDI as opposed to portfolio investment is to be ascribed to the inefficiencies in security markets. Many of the less developed countries have, for example, no organised markets for securities, therefore capital flows in these countries can occur only in the form of FDI. Even European security markets are said to be inefficient in the sense that they are relatively small and have wider fluctuations than justified by the operating results of the companies, which tend to increase the risks of minority portfolio investors far above the industrial risks inherent in company operations. If FDI is a substitute for portfolio investment, as implied in Ragazzi's argument, then the subsidiaries of MNCs can be expected to be more diversified than their parents, but this is not the case [Hennart, 1977]. The portfolio hypothesis is also incapable of explaining the differences in the propensities of industries to invest abroad. Some industries are more internationally

oriented than others and these differences cannot be explained in terms of risks and returns alone [Hufbauer, 1975].

Moreover, the empirical tests of the portfolio hypothesis are beset with no less statistical difficulties than the rate of return hypothesis. According to the theory, the investment decisions are related to the trade-off between *ex ante* returns and risks, but the available statistics are *ex post*. The statistics on returns are unlikely to represent the actual returns reaped by firms for reasons stated earlier. The estimate of risk in this hypothesis is based on the variance of rates of returns. Thus the risk variable also cannot be measured very reliably. Notwithstanding, it is doubtful whether investors usually have enough data on the past rate of return on assets which they would like to hold and whether they rely on the future continuity of the past performances of companies involved. Nonetheless, it is obvious that risk constitutes a very important element in investment decisions; its incorporation in investment functions has, however, not yet made much progress.

3. Output and Market Size Hypotheses

These two hypotheses are practically two sides of the same coin. The output hypothesis is applied at the micro level and assumes a positive relationship between the FDI of a firm and its output (sales) in the host country. The market size hypothesis is applied at the macro level. FDI is considered here also to be a function of output or sales, but they are approximated by the size of the market — usually GDP or GNP — of the host country. The rationale of both of these hypotheses is provided by the domestic experience that firms increase their investment in response to their sales and that domestic investment of a country rises with its rising GDP. Theoretical models of output hypothesis are generally derived from the neoclassical domestic investment theories, the most popular of which is the Jorgenson's model [1963] which is a generalised form of the flexible accelerator model by Chenery [1952] and Koyck [1954][1]. The studies on the market size hypothesis are, however, *in most of the cases* not very explicit about the assumptions and the objective function of their theoretical models so that it is not possible to say that they have the same theoretical background as the studies on output hypothesis. Many of the studies on market size hypothesis are more concerned with establishing an association between FDI and the market size of the host countries than with the theoretical basis of this association. Thus it is impossible sometimes to determine in the case of a particular study whether it should be included in the group of hypotheses based on the assumption of perfect markets or not. Notwithstanding, it appeared to be correct to discuss the output and market hypotheses together in this group of hypotheses because of their common reasoning and heritage in general. Out of these two hypotheses, the former is more prestigious owing to its

[1] For surveys on domestic investment theories see Meyer and Kuh [1957], Simon [1959], Eisner and Strotz [1963], Jorgenson [1971] and Stevens [1974].

rigorous theoretical treatment, but the latter is the most popular of all hypotheses on FDI tested in the last two to three decades.

Among those who have attempted to apply a domestic investment model to FDI is Kwack [1972]. He applied Jorgenson's model to the U.S. quarterly data for FDI (1960III through 1967IV) and found that the flow of FDI depends on the value of foreign output of the U.S. non-financial corporations, the initial value of their FDI, the cash flow (net of dividends) and the U.S. rate of interest. Stevens [1969b] demonstrated a statistically significant relation between the flow of FDI from the U.S.A. into Argentina, Brazil and Venezuela and the sales of the U.S. companies in the manufacturing sector of these countries during 1957—1965. Bandera and White [1968] found a statistically significant correlation between the U.S. FDI in EEC countries and their incomes (GNP), and concluded that various motives given by the investors for their foreign investments in surveys [Behrman, 1962] can be adequately summarised as a desire to penetrate the growing market defined in terms of level and growth of GNP of host countries. Scaperlanda and Mauer [1969] examined the same hypothesis using the U.S. data on FDI in the EEC for the period 1952—1966 and came to the conclusion that market size hypothesis is supported statistically. Goldberg [1972] has, however, contradicted this result. He maintained that these investments can be explained not by the size of the EEC market but by the growth of the market. In a larger sample of developing countries than that of Stevens [1969b], Reuber *et al.* [1973] found that the flow of FDI (on per capita basis) into LDCs was correlated with their GDP but not with the growth of their GDP, a point emphasised by Bandera and White [1968] in relation to U.S. FDI in the EEC. Reuber *et al.* also tested the relationship between the flow of FDI and the change in GDP or value added in manufacturing industries with a time lag for a series of LDCs, but did not discern any conclusive results. The interview responses suggested that year-to-year outflow of investment was not linked to changes in sales or output. Takahashi [1975] constructed a neoclassical profit maximising model to explain short-run fluctuations in U.S. FDI which shows that the investor's optimal real capital stock rises or falls as the price level in the host country increases or decreases relative to that of the investing country. But this applies only to the locally oriented and not to the export-oriented FDI. The two crucial independent variables in his aggregate functions were the GNP of the host nation and the difference between the growth rates of the GNP of the host and investing countries. His regression estimates proved the former, as proxy for the market size, to be a significant determinant of U.S. FDI. But the dummy variable for the formation of the EEC was insignificant, a result consistent with Scaperlanda and Mauer's [1969] conclusion, but not with that of Schmitz and Bieri [1972]. Root and Ahmed [1979] have examined this question for developing countries. They found economic integration to be a significant discriminator of FDI. Schwartz [1976] distinguished between external and internal determinants of FDI; market size is included in the former and sales of the foreign subsidiaries of the U.S. companies in the latter. He found that in both the

EEC and the LAFTA investments were significantly related to sales, but with regard to market size hypothesis there were some differences between the two regions. Whereas the absolute size of the market of the host countries emerged as the primary external determinant of FDI in the case of the EEC, it was the growth of the market in the LAFTA which took the position of the most important external determinant of U.S. investments. Schwartz concluded that after an initial investment has been undertaken in a country on the basis of its size or growth, sales and profits of the affiliates are better determinants of further investments.

Other important studies bearing directly or indirectly on these two hypotheses are by Polk *et al.* [1966], Morley [1966], Moose [1968], Severn [1972], Stevens [1972], Ahmed [1975] and Sabirin [1977]. Size or growth of market as determinant of FDI is considered also in a number of survey studies[1]. What one can conclude from these studies, in spite of their differences with regard to the assumptions, data, methodology and specification of the variables, is that most of them have come out in support of the dependent relation of FDI to the output of the foreign subsidiaries and/or the market size of the host countries, and that this relation cannot be rejected outright. However, one has to be very careful in interpreting the significance of this relation for the following reasons.

First, both of these hypotheses are based more or less on the assumptions of the neoclassical theories of domestic investment which are surrounded with a good deal of unrealism. This is well known and need not be repeated here. Second, the size and growth of the markets of the host countries are likely to influence the FDI undertaken to produce goods for their domestic markets but not the FDI meant to produce for exports. But *most* of the studies on market size hypothesis fail to distinguish between various kinds of FDI at least for statistical reasons. Third, the growth of GDP and FDI are mutually related and the statistical association found between the two does not say much about the structural relationship between them [Reuber *et al.*, 1973]. Fourth, the output hypothesis should take into account only the investments which are incurred on plant and equipment in the host countries as is the case in the domestic investment theory. But the statistics on FDI also include sums involved in inventory as well as financial assets and it is not correct to equate these investments with plant and equipment expenditure. Fifth, output statistics used for testing the output hypothesis should not be taken at their face value, since they are subject to many of the deficiencies of the reported profits as discussed earlier. Finally, the decision of firms on initial FDI and expansionary FDI are very likely to be guided by different considerations. Barlow and Wender [1955] argued for example that foreign earnings are treated by a company more like gamblers' dollars and it is much more willing to take a chance with them than with a new FDI. Analysing the historical development of the subsidiary of General Motors in Australia,

[1] See U.S. Department of Commerce [1954]; Robinson [1961]; Basi [1963]; Brash [1966]; Kolde [1968]; Deane [1970]; Andrews [1972]; Forsyth [1972]; Reuber *et al.* [1973]; Ifo [1977; 1979].

Penrose [1956] generalised that once established, a subsidiary has its own life. Its expansionary investments have to be analysed differently compared with those involved in the initial decision of the firm to invest in a particular foreign country. Richardson [1971a; 1971b] formalises the idea that the relative weights of subjective and objective variables in the determination of initial and expansionary FDI differ substantially and rightly cautions that great care should be taken in applying the traditional determinants of domestic investments to all types of FDI.

III. Hypotheses Based on Market Imperfections

A discussion of those hypotheses which are based on the condition that output and/or factor markets are imperfect is given in this section. The beginning in this direction of thinking on FDI was made by Stephen Hymer in his seminal doctoral dissertation written in 1960 and published in 1976. Charles Kindleberger [1969] refined and publicised Hymer's idea. They argued that in establishing and operating production plants in a country foreign firms necessarily have some disadvantages compared with local firms, and if in spite of that foreign firms do invest directly in that particular country, they must possess some advantages to which 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 the local firms of the host country. The comparative disadvantages of a foreign firm are related to its ignorance of local customers' tastes, legal system, institutional framework, business and other social customs as well as to the costs of operating from a distance such as those involved in travelling and communication. Foreign firms usually pay or have to pay higher wages and salaries both to local and foreign personnel [Agarwal, 1976] and may be discriminated by public institutions. Among the comparative advantages which an investing foreign firm has or must have are cheaper sources of financing, brand name, patented or nonmarketable technology, marketing skills or special access to markets, managerial skills, government limitation on output or entry and economies of scale [Kindleberger, 1969]. In order to enable a firm to undertake FDI these advantages have to be firm specific and transferable to the subsidiaries.

However, any one or more of the market imperfections or oligopolistic advantages are a necessary but not sufficient condition for foreign operations of a firm. A firm could, for example, have these advantages and yet serve the foreign markets with exports or by licensing, renting or selling the technical, managerial or marketing skills. Why a firm chooses FDI and not any of these alternatives for serving a particular foreign market is the question[1]

[1] Hymer was less concerned in his thesis with this question than with proving that the theory of portfolio investment, which was dominant at that time, could not be successfully applied to FDI which he thought to be inseparable from control. Hymer has, however, pointed out that sharing the monopolistic advantage with a local partner in the form of licensing or joint venture is often faced with the problems of an agreeable valuation of

on which much of the work following the lines of the Hymer-Kindleberger hypothesis has concentrated and is analysed below.

1. A Behavioural Hypothesis

An interesting answer to the above question was given by Aharoni [1966]. Drawing on the behavioural theory of firm by Cyert and March [1963] he maintained that the three factors of fundamental importance in initial investment decision are uncertainty, information and commitment. 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 impelling the management to consider the possibility of investing abroad. The initiating forces may be external or internal such as a strong interest of one or several high-ranking executives inside the organisation for a particular FDI. The former include proposals from foreign governments, 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. He also lists some auxiliary forces which enhance the impact of initiating forces. These include creation of a market for components and other products, utilisation of old machinery and capitalisation of know-how. Once the possibility of FDI is considered by the management, it may lead, depending on the strength of initial forces, to search for information relevant for the appraisal of the likely investment project. 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 implementation of the project depends on their commitment and persuasive capability in removing the natural pessimism of top management in the particular case of FDI. Aharoni points out 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.

His book is certainly very enlightening on the process of foreign investment decisions. However, his analysis does not lead to testable empirical hypotheses, and the generalisations are based on the interviews of a limited number of firms[1] not quite representative of the population of U.S. firms with a longer history of FDI.

2. Product Cycle Hypothesis

This hypothesis offers an explanation for both FDI [Vernon, 1966; Hirsch, 1967] and international trade [Posner, 1961; Hufbauer, 1966]. An excellent review of the development of this hypothesis can be read in Vernon [1979], with whose name it is specially associated. In its original version, the life cycle of a product is conceived into three stages. In the first stage when the

this advantage and sometimes they may agree on a price and other times they may not, leaving then the foreign investor only with the choice of direct investment.

[1] His survey included 38 U.S. corporations which had considered proposals for FDI in Israel, many of which did not materialise.

product is new it is produced by the innovating firm in its home market, i.e. the U.S.A., because of the greater need for efficient coordination between R&D and production units as well as the availability of demand for it there. The second stage is marked by the maturity and export of the product to the European countries having the next higher level of income. Expansion of demand and growing competition in these markets lead eventually to FDI of the innovator into these countries for local production of the product. The third stage is characterised by a complete standardisation of the product as well its production technique which is no longer an exclusive possession of its innovator. Price competition from other producers forces him now to invest into developing countries to seek cost advantages, especially labour costs.

At the empirical level Gruber *et al.* [1967] found a strong association between propensity to invent new products, export performance, FDI and the ratio of local production to exports on the one hand and R&D expenditure of the U.S. industries on the other hand. The relation between the ratio of local production to exports and R&D expenditure is interpreted as an indication of the substitution of FDI for exports in host countries in the final stage of a product cycle. Horst [1972b] made a similar analysis for U.S. exports and FDI in Canada. He found that the technological intensity of a U.S. manufacturing industry was more closely related to the sum of that industry's exports to Canada and its subsidiary sales in Canada than it was to either exports or subsidiary sales taken separately[1]. From that he concluded that exports and FDI may be substitutes for one another. The choice between exports and local production was affected, according to him, by the Canadian tariff policy. The higher the Canadian tariff, the larger the share of local production in total U.S. sales of an industry in Canada. Orr [1975] has, however, successfully disputed the latter finding of Horst's using more disaggregated data. Baldwin [1979] too found the tariff variable to be insignificant. He further concluded that the U.S. manufacturing FDI occurs extensively in the product lines where output is differentiated and investors have the opportunity of capturing rents based on this product differentiation and that FDI tends to be relatively high in industries utilising comparatively large numbers of highly educated employees. Juhl's [1979b] findings lend some support to the validity of the product cycle hypothesis for German FDI in developing countries and Parry's [1975] for the pharmaceutical industry of the U.K.

The scope of the product cycle hypothesis has been widened several times [Vernon, 1971; 1974a; 1974b] so that it now takes into account not only labour costs but also other factor costs (land and material) and is applicable to FDI of all developed countries and not confined to the FDI of American MNCs. Hirsch [1976] has recently generalised the product cycle model so that the rigid sequential relation between product innovation, export and

[1] Wolf's study [1977] indicated that this applies for the U.S. multinational firms not only in Canada but for their worldwide operations.

FDI is no longer essential for its validity. He specifies the conditions which influence a firm's choice to serve a foreign market through export or FDI. These conditions have been further elaborated in Agmon and Hirsch [1979] where a distinction is made between developed and developing countries in this regard. Nonetheless, the applicability of the product cycle hypothesis is restricted to highly innovative industries [Solomon, 1978] and it is a oversimplification of the firm's decision-making process [Buckley and Casson, 1976]. In defense of this hypothesis, however, it should be remembered that it was originally based on the U.S. experience and offered a useful explanation of the interaction between production, export and FDI at firm level during the fifties and sixties. It did not pretend to explain all kinds of FDI. Vernon [1971, p. 65f.] himself has called the product cycle model a "deliberate simplification of reality" with no pretence of capturing "the complex sociological, political and idiosyncratic factors" influencing the investment behaviour. Moreover, the conditions on the technological front as well as on the international factor and product markets have changed since the introduction of this hypothesis. The technological leadership of the U.S.A. has suffered badly and income differences among the developed countries have levelled down. Thus some of the assumptions of product cycle hypothesis do not hold any more. Therefore, its power to explain the causes of FDI has weakened [Vernon, 1979].

3. Oligopolistic Reactions Hypothesis

Knickerbocker [1973] has hypothesised that FDI is a result of oligopolistic reaction. Using the Harvard School of Business Administration data on the manufacturing FDI of 187 American MNCs[1], he constructed an entry concentration index (ECI) which showed that the entries of American firms into foreign markets are bunched in time, which means that the oligopolistic firms try to counter any advantage that the first firm may score from its FDI by following it with their own FDI in order to maintain a competitive equilibrium. He compared his ECI with the U.S. industrial concentration index and found a significant positive correlation between the two indices, from which he concluded that increased industrial concentration causes 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 overcrowding of a host country market. He also found that the profitability of FDI was positively correlated to entry concentration and that the latter was negatively correlated to product diversity. Knickerbocker's hypothesis is also supported by observations of the behaviour of firms on the domestic market. Scherer [1967] had shown earlier that innovative activities of firms were positively correlated to industrial concentration as long as this concentration was moderate, after that R&D expenditure of firms declined. This supports Knickerbocker's finding that the relation between ECI and industrial concentration index becomes negative at a very high level suggesting the

[1] Vaupel and Curhan [1969].

existence of collusion of firms. Scherer, in another paper [1969], showed that the domestic investment in the U.S.A. (1954—1963) was characterised by a greater degree of bunching in more concentrated industries.

Knickerbocker's hypothesis was tested by Flowers [1975] on FDI from Canada and Europe (U.K., France, Federal Republic of Germany and the Netherlands) in the U.S.A. He found a significant positive correlation between the concentration of FDI in the U.S.A. and the concentration in the investing countries. European and Canadian FDI in the U.S.A. responded with a gap of approximately three years after the original U.S. FDI in Europe and Canada. In industries with high seller concentration the firms tended to match quickly the FDI of the leading firm in order to maintain their market shares.

An interesting conclusion to which Knickerbocker's hypothesis leads is that the process of FDI as a function of oligopolistic reaction is self limiting since the initial (U.S.) 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, the Federal Republic of Germany and other countries, international competition has increased in many industries. A follow up conclusion from Knickerbocker's hypothesis that this competition should lead to a decrease in total flow of FDI is, however, not yet visible. Thus the value of this hypothesis for future predictions is very limited. It is also only a partial explanation of FDI since it does not explain why the leading investor sets the ball rolling. Further it fails to account for the FDI of firms having a wide dispersion of their investments.

4. Internalisation Hypothesis

Buckley and Casson [1976][1] think that the markets for key intermediate products such as human capital, knowlege, marketing and management expertise are imperfect; therefore linking different activities through these markets involves significant time lags and transaction costs. As a result firms are encouraged to replace these external markets by their own internal markets for these products. The internalisation of markets across national boundaries leads to FDI, and this process is continued 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. Costs of internalisation arise e.g. from administrative and communication expenses.

[1] See also Dunning [1977], Buckley and Casson [1978] and Casson [1979]. The latter cites (p. 108) a large number of authors influencing the development of this hypothesis. The basic work among these is that of Coase [1937] who maintained that firms are an institutional alternative to the market because of very high market transactions costs. McManus [1972] maintained that FDI is undertaken by the firms to internalise the externalities such as the spillover effect of advertising in the U.S.A. on the foreign demand for their goods. For a reappraisal of the literature on the internalisation hypothesis see Rugman [1980].

It is obvious that multinational firms bypass the market in intermediate products through the process of FDI. What is not certain is whether the motive for bypassing the market is its inefficiency in terms of relatively high transaction costs and longer time lags or anything else. Dunning's [1977] argument that the desire of the firms to retain the exclusive right to use the innovations generated by them appears to be more convincing because the longer an innovator is able to use exclusively an innovation the greater are the monopoly rents to be earned by him. In the case of innovations in intermediate products usually markets do not exist. Hence an innovator is not faced with the problem of a choice between external and internal markets. He is more likely to be faced with the choice of creating a market for his innovation or of keeping it for his exclusive use. It is more natural that he should opt for the latter until imitators start creating the market for that product. Nonetheless the attempt by Buckley and Casson is valuable as it stresses the need for a systematic general theory of FDI and multinational enterprise. The theoretical framework given by them does not apply in the short run and especially to FDI by smaller firms operating in one or two foreign countries. Its empirical verification is also very difficult, if not impossible. The statistical tests done by them under very simplifying assumptions boil down to the conclusion that the process of internalisation is concentrated in industries with relatively high incidence of R&D expenditure, a conclusion reached in many other studies.

Hardly any one of the above hypotheses in this section is able to explain all kinds of FDI. Therefore, Caves' [1971] argument that different explanations are needed for different kinds of FDI deserves due consideration. For this purpose he distinguished between horizontal, vertical and conglomerate investments. Most of the FDI is undertaken, according to him, either in horizontal expansion to produce the same or similar kinds of goods abroad as in the home country or in the exploitation of raw materials involving vertical integration of foreign production in the home plant. For the horizontal type of FDI, he maintained product differentiation to be the critical element of market structure. A differentiated product is protected from exact imitation by trade marks or high costs of physical imitation or both. The knowledge to produce it can be transferred to the subsidiary without extra costs or with costs lower than the returns attainable through FDI. Caves said that a high rank correlation existed between the extent of product differentiation and the proportion of firms in an industry having foreign subsidiaries, though he did not give any quantitative evidence. In the case of vertically integrated firms, FDI is a result of their efforts to avoid oligopolistic uncertainty and create barriers to the entry of new rivals. By controlling their input sources, the existing firms may raise substantial barriers for likely competitors. Notwithstanding the usefulness of this distinction, Caves has apparently belittled the importance of FDI in product diversification which is undertaken by investors to satisfy the need for expansion and risk diversification.

IV. Hypotheses on the Propensity to Invest

This section deals at first with two hypotheses which have drawn considerable attention in the literature on FDI. They are the liquidity and currency area hypotheses. The former is related with the FDI of a firm and the latter with the influence of imperfections of foreign exchange and capital markets on FDI of a country. Thereafter the literature on some other variables influencing the propensity of a firm or industry to invest abroad is reviewed.

1. Liquidity Hypothesis

The "gamblers' earnings" hypothesis of Barlow and Wender [1955] marked the beginning of attempts to apply the liquidity theory of domestic investment to FDI, which seeks to establish a positive relation between the internal cash flows and investment outlays of a firm[1]. Barlow and Wender observed that the initial investment of U.S. companies in foreign operations is modest. The expansion of these operations is done through reinvestment of local profits. Since then this hypothesis has been examined empirically by many economists and the evidence appears to be mixed.

Among those who have come out against this hypothesis are Stevens [1969a] and Severn [1972]. Stevens tested it on a sample of 71 well established U.S. foreign subsidiaries and did not find any evidence in support of this hypothesis either in the sense that the expansion of subsidiaries was financed only by their retained earnings, or in the sense that there was a tendency for the fixed investment expenditures of the subsidiaries to be determined by their own retained earnings. Severn using cross-section data for 68 firms accounting for about half of the U.S. FDI in manufacturing during 1961 and 1966 came to the conclusion that the internally generated funds are allocated among the parent and the subsidiaries by the top management in such a way as to maximise profits from the point of view of the whole concern. As compared to these studies, Brash [1966], Safarian [1969], Kwack [1972] and Hoelscher [1975] have produced evidence in favour of the liquidity hypothesis. Brash stresses in his study of American investments in the Australian industry that "the most important sources of the funds required for expansion are undistributed profits and depreciation allowances" (p. 93). However, he does find some differences in the behaviour of U.S. subsidiaries, joint ventures and U.K. subsidiaries, the latter two showing a tendency of a higher rate of dividend payments and a higher rate of profit repatriation. Safarian made similar observations in Canada. During the years 1957—1965 between 60 and 80 per cent of the funds used by the U.S. subsidiaries in Canada came

[1] It is based on the assumption that the cost of internal funds is viewed by the investors to be lower than the costs of external funds [Meyer and Kuh, 1957; Duesenberry, 1958]. Modigliani and Miller [1958; 1963] have, on the other hand, argued that investment decisions are independent of the methods of financing. Also the results of studies which have tested the significance of cash flow variables as determinants of domestic investments are contradictory [Anderson, 1964; Meyer and Glauber, 1964; Evans, 1967; Jorgenson and Siebert, 1968; Jorgenson, 1971].

from internal sources of the firms especially from net income and depreciation. Safarian pointed out, however, that the rate of reinvestment of earnings of U.S. foreign subsidiaries was higher in Canada than in the rest of the world. Kwack examined the relationship between the U.S. corporate cash flow (net of dividends) and the U.S. direct investment abroad. He found this relation to be statistically significant and concluded that since the cash flow is an important additional variable which positively affects the flow of U.S. FDI, changes in the U.S. tax policies to increase the cash flow would have a stimulating effect on these investments. The statistical tests by Hoelscher showed that liquidity variables such as internally generated funds, repatriation to the parent, and a subsidiary's debt capacity performed much better than the sales variable based on the accelerator theory of investment.

There is a third group of economists who have taken a relatively more differentiated stand on this hypothesis. Stobaugh [1970] distinguished between small and large companies and concluded on the basis of interview data that the investment behaviour of the former supported the Barlow and Wender hypothesis in the sense that companies with total sales of $ 50 million or less were less willing to make additional investments in the already established subsidiaries in foreign countries. Reuber *et al.* [1973] have suggested — also on the basis of interview data — that while analysing the influence of internal cash flows on FDI in LDCs, a distinction should be made between the cash flows of the enterprise as a whole and those of the subsidiaries alone. Internal cash flows of the enterprises may not be a major determinant of their FDI in LDCs because such investment represents only a small fraction of the array of reinvestment possibilities faced by most of the firms, and further, they have an easy access to external funds on favourable terms in international markets for investments[1]. But the internal cash flow of the foreign subsidiaries in the LDCs exercises a substantial influence on their new investment outlays. This tendency is reinforced by restrictions imposed on repatriation of profits and capital by these countries.

It seems that the truth lies somewhere between the two extreme positions, viz. that the expansionary investments of foreign subsidiaries depend only on their profits and that the investment decisions are quite independent of the sources of financing. The fact that the corporations have a tendency to invest their internally generated funds in their own subsidiaries where they have a direct influence on the management can hardly be denied. This tendency is reinforced in the case of LDCs owing to greater imperfections of their financial and capital markets.

2. Currency Area Hypothesis

Aliber [1970; 1971] hypothesised that the pattern of FDI can be explained 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.

[1] This is also supported by the evidence collected by Vernon [1972].

Aliber maintained that 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 the 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 a foreign investor would enjoy over local firms.

Strictly speaking, this hypothesis has not been empirically tested. What many economists believe on the basis of casual empiricism is that overvaluation of a currency is associated with outflow of FDI and undervaluation with inflow of FDI in the currency area concerned. This is supported by the experiences of the U.S.A. and the Federal Republic of Germany during the sixties. Empirical studies available in this field are primarily on the relation between FDI and exchange rate changes, which is not to be confused with Aliber's hypothesis. A few studies have shown that devaluation of the currency of a country discourages the inflow of FDI in that country. For example, Scaperlanda [1974] found that the depreciation of the Canadian dollar vis-à-vis the U.S. dollar had a negative effect on the flow of U.S. FDI in Canada. But the majority of economists who have tested this hypothesis statistically have come to the conclusion that devaluation encourages inflow of FDI and discourages outflow of FDI. Boatwright and Renton's [1975] study on inward and outward FDI of the U.K. indicated, though indirectly, that the depreciation of the pound sterling raised the value of the FDI in the U.K., but it also raised the U.K.'s FDI abroad instead of having a negative effect on it. A more detailed investigation was undertaken by Alexander and Murphy [1975]. They concluded that the devaluation of a country's currency discourages the outflow and encourages the inflow of FDI into that country. Somewhat similar results were obtained by Logue and Willet [1977] in their analysis of the U.S. data on FDI (1967—1973). Kohlhagen's study [1977] of major exchange rate realignments of the currencies of the U.K., France and Germany during the 1960s showed that currency devaluations increase the relative profitability of domestic production vis-à-vis foreign production and thus induce the inflow of FDI into the devaluing countries. Using the U.S.-Canadian time series data Sachchamarga [1978] has tried to further generalise the Alexander and Murphy hypothesis. The tests of his simultaneous equation model support the hypothesis that the depreciation of the foreign exchange value of a country's currency will encourage FDI into that country and discourage its FDI. The magnitude of the effect of a currency devaluation on the FDI of any particular industry will be determined by the fact that whether it is relatively more dependent on the foreign market for the export of its output or for the import of its input.

What emerges out of the varying results of these studies is the fact that the exchange rate is only one of many factors influencing FDI decisions. Its over- or undervaluation and devaluation or revaluation may influence the timing of a particular FDI rather than being the sole cause of it. Aliber's assumption that portfolio investors ignore the exchange risk on foreign earnings of

a firm seems to apply to relatively smaller portfolio holders, but it is the large institutional investors who dominate the portfolio investment today. Aliber's hypothesis has drawn considerable attention because it successfully explained the trend of the outflow of the U.S. FDI during the fifties and sixties into Europe. But it is only a partial explanation since it does not explain the cross investments between currency areas or FDI of a country into another belonging to the same currency area such as dollar or sterling area.

3. Other Determinant Variables

Many empirical studies have attempted to sort out variables which may be statistically associated with the FDI of firms or industries. Although this kind of approach is often faced with the problem of specifying the cause and effect relation between the associated variables, its usefulness for drawing conclusions on the future pattern of FDI can hardly be denied. Many of these studies have addressed themselves to the question about the characteristics which distinguish a multinational from a purely national firm which implies that FDI is undertaken mostly by multinational firms. The variables which have often proved to be significant are R&D expenditure, size of the firm and foreign trade intensity[1], although there are quite a few other variables which also appeared as significant. Vaupel [1971] produced evidence on the basis of the data for 491 U.S. firms that as compared to uninational firms multinationals incurred higher R&D as well as advertising expenditure, showed more net profits, had higher average sales, were more diversified, paid higher wages in the U.S.A. and recorded a higher export/sales ratio. Vernon's [1971] conclusions are quite similar[2]; he has, however, laid considerable emphasis on the larger size of firms investing abroad. Using U.S. Tariff Commission's [1973] data for 1970, Lall [1980] has come to somewhat different conclusions. He found that R&D, scale economies and possession of skill advantages favour exports more than foreign production by the U.S. multinational corporations whereas product differentiation promotes more foreign production than exports. In an attempt to distinguish American multinational firms from the general population of American manufacturers, Horst [1972a] examined many of the above variables and came to the conclusion that "once interindustry differences are washed out, the only influence of significance is firm size" (p. 261). A very strong argument in favour of this hypothesis is given by Bergsten *et al.* [1978], who argue that a continued growth of large firms in the U.S. is constrained, for example, by antitrust regulations and therefore through their FDI these firms seek an alternative to further growth at home. For European firms Franko [1976] thought the relationship between size and multinationality to be ambiguous since many smaller firms have an impressive spread of foreign manufacturing activity (p. 17), though his statistical analysis did show that higher

[1] R&D as well as foreign trade variables appear also in the discussion of the internalisation and product cycle hypotheses.

[2] The data base is the same as Vaupel's but is differently classified.

multinational spread of firms is characterized by larger size (in terms of sales), R&D effort, special skills, proprietary know-how and patent advantages. For the German FDI in developing countries, Juhl [1979b] has observed a significant positive correlation between the average size of firm and propensity to invest abroad.

Further comparison of the U.S. and the continental, European multinational enterprises by Franko [1976] yielded some remarkable differences with regard to export propensity and product diversification. The European firms with a few foreign manufacturing operations showed a higher propensity to export than the European firms manufacturing in a larger number of countries, and the continental enterprises tended to be more diversified in their foreign production than at home, a phenomenon unknown in the experience of the American multinational enterprises. The multinationality of the European enterprises was not associated with their marketing and advertising advantages (p. 21f.). Parker [1978] has pointed out that whereas the association between research intensity and multinationality found in the U.S.A. applies to the European firms, there is no difference in this respect between national and multinational firms of Japan.

The association between FDI and foreign trade is supported by historical experience [Wilkins, 1970; 1974] as well as by other empirical evidence. A cross-country study of U.S. FDI in developing countries by Rock [1973] yielded a significant correlation between the trade of these countries with the U.S.A. and American FDI in these countries. Agarwal [1978] found that German FDI is significantly related to German foreign trade with respect to both regional as well as sectoral distribution. Similar observations for German FDI have also been made by Baumann *et al.* [1977]. Rock [1973] has rightly argued that firms supply a foreign market initially with exports. But when it reaches a critical size or when threats to this market arise from tariff or non-tariff barriers, the firms may find it necessary to invest there. Thus, FDI is the last stage of a process that begins with exports. Roemer's [1975] observations of the competition among the United States, Great Britain, Germany and Japan have led him to an interesting hypothesis. He sees a country passing through four stages demarcated in terms of changing mutual strength of its trade and investment. First its share in world exports of manufactures rises; second, its share in trade stabilises and that in the world FDI takes off; in the third stage the trade share begins to fall and finally its share in world FDI also falls. In terms of this cycle, he finds that Japan, Germany, the U.S. and Great Britain are at present in the first, second, third and fourth stages, respectively.

V. Determinants of the Inflow of FDI

Nearly all the proceeding hypotheses are primarily related with outgoing investment. The market size hypothesis is the only exception. It is, however, also the most popular explanation of a country's propensity to attract FDI. But since this hypothesis seemed to be inseparable from the output hypo-

thesis it was considered to be more fruitful to discuss both of them together in Section II. Of course, inferences on attractiveness of host countries are and can be drawn from the discussion on other hypotheses also, but they appear to fall short being comprehensive. This is more so when the inflow of FDI into developing countries is considered. It is perhaps for this reason that many inductive experiments have been carried out to identify the variables which may be particularly relevant for these countries. The number of independent variables examined in such studies is very large and they include not only economic but also social, cultural and political aspects, probably because of the belief that the relatively slower movement of capital from rich to poor countries than that among the former is to be ascribed to the local noneconomic factors, which may not be as hospitable to foreign capital in the Third World as in the already developed countries of the Western world. A full coverage of studies on all of these variables is beyond the physical scope of this paper. Therefore only three of these variables which are found to be relatively more important are considered here. They are political instability, incentives for foreign investors and supply of cheap labour in developing countries. The first is a retarding factor, the second should encourage the inflow of FDI and can be more influenced by the host countries, and the last one is a comparative advantage of developing countries over developed countries.

1. Political Instability

Political instability in a country is likely to discourage the inflow of FDI. Therefore, one would expect that these two variables should be negatively correlated. However, the empirical evidence produced by survey and cross-section studies can be judged only as mixed. Whereas the majority of survey reports have concluded that political instability of a country has a negative effect on the inflow of FDI, some of the cross-country studies have come out in favour and others against this hypothesis. Among the former kind of studies, U.S. Department of Commerce [1954], Robinson [1961], Basi [1963][1], Aharoni [1966], U.S. National Industrial Conference Board [1969], Swansbrough [1972], and Root [1978] have laid considerable emphasis on the negative role of political instability in attracting the foreign capital in a country[2]. Reuber *et al.* [1973] specified it, on the contrary, as a relatively unimportant determinant of FDI in developing countries, at least as far as the distribution of the total supply of FDI among these countries was concerned, and Piper [1971] concluded that political variables are of minimal concern to investors and are generally given the same treatment in the FDI decisions by them as in the domestic investment decisions. Among the cross-country studies

[1] Basi included in his survey both developed as well as developing countries as host nations. His interview data indicated that political considerations play a greater role in investment decisions related to developing countries.

[2] Aharoni and Root have, however, stressed that the evaluation of political risk by the investors is rather impressionistic and not based on any systematic analysis.

those by Ahmed [1975][1] and Levis [1979] supported a negative correlation between the inflow of FDI and political instability, whereas those by Bennett and Green [1972], Green and Cunningham [1975] and Kobrin [1976] did not. In a very detailed analysis of ASEAN countries, Situmeang [1978] concluded that political instability was statistically unrelated to the flow of FDI in all the sectors (non-extractive, manufacturing, high technology and low technology industries).

The conflict between the results of these studies is quite apparent. Apart from the fact that these studies have used varying kinds of data and analytical methods, a very important source of this conflict is the definition of political instability. Political instability does not always enhance political risk for FDI, for example in the case of a likely shift of political power from an extreme leftist to a more democratic government or even a dictatorship. Moreover, the degree of political risk emanating from political instability in a country is likely to vary for FDI of different origins and in different industries [Thunell, 1977]. It seems that it has not been possible so far to give due consideration to all such factors in an operational definition, although quite a few indices of political stability and investment climate, in which the former is also included, have already been developed[2]. Another source of the above conflict is that the developed countries offer guarantees on FDI against political risks which are availed by their investors in many cases but these guarantees are generally not taken into account by the studies on this variable. One of the few exceptions is the study by Rock [1973]. He considered two periods for analysing the effect of political instability in host developing countries on American FDI in their manufacturing industries. In the first period in which the investment guarantee did not exist American FDI was negatively correlated with political instability, whereas in the second period in which this guarantee was available, such a correlation did not exist and at the same time the investment guarantee variable appeared as a significant determinant of American FDI in these countries. His interpretation that the American Investment Guarantee Program has reduced the political risk associated by investors to political instability in the host countries is apparently correct.

2. Incentives

The evidence on the influence of incentives on the inflow of FDI is clearer than that on the influence of political instability, but it does not support the hypothesis that these two variables would necessarily be positively associated with each other. For example, Aharoni [1966] concluded from his survey evidence that at the initial stage of a foreign investment decision the incentives are not at all considered by firms. Especially the income tax exemptions were found to be unimportant. He quotes also Barlow and Wender [1955], Ross and Cristensen [1959] and Robinson [1961] in support of his finding. A comprehensive discussion of this variable is given in Reuber *et al.* [1973]. According

[1] For a summary see Root and Ahmed [1979].

[2] For a comparison of these indices see Haendel *et al.* [1975] and Juhl [1977].

to them, the incentives provided by the investing countries may be of some help, especially to smaller firms with limited experience in the developing countries, but their overall impact on FDI is marginal at best. About the incentives offered by the developing countries it is doubtful whether they have much effect on the total flow of FDI, although they might influence its distribution among them. Also in Ahmed's study [1975] the incentive variable proved to be statistically insignificant.

Thus the general conclusion drawn by Reuber *et al.* [1973], which seems to be correct, is that the bewildering variety of incentives granted by developing countries generally adds to the costs of these investments for these countries without increasing their flow effectively. The main reason for this divergence between the targets and the results of incentive schemes is that the incentives provided by the developing countries are generally accompanied by a host of disincentives such as restrictions on ownership, size, location, dividends, royalties, fees, entry into certain industries and mandatory provisions for local purchases as well as exports, so that a likely positive effect of the incentives is cancelled out by a negative effect of the disincentives. Moreover, the incentive policies of developing countries are generally quite restrictive. Investors have to fulfil a number of conditions to be eligible for the incentives, and if these conditions are very restrictive, they may prove to be even detrimental to the flow of FDI [Situmeang, 1978].

3. Cheap Labour

The supply of cheap labour in developing countries has always been regarded as one of their comparative advantages in international trade in certain products. But its recognition as a possible explanation of FDI is of relatively recent origin. Whereas the evidence from survey reports [e.g., Forsyth, 1972; Kebschull, 1972; Halbach, 1977] in support of this variable has been rather weak, the results of some of the time-series and cross-country analyses have been strongly in its favour. For example, Riedel [1975] found that relatively lower wage costs have been one of the major determinants of the export-oriented FDI in Taiwan. His result is supported by Donges' [1976; 1980] studies on Spain and Portugal. Agarwal's [1978] study yielded a significant positive correlation between German FDI and relative wage costs (share of wages and salaries in value added per employee in Germany divided by the corresponding quotient in host countries) in Brazil, India, Iran, Israel, Mexico and Nigeria. Similar results were obtained by Juhl [1979a] at the sectoral level for German FDI in Colombia, Ecuador, El Salvador and Mexico. The influence of differences in wage levels between investing and host countries is obviously greater in the case of FDI in industries producing labour intensive products and components than in other industries.

FDI is concentrated in products where MNCs have relatively more ownership-specific advantages than the location-specific advantages of host countries such as cheaper labour in LDCs. Therefore, the importance of this variable, especially for future growth of FDI in these countries, should not be overemphasised, though there may be a temptation to do so because of the

pressing need for cost minimisation and the recent faster growth of FDI in labour intensive industries of developing countries. Moreover, the growth of these investments may be retarded by the mounting resistance to them coming from the trade unions in investing countries and by the local competition which would come from national firms of developing countries in the course of their technological progress.

VI. Concluding Observations

Each of the preceding hypotheses (theories) accounts only partially for the determinants of FDI. Therefore, the need for a kind of general theory which is able to integrate the existing relevant knowledge on determinants of FDI has been felt for long. Econometric attempts in this direction have not been successful because of both theoretical and statistical reasons. International data on FDI are incomplete and weak. The current national and international efforts are expected to improve them. However, it is in the nature of FDI that statistical information on it cannot be comprehensive and detailed enough to allow fine analytical experiments. But on the theoretical side a major breakthrough seems to be in the offing. The credit for that goes to Dunning [1977; 1979]. With his eclectic approach he has made a promising start towards the development of a general theory of FDI. He hypothesises that 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 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 outwright 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, cheaper energy or raw materials, investment incentives, etc. Since all the three kinds of advantages are related with market imperfections, Dunning's eclectic theory of FDI belongs to the category of those discussed in Section III. But it goes further and appears to be a culmination of research based on Hymer-Kindleberger lines. However, more efforts are required to translate it into an operational model. Looking at the potentialities of this hypothesis to explain FDI at the firm, industry and country level these efforts appear to be worthwhile and likely to bear fruits.

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