

## 2 Foreign Direct Investment as a Sequential Process

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The primary advantage of the multinational firm, as differentiated from a national corporation, lies in its flexibility to transfer resources across borders through a globally maximizing network. Recent models of direct foreign investment have tended to downplay these advantages of a coordinated multinational system; rather, they have stressed the motivational behavior arising out of essentially national factors and market imperfections, e.g., proprietary knowledge, domestic industrial structure, and product differentiation. The neglect of the advantages of multinationality obscures, though, an important distinction between the original motivations to establish plants in foreign countries and the subsequent investment decisions. There is, in short, a fallacy of explanation of genesis in failing to distinguish between the initial investment decision and the subsequent incremental investment flows.

This paper argues that current foreign direct investment (FDI) must be understood as largely sequential flows stemming from the advantages of flexibility of a multinational system. The empirical foundation for this argument can be seen in the change over the past 30 years of the dominant channels of US FDI from new intercompany outflows to reinvested earnings. In 1970, the ratio of equity and intercompany account outflows to reinvested earnings was 1.39. By 1979, the ratio was 0.32. (The complete time series is given in table 1.) The predominant share of FDI flows are incremental investments in already established subsidiaries. In light of these trends, previous theories of FDI which stress the oligopolistic behavior of corporations in their home markets provide incomplete explanations for current FDI. What is required is a greater consideration of the systemic advantages inherent in a multinational network.

These trends carry implications also for the way data on FDI flows are categorized and used. Rather than collecting data according to entries and exits, information should be gathered concerning the conduit of flows as well as changes in the stock of FDI at the firm level. Data

**Table 1**  
US Foreign Direct Investment (in millions of dollars).

Year	Total	Equity and intercompany account outflows	Reinvested earnings of incorporated affiliates	Ratio of equity outflows to reinvested earnings
1950	1,088	621	475	1.31
1955	1,766	823	962	0.86
1960	2,039	1,675	1,266	1.32
1965	4,994	3,468	1,542	2.25
1966	4,318	3,625	1,791	2.02
1967	4,768	3,050	1,757	1.74
1968	5,347	2,855	2,440	1.17
1969	6,186	3,130	2,830	1.11
1970	7,387	4,413	3,176	1.39
1971	7,280	4,441	3,176	1.40
1972	7,118	3,214	4,532	0.71
1973	11,435	3,195	8,158	0.39
1974	8,765	1,275	7,777	0.16
1975	13,971	6,196	8,048	0.77
1976	12,759	4,253	7,696	0.55
1977	13,039	5,612	7,286	0.77
1978	17,957	4,877	11,469	0.43
1979	24,844	5,904	18,414	0.32

Source: *Survey of Current Business*, US Department of Commerce, vol. 61, no. 2 (February 1981).

which reveals the industry and regional breakdown of both reinvested and new FDI flows would provide a critical platform by which the systemic advantages of the multinational corporation (MNC) can be appraised.

This is not to deny that the advantages of the MNC have been studied. The broader field of research on the MNC has been sensitive to these issues. Especially in the consideration of the political complexities posed by multinational corporations, the peculiar strengths attributed to the operation of a multinational network have been discussed.<sup>1</sup> Such issues as transfer pricing, tax arbitrage, bargaining or negotiating powers, and cost advantages have been analyzed in isolation or in group.<sup>2</sup> There has not been, however, a thorough integration of these issues and the theory of foreign direct investment in the literature, with the partial exception of Dunning (1979).

The purpose of this paper is to move toward such an integration. Section I reviews briefly the recent FDI literature and introduces a more generalized model in the hope of elucidating the importance of the multinationality factor in FDI flows. The cutting edges of this model is the view of the MNC as a collection of valuable options which permits the discretionary choice of altering real economic activities or financial flows from one country to the next. Section II discusses the valuation of systemic advantages. Finally, section III discusses the importance of this expanded theory from the point of view of host and home countries and comments upon trends likely to persist into the 1980s.

## I

Particular aspects of the contribution of multinationality to the value of the firm and to explaining its behavior have been examined. Kindleberger (1969) considers the conflict between the host country and a multinational firm who are maximizing conflicting objective functions. Agmon and Lessard (1977) and Lessard (1979) note the incremental value of being able to arbitrage tax regimes. Hirsch (1976) cites in a revealing analysis the effects of joint production and trade in intermediate goods in the context of subsequent investment decisions. Vernon (1979) stresses the information- and profit-scanning functions of a multinational network. Davidson (1980) demonstrates the significance of experience effects upon FDI flows.

A growing body of research concerns the combination of location and trade theory with that of internalization. Magee (1977) argues that FDI is motivated by the difficulties of appropriating rents from the trade and licensing in proprietary knowledge. Buckley and Casson (1976) argue similarly that plant location is determined by, one, locational advantages and, two, market failure in the trade of proprietary knowledge, especially that of research and development.

Dunning (1977, 1979) has more recently expanded upon these ideas in developing what he calls the "eclectic theory" of FDI. The theory combines usefully the macroeconomics of standard trade theory with transportation theory. Thus, a country's endowment and geographical position create certain "locational" advantages. Dunning then proceeds to consider the factors which determine entry barriers and sustainable oligopolies. These factors, e.g., patented information, brand names,

		location	
		advantaged	disadvantaged
ownership	advantaged	export	FDI outward
	disadvantaged	FDI inward	import

Figure 1  
Trade and FDI outcome for a single industry in the home country.

technology, from what he calls "ownership" advantages. Ignoring the possibility of licensing, the various combinations of these advantages suggest a scheme such as shown in figure 1. In the upper right box, for example, the firm possesses a unique technology or some cost advantage. Its home domicile is, however, characterized by higher factor or transportation costs than foreign locations. As a result, it invests overseas. Thus investment occurs only when the home firm possesses a unique asset and the host country is relatively advantaged in location. Finally, the theory of internalization is introduced to explain why licensing is not a preferred mode to FDI.<sup>1</sup> Thus, trade and location theory is wedded to that of internalization in order to explain FDI flows as a response to market imperfections.

Nevertheless, the importance of a multinational network as an important contribution to the value of the firm and its economic opportunities and to the determination of the likely conduits of FDI have not been sufficiently analyzed. In the view of Buckley and Casson, for example, internationalization is the by-product of the search for minimum cost production sites and the internalization of markets. The absence of uniquely international factors is starkly apparent in Hirsch's model, which is considered in more detail in the next section. While Hirsch discusses economies of scale and joint production in marketing at a single location, there is no variable that represents the revenue impact of the ownership of a globally operated system. Dunning (1981)

as well does not analyze the precise systemic opportunities generated by multinationality, though he does list several types of advantages.

But does the factor of multinationality add to our understanding of the determinants of FDI? One way to answer this question is to consider whether MNCs would still have cause to exist in the absence of the commonly listed market imperfections. Let us suppose, then, that the four of the five imperfections that Buckley and Casson list in the market for technology could be eliminated. These imperfections are (1) the absence of a forward markets to hedge the risk of development, (2) the impossibility to arrange contracts that would permit discriminatory pricing, (3) the presence of monopsonistic purchasers, and (4) informational impactedness. (The fifth imperfection is that of government intervention, which—along with such events as changes in exchange rates—can create unique arbitrage opportunities for the MNC.) If in some idealized state, these imperfections were altered to the requirements of perfect markets, would there still be the MNC?

The answer would be affirmative, due to three characteristics which enable the MNC to exploit uniquely international distortions in markets or production: one, the ability to arbitrage institutional restrictions; two, the informational externalities captured by the firm in the conduct of international business; three, the cost saving gained by joint production in marketing and in manufacturing. These imperfections, which are carefully considered in the studies on the political dilemmas posed by multinationals and on multinational planning and control, are curiously understated in the mainstream economic literature.

This neglect is derived largely from not considering international projects as incremental at a global level. Although conceiving international investment within a dynamic theory of the firm, the internationalization literature fails to consider the value of the *operational* flexibility and externalities of a multinational system. Rather, the stress is placed upon the *structural* elements of plant location and the elimination of transactional costs.

There is, in short, a tendency to view FDI as a decision made at a discrete point of time. This is the fallacy of genesis to which I previously alluded. The decision to transfer resources internationally is only one aspect of FDI. Given the structural outcome of this decision, the other aspect is the series of sequential decisions which determine the volume and direction of these transferred resources.

Contrary to the structural approach, consideration of the operational value of a global system places stress upon the unique ability of multinationals to reduce the costs of operating in an uncertain world.<sup>4</sup> This is best illustrated by considering explicitly the three factors that were claimed above to be uniquely international attributes. The first is the ability of the MNC to arbitrage institutional restrictions, e.g., tax codes, antitrust provisions, financial limitations, and even national security prohibitions on trade. In effect, the operation of an international system has provided the multinational with a string of options written on contingent outcomes. The difference between the inclusion of taxes, financial incentives, etc., as part of a theory of location and this approach is that the consideration of institutional arbitrage as an option emphasizes the unique ability of the MNC to exploit the conditions of uncertainty and of institutional environments. The MNC can, in effect, exercise an option upon the occurrence of an event, e.g., its option to choose in which country to declare its profits. Boundaries do not represent only the costs of tariffs and transport; they also represent profit opportunities which can only be exploited by a multinational corporation.

The second factor concerns the capture of externalities in information, or what we call learning cost externalities. There is an information set required of international business that is separable from that required of domestic business. Corporations spend vast resources in their recruitment of internationally skilled personnel, in political analysis, in intercultural education programs, and in the development of monitoring and control mechanisms. They also invest in information scanning and processing in order to locate markets and customers internationally. But most critically, there are important learning curves involved in these activities as well as "first mover advantages." Occidental Petroleum's knowledge and status as a long-standing supplier/customer of the Soviet Union is not easily duplicated.

Joint production economies can occur in both marketing and manufacturing on a global scale. Niehans (1977) has noted that economies of scale in marketing or servicing but constant or decreasing scale economies in manufacturing can serve to explain the growth of the MNC. Similarly, joint production economies due to the creation of a multinational network reduces the physical capital or labor costs of production and marketing of incremental investments. For example, the multinational network permits the export of otherwise nonexportable goods,

since the fixed costs of establishing sales offices, hiring personnel, and locating plant sites are already sunk. The incremental cost saving can permit, as Hirsch suggests, an increase in the export of intermediate products or in the market entry of new products sharing production economies. In addition, the multinational network can serve to export additional final goods or to service the export of other firms' goods in times of slack capacity; the Japanese trading companies are an example of the latter facility. Unquestionably, the formation of a multinational network poses significant barriers to entry. The implications of these barriers are analyzed in greater detail in the conclusions.

## II

The implications of considering the value of international factors can be illustrated in the formulation of a capital-budgeting procedure. In an instructive article, Hirsch (1976) suggests that the decision to service a market by exports or by foreign direct investment can be modeled by four cost variables discounted at some appropriate rate: production and tax transportation costs  $P$ , research and development costs  $K$ , marketing costs  $M$ , and control costs  $C$ . Demand is assumed as given. Marketing costs are argued to be higher for exports than host-manufactured goods, while control costs rise with the internalization of production. These assumptions are intuitively reasonable. Moreover, Hirsch argues that  $M$  and  $C$  are increasing functions of  $K$ . Implicitly, Magee argued the same in his claim that the opportunity loss of appropriability rises with information content at every stage of production. Hirsch's reasons rest in the costs of market exploration and organizational communication. Since neither argument is mutually exclusive, both can be subsumed in Hirsch's model.

Given this formulation of the model, Hirsch demonstrates convincingly that the failure of conventional trade theory is its consideration solely of the comparative costs of production. Expanding the model to include the production of several goods, Hirsch also shows that economies of joint production can change the investment decision when production for each good is maintained as an independent project. The model is also expanded to consider multistage production, whereby Hirsch shows that overseas investment production can increase the export of previously non-competitive intermediary goods.

While Hirsch discusses economies of joint production in marketing at a single location, there is no variable that represents the cost savings of the ownership of a globally operated system. As suggested earlier, these cost savings arise from considering a global network as a sunk cost and sequential investments as incremental. (There is also the factor that in a world of imperfectly diffused information, the scanning advantages of a multinational widens its set of investment opportunities.) The impact of these cost factors is to reduce the incremental values of  $C$ ,  $K$ , and  $M$  and to expand the firm's investment opportunities.

We can illustrate the value of systemic advantages by considering explicitly how a capital budget formulation might account for these benefits, particularly those of the first factor. The first factor, that of arbitraging institutional and national barriers, contributes directly to the enhancement of the discounted revenue stream. Such a contribution is derived through, one, a possible reduction in the discount rate, and secondly, through the addition of a string of real but usually nontradeable options. The advantages accrued by international diversification in financial markets and the role of MNCs in providing diversification have been commented upon by several authors, in particular by Sonlik (1974), Lessard (1976), and Agmon and Lessard (1977). In a world of no barriers to portfolio flows and of purchasing power parity, the cost of capital at the margin is the same for all investors in a taxless world, regardless of nationality. Since changes in the exchange rates and nominal interest rates would reflect equally changes in prices, discounted cash flows before taxes are the same no matter what their currency denomination.<sup>5</sup> When capital markets are segmented by national barriers and policies, discount rates vary between countries. These variations reflect national differences in risk bearing and in time preferences. To the extent that barriers are imperfect, discount rates tend toward a world rate plus or minus the transactional costs of subventing these barriers. Considered in this light, the equilibrium discount rates can be viewed as prices for a single commodity adjusted for transportation costs, when all countries are equally distant from one another.

The argument for the advantages of the MNC in financial markets boils down to the following set of simple statements. Multinational firms are able to invest across national borders and thereby avoid the presumably more costly barriers to portfolio flows. Because of its access to more diversified international financial markets, the MNC can, hold-



ing else equivalent, invest in marginal projects otherwise host firms. Since the MNC adjusts its risk according to a portfolio and the domestic firm according to a more home-portfolio (due to capital market imperfections and barriers), the MNC's cost of capital is relatively lower for the MNC. Second, a foreign project represents a unique asset in terms of the MNC's portfolio investments on the world market, the home investor must pay the MNC a premium for contributing an otherwise unique asset to his or her portfolio. In conclusion, then, in a world of free international capital flows, MNCs receive a premium relative to purely domestic home competitors—if their foreign investments are unique and nontraded assets—and invest at a lower cost of capital relative to the purely domestic host country competitors.<sup>6</sup> Another factor that has received less attention in the literature regarding the value of a multinational network is the value of holding a portfolio of assets defined by institutional barriers. These barriers can be defined by different currencies or more exactly by changes in relative prices, taxes, sovereign risk, and legal prescriptions on equity repatriation, etc. To illustrate the importance of these barriers, consider an MNC operating a series of plants in several countries. In purely domestic markets, the future cash flows are uncertain. In the realization of its cash flows, the MNC can through transfer pricing, financial packaging, and other methods alter to a nontrivial extent the structure and level of its obligations. The contingent events are the repatriation of taxable earnings in each of the various countries. The value of the option is that the MNC can choose in which jurisdiction to declare these profits so as to minimize the tax

For a second example, the MNC with several export markets and manufacturing plants. By design, the plants operate on average full capacity. In country X, it must renegotiate a set of labor contracts. In response to unacceptably (however defined) bargaining positions, the MNC can shift production to service its overseas markets, given that labor contracts are not binding. (This potential has secondary effects in terms of bargaining strength, as discussed in section III.) Thus given the uncertainty over the outcomes of negotiations, the MNC has the real option of mitigating the costs of factor price increases or higher taxes

in the short term, and the physical adjustment costs in the long term, through maintaining excess capacity in diverse national plants. A similar case is that of a real appreciating currency. The ability to shift exports from a country whose currency is appreciating to one where other plants are located is a valuable option—assuming that pricing is denominated in the currency of the importing country and factor payments are derived out of overseas revenues.

What is important to note is that all the above-described options are valuable because the future state of the world is uncertain.<sup>7</sup> Moreover, the more variable the environment, the more valuable are these options. From the point of view of the MNC, the variance of its cash flows and of factor prices in the context of national restrictions presents a set of valuable options relative to the opportunity set of a purely domestic firm. Since these options are exercisable only by the MNC and cannot be traded and purchased by individual investors in any meaningful sense, the value of the firm is enhanced by the incremental value of these options.<sup>8</sup>

The above discussion can be illustrated through the consideration of the elements that would enter into a capital-budgeting model. The value of the firm can be described as

$$NPV = \sum_{t=0}^T \frac{(\text{cash flows} + \text{learning} + \text{joint production} + \text{options})}{(1 + R)^t}$$

The discount rate may be lower than that available on the world market and, as is more likely, lower than that available to host country firms when capital markets are segmented. (The appropriate discount rate for each term is likely to vary according to its systematic risk, but for simplicity, we assume one rate.) The first term represents simply the discounted cash flows from a series of independent projects that are owned by globally unintegrated firms. The next three terms capture the advantages arising out of the interdependence of the cash flows of projects undertaken by an MNC. We have indicated these advantages to be learning-cost and joint-production economies, and the possession of real nontradeable options.

How may these advantages be actually evaluated?<sup>9</sup> Once the initial investment is made, learning cost and joint production externalities are likely to be incorporated in the capital budget through an incremental analysis. A more complex analysis is to evaluate at the time of the

initial investment the value of the option to expand into other products or into other markets. The option to arbitrage national barriers is similarly difficult to evaluate. Given the recent interest in evaluating financial options, it would appear that the analytical methods are already available to value real options numerically.<sup>10</sup> There are, however, serious obstacles to such an extension which are not always noted in the literature. In brief, a financial option can be valued because one assumes that there exists a shadow security whose price will follow a particular type of stochastic process. In the absence of such a shadow security, we have no reason to believe that the price of the real asset will also follow such a path since there is no means to arbitrage the real option against its shadow security. Nevertheless, the options literature provides the appropriate framework for understanding the reasoning behind the claim that the option to exercise certain rights, e.g., where to declare taxes, where to shift production, is a valuable hedge against contingent events.

The inclusion of these three elements in addition to the normal cash flows generated by project illustrates the opportunities that stem from a multinational system. As a result of these opportunities, we expect that growth in FDI is more likely to be in the form of reinvested earnings than in new entries. The consequences of this trend from the perspective of governments are discussed in the next section.

### III

From the firms' point of view, the flexibility to transfer resources across borders is a positive contribution to its earning stream. As discussed in an abundant literature, the viewpoints of governments are often less sanguine. Rather than consider the larger issues of government and MNC relations, we concentrate on a few specific issues, e.g., monetary stabilization, regulation, and negotiation. Through these examples, we illustrate that the well-established issues of contention between governments and MNCs are comprehensible only within the context of the systemic flexibility of the MNCs.

How is a government likely to view these systemic advantages of MNCs when pursuing domestic monetary stabilization objectives? If an MNC speculates on currencies, its behavior tends to give markets greater liquidity and thereby accelerates the speed of adjustment. Even if the MNC is not a speculator, it forecasts and hedges its contractual

and noncontractual exposure. Whether it speculates or is able merely to shift currencies more easily from one country to the next or to write more inexpensive contractual hedges, these activities clearly tend to negate the ability of governments to pursue objectives such as the stabilization of its currency countervailing to the market trend. Thus the presence of MNC's limits further the ability of governments to pursue independent objectives in an international economy.

If governments are more constrained in their ability to pursue monetary objectives due to the existence of MNC's, are they more constrained in pursuing other objectives? Consider a government which desires to regulate a foreign-owned industry. Under closed borders, enterprises are essentially hostage to the partisan coalitions of its environment. Since exit except in the form of selling its holdings is impossible, the regulated enterprise consents to government regulation, while it may itself seek to join a political coalition.<sup>11</sup> For the MNC whose foreign assets are primarily in the form of proprietary knowledge, regulation is unlikely to be successful. It is especially unsuccessful in its most extreme form—that of nationalization, for as long as the ongoing value of the subsidiary is dependent on a sequential stream of innovations, nationalization results merely in the elimination of industry. The effects of less extreme interventions, e.g., an increase in taxation, invoke most likely less extreme reactions. Nevertheless, the implications are the same. To the extent that multinational corporations contribute more to the economy than that of the new policies, their partial or total withdrawal are a real loss to the host country. Moreover, if multinational corporations are truly global, then the argument applies to home countries in which governments attempt to regulate, for example, outward flows of capital.

When FDI is primarily transmitted in the form of fixed capital with known and stable technologies, the bargaining position of the MNC and host government is reversed. This situation, which is known as the obsolescent bargain, has been extensively analyzed.<sup>12</sup> Mining is a classic example. The original investment requires a large fixed capital component. Presumably the MNC chooses to internalize this transaction in order to gain access to guaranteed supplies, to speculate on future prices when futures markets do not exist or do not trade claims on contracts many years out, or to acquire oligopolistic advantages. At the time of the investment, the host government's bargaining position is

constrained by competition from other countries. The host government can, however, capture part, if not all, of the rents *ex post* to the investment through a process of renegotiation. If, for example, the value of its mineral resources is higher than expected, the host government has the option of capturing part of the consequent excess returns. To the extent that this gaming behavior is expected and that equity claims and other financial contracts are difficult to enforce, it is likely that MNCs will be reluctant to invest in mineral extraction without adequate guarantees or insurance.

What does the above analysis imply for the growth and the role of the MNC in the 1980s? There are three principal implications. First is that the entry of new firms in international markets is likely to slow, holding changes in investment opportunities constant. Evidence for this transition is suggested, as noted earlier, in the growth of reinvested earnings relative to new equity investment in total FDI flows. These figures have been given in table 1.

The benefits of institutional arbitrage, learning curve effects, and joint production economies create, then, substantial barriers to entry. The importance of these factors is underlined in light of the present proportion of intra-firm trade which accounted roughly for 48.4% of all US imports in 1977 (Helleiner, 1979). Discussions of antitrust implications have usually stressed the feedback of FDI on competition in the home market (Bergsten et al., 1978). Perhaps a more troubling aspect is the impact of these barriers on the entry of firms from LDCs or from developed countries which were slow to create international firms. While FDI between LDCs has been increasing, such investments appear to be characterized more by the capture by small firms of investment gaps ignored by the much larger MNCs. Thus, FDI by LDCs is likely to be explained by a theory of FDI by small firms than by entry openings unique to the skills of LDC enterprises.<sup>11</sup>

Another implication lies in the persisting role of research and development in explaining some, though perhaps a relatively decreasing amount, of flows of proprietary capital over international borders. For those end products that are oriented towards the home market, FDI is often in the form of overseas production of intermediary products. In this case, FDI is related to research and development only insofar as the end product embodies a large value of technological expenditure. The overseas production of intermediary goods can involve minimal

research and development expenditures in terms of value added. Moreover, FDI is in this form partially trade enhancing.

What should be noted is that the production of technologically sophisticated products is of less importance—though still of indubitable significance—in future FDI flows. Instead, we can imagine the development of decentralized structures that permits the delegation of product selection and research and development to subsidiaries but leaves the strategic variables of financing, production, and tax arbitrage to the home office. There is some indication that this devolution is already perceptible in the food industry (Katz, 1981).

Related to the above implications is the tendency of the MNCs to develop and expand their trading divisions. In part, this evolution is derived from the hazards of the obsolescent bargain as well as from the erosion of market advantages as the original technological edge in some products evaporates. Vernon (1977) has termed this latter trend "senescence." The difference between these two trends is simply that the obsolescent bargain refers to loss of property rights, senescence to loss of market shares. The underlying cause of both trends is, however, similar, i.e., the loss of some technological advantage specific to the firm which maintains its bargaining or market position. In the first case, the MNC can limit its exposure by financing extraction in the form of debt with payoffs denominated in a specified quantity of the underlying mineral or product, or by long-term contracts, or by providing managerial services and downstream marketing and relinquishing its ownership or contractual obligations. In the second case, the MNC is also induced toward eliminating its productive activities and in effect leasing the services of its global network. In both cases, the possession of a multinational network provides a stream of benefits and investment opportunities independent of the products being traded. Examples of this development are the oil industry, Japanese trading companies, and the diversification of large firms into trading third-party products, such as in the case of Thyssen.

Consequently, the MNC of the 1980s is likely to be engaged less in equity investments in primary extraction industries, but relatively more in the provision of marketing and consulting services. Trade in intermediate products is also likely to increase, because the MNC can optimize production and marketing within an already existing global

system. These trends, of course, are a continuation of a pattern that has been visible for several years.

#### IV. Conclusions

I have tried to detail the precise advantages arising from a multinational network and its implication for the identity of the agents and the type of investment flows in the future. By and large, policy implications have not been discussed. The reasons for this omission are simple. Having developed our model under the assumption of profit maximization, optimal policy recommendations which differ from a competitive profit-maximizing outcome can only be motivated if the national objective functions are specified. I have not attempted such a specification, although the dropping of the assumption of profit maximization would be an interesting exercise.

The question has been left open whether the profitability and growth of the MNC is a result of its market power or productive efficiency.<sup>14</sup> I have, however, implicitly suggested the importance of first-mover advantages that current MNCs possess relative to potential entrants. If we are concerned over the absence of bargaining power on behalf of many LDCs, then our analysis reinforces the recommendations for an international regulation of MNCs or the creation of countervailing institutions or enterprises to enhance the bargaining power of LDC countries. Such regional efforts as ASEAN's recent consideration of the formation of trading companies similar to those of the Japanese are illustrations of efforts to create potential countervailing enterprises. But hidden beneath such developments and recommendations is an irony often noted in the case of MNCs from developed countries. That is, though the rents from learning-curve and joint-production externalities accrue to the home MNC and hence potentially to the home countries, the creation of truly global enterprises poses challenges to the national sovereignty of governments through their maximization of global profits and through their arbitraging of institutional borders. In other words, is it reasonable to expect that an MNC originating in a developing country, which MNC maximizes its return from its global activities, should be more sensitive to the sovereignty and interests of its national government?

Consequently, the conflict of nation-states and international firms remains an issue in the 1980s. Countries face incentives not only to regulate the entry of firms, but also their exit. There has appeared the ironic evolution that LDCs have been concerned to establish strict rules of entry, whereas developed countries increasingly seek to control the exit of firms and the immediate loss of jobs and production. Whether the combined impact of these trends is to reduce the benefits of a global network remains to be seen; but, in any event, it represents the forefront of future discussions on the merits of FDI and the multinational corporation.

### Notes

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1. See, for example, Kindleberger (1969), Vernon (1971, 1977), or Stopford and Wells (1972).
2. Such issues as transfer pricing, tax arbitrage, bargaining or negotiating power, and regulation are discussed by Lessard (1979), Bergsten et al. (1978), and Robinson (1976).
3. For a review of the internalization literature, see Rugman (1981). It should be noted that the concept of internalization is already adumbrated, like so many ideas in the literature on FDI, in Kindleberger (1969), pp. 19-22.
4. Undoubtedly, it can be claimed that the theory of internalization accounts precisely for these operational facets. (See, e.g., Buckley and Casson, 1976, p. 69.) But by placing stress upon the cost aspect of transactions, it fails to consider the profit opportunities generated by a global system.
5. This can be shown by considering whether to discount the overseas earnings by the home or foreign discount rate. If we assume purchasing power parity, changes of nominal interest rates are canceled by identical changes of nominal exchange rates.
6. In his contribution to this volume, Robert Aliber revives his earlier argument that FDI can be explained at the macroeconomic level, i.e., the arbitrage of international markets. Though such an approach appears weak in explaining such phenomena as cross-hauling, it has a tantalizing appeal in its attempts to link such anomalies as FDI waves to concepts as Tobin's  $q$ . There may be a macroeconomic story after all.
7. In the cases where uncertainty may appear as irrelevant, such as in tax arbitrage, governments are well-equipped to develop monitoring and enforcement services. It is the uncertainty of the realized profits that keeps the costs of these services relatively high to the benefits of reducing arbitrage behavior.
8. Some readers may be misled into inferring that the above argument suggests that total variance does matter after all to the investor. To the contrary, since these options are similar to monopoly or proprietary rents, the firms earn abnormally high rates of return but the stocks written on the firm, as long as they are traded in competitive capital markets, are priced in the expectation of a market rate of return adjusted for systematic risk.



9. See Lessard (1981) for a thorough discussion of the application of adjusted present value techniques for valuating international projects.
10. See the path-breaking article by Black and Scholes (1973) for the evaluation of financial options. Our concern with the shadow security is directed primarily at recent extensions of the Black-Scholes model into the evaluation of real assets. MacDonald and Segal (1981) are certainly aware of these difficulties, whereas Cooper and Broglie (1981) simply assume the existence of a shadow security without substantial comment.
11. See the interesting article by Magee in this volume which discusses the impact of political coalitions on FDI flows.
12. See the writings of Vernon (1971), Stopford and Wells (1972), and Bergsten et al., (1978).
13. We have not tried here to develop such a theory of FDI by small firms. Briefly, one relevant factor would seem to be trade in custom-designed products, i.e., small producers are more sensitive to the "voice" (in Hirschman's terminology) of smaller producers (Hirschman, 1971). Another factor is the trading by small firms of used capital equipment. Since used capital equipment is difficult to value, the seller may attempt to eliminate the costs of discounting incurred through the asymmetry in information by taking an equity position. Indeed, joint ventures between LDCs are relatively common. These factors, in addition to the ones discussed above, tend to explain some characteristics of FDI between LDCs, whose markets tend after all not to be dominated by large domestic enterprises as those in developed countries. For a discussion of FDI between LDCs, see Wells (1977).
14. A number of articles in this volume attempt to measure econometrically the relationship between the profitability of the MNC and barriers to entry. Though the factor of efficiency is not explicitly specified in these regressions, the results are nevertheless interesting in showing the significant correlation of these profits and barriers to entry.

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