

INT-2251

FOR PARTICIPANTS ONLY

6 March 2002

ENGLISH ONLY

ECLAC
Economic Commission for Latin America and the Caribbean
World Bank

Seminar on Globalization

Santiago, Chile, 6-8 March 2002

THE ECONOMICS OF INTERNATIONAL INVESTMENT INCENTIVES

Magnus Blomström

This document was prepared by Magnus Blomström, Stockholm School of Economics, NBER and CEPR. The views expressed in this document, which has been reproduced without formal editing, are those of the author and do not necessarily reflect the views of the Organization.

The Economics of International Investment Incentives

Magnus Blomström
Stockholm School of Economics, NBER and CEPR

1. Introduction

The attitude towards inward foreign direct investment (FDI) has changed considerably over the last couple of decades, as most countries have liberalized their policies to attract all kinds of investment from multinational corporations (MNCs). On the expectation that MNCs will raise employment, exports, or tax revenue, or that some of the knowledge brought by the foreign companies may spill over to the host country private sector, many governments have also introduced various forms of investment incentives, to encourage foreign owned companies to invest in their jurisdiction. The most powerful arguments in favor of such incentives are based on the prospect for knowledge spillovers. Since technology to some extent is a public good, foreign investment can result in benefits for host countries even if the MNCs carry out their foreign operations in wholly-owned affiliates. These benefits take the form of various types of externalities or “spillovers”. For instance, local firms may be able to improve their productivity as a result of forward or backward linkages with MNC affiliates, they may imitate MNC technologies, or hire workers trained by MNCs. The increase in competition that occurs as a result of foreign entry may also be considered a benefit, in particular if it forces local firms to introduce new technology and work harder. However, the foreign MNCs will not include these spillovers in their private assessment of the costs and benefits of investing abroad, and may therefore invest less than what would be socially optimal. The motive for public subsidies to foreign investors is to bridge the gap between the private and social returns, thus promoting larger inflows of FDI.

In this paper we examine whether international investment incentives can be justified on the basis of academic research on the host country effects of FDI. We are particularly interested in “financial incentives” given to multinationals to compensate them for being unable to reap all the benefits of their activities. We also discuss some

alternative policy measures available for governments to benefit from inward foreign investment.

The paper is organized as follows. Section 2 provides a brief overview of why firms invest abroad and Section 3 discusses the determinants of where they invest and introduces the arguments for international investment incentives. Since these incentives must be justified in terms of externalities or spillovers of FDI, Section 4 summarizes the available statistical evidence on such effects, focusing on the diffusion of production technology and labor and management skills from multinational corporations to local host country firms. Based on the current knowledge of spillovers, Section 5 asks whether investment incentives can be justified or not, and discusses some alternative policy measures. There is also a concluding section.

2. Why Do Firms Invest Abroad?¹

The modern theory of foreign direct investment dates back to Hymer (1960). The point of departure for his analysis was the observation that indigenous firms have advantages over foreign enterprises in the domestic market, because of their better knowledge of the local environment. In order to compete with local firms, foreign enterprises must therefore have some advantages that compensate them for the disadvantage of operating in a foreign environment. Furthermore, some market imperfection must also impede the local firms' access to the foreign enterprises' advantages. Thus, the theory of perfect competition is not likely to apply in cases where FDI and multinational corporations are present.

Subsequent developments within the industrial organization approach have centered on analyzing the special characteristics that make foreign firms competitive and the nature of the market imperfections surrounding foreign direct investment. Kindleberger (1969) has presented a taxonomy of the monopolistic conditions which induce direct investment, based on departures from perfect competition in goods and factor markets, internal and external economies of scale, and government regulations. Caves (1971) distinguished between horizontal and vertical FDI and emphasized the importance of product differentiation in the first case. The ability to differentiate products, including advertising, and the concomitant skills developed to serve

¹ For more complete surveys, see e.g. Caves (1996) and Dunning (1993).

markets, are, in his view, the crucial monopolistic advantages behind horizontal FDI. Other advantages, such as technological know-how derived from investment in research and development (R&D), are expected to be strongly correlated with differentiation capabilities, since the bulk of these investments is directed to the development of new products and the improvement of existing ones. Thus, the product differentiation capabilities emphasized by Caves can be seen as both comprising technological intensity and advanced marketing.

Another important step in the development of a theory of the multinational enterprise was taken by the internalization theory, which has an historical antecedent in Coase (1937), and an immediate precedent in the work of McManus (1972). McManus emphasized the role of transaction costs in the development of foreign operations. His analysis recognizes the existence of important interdependences between activities conducted in different countries and the need to coordinate the activities of the interdependent parties. There are three ways in which to coordinate economic agents: a) decentralized decision making leading to transactions at arm's length, making use of the price mechanism; b) contractual agreements; and c) the internalization of transactions within a single institution, through the establishment of an international firm. However, the price mechanism cannot be used without costs. There are transaction costs that arise from the need to specify the attributes of the good to be exchanged or from the difficulties in quantifying the flows of services or assets being exchanged. When the transacted commodity is information, for example in the form of technological know-how or marketing skills, transaction costs can be expected to be high or maybe even prohibitive. The multinational corporation, then, arises as a response to market failures, as a way to increase allocative efficiency in the presence of high costs of coordinating economic activity between independent economic agents.

McManus' ideas were further developed by Buckley and Casson (1976), who were the first to give an explicit presentation of the so-called internalization theory. The point of departure of this theory is that different business activities are linked by flows of intermediate products, embracing not only ordinary semi-processed materials, but also knowledge and information in the form of technological know-how and skills embodied in goods and human capital. The theory further postulates that external markets are often inefficient, especially with regard to transactions in intermediate products that embody firm specific intangible assets. This is because

specification and pricing of these products is particularly difficult. Moreover, external markets in knowledge intensive products are difficult to organize and usually do not cover the multiple eventualities that transactions in information give rise to. Thus, when appropriate external markets do not exist, or when the costs of operating in them are higher than the benefits, there are incentives for the MNC to develop its own internal organizational structure to achieve internal coordination of activities.

Hence, the internalization theory sees the MNC as the outcome of a process in which firms attempt to secure rents from their intangible assets in the presence of market imperfections. The emphasis is no longer, as in earlier theories, on the possession of firm specific advantages leading to market imperfections; but on the nature of markets, their weaknesses and limitations, and the organization of firms as a response to market imperfections.

A further contribution to the theory of the multinational corporation was made by Dunning (see e.g. Dunning, 1980). Arguing that no single theory could explain the existence of foreign direct investment, he proposed an eclectic approach in order to reconcile the different approaches and hypotheses discussed above. According to him, international production is the outcome of a process in which ownership, internalization and localization advantages work together. The ownership advantages are firm specific in the sense that the firm has control over them. They embrace patents, know-how, labor skills and other forms of superior production technology, control over markets and trade monopolies, scale advantages, managerial capabilities, etc. These factors determine the firm's competitive position in relation to other firms. The internalization advantages arise from the existence of market imperfections, and have been discussed above. They explain the firm's reluctance to engage in licensing agreements. Location advantages are those associated to the availability of inputs for all firms established in a certain country. They comprise natural resources, location, cultural and political environment, factor prices, transport costs, but also government policies such as trade barriers (quotas, tariffs) and local content requirements. These circumstances explain, for example, why a firm could undertake production abroad instead of producing for export from the home country.

So in brief, theory suggests that in order to compete successfully in a foreign market a firm must possess some ownership-specific assets in knowledge, technology, organization, managerial and marketing skills. A firm blessed with such assets enjoys several possible ways (apart from exporting) to claim the rents that they will yield in

foreign markets, including subsidiary production, joint ventures, licensing, franchising, management contracts, marketing contracts, and turnkey contracts. Of these, subsidiary production and joint ventures involve varying degree of equity participation, and thus a location decision for the investment. What then determines the locational decisions of the multinationals?

3. Investment Incentives and FDI

There is a strong consensus in the literature about why multinationals invest in specific locations (see e.g. Dunning, 1993, Globerman and Shapiro, 1999, and Shapiro and Globerman, 2001). MNCs are mainly attracted by strong economic fundamentals in the host economies. The most important ones are market size and real income levels, skill levels in the host economy, the availability of infrastructure and other resource that facilitates efficient specialization of production, trade policies, and political and macroeconomic stability. The relative importance of the different fundamentals varies depending on the type of investment. For instance, foreigners investing in the United States have mainly been attracted by the large market size, while multinationals investing in Singapore focus on the availability of skilled labor, good infrastructure and political and macroeconomic stability.

The location of FDI may also be influenced by various incentives offered by governments to attract multinationals. These incentives take a variety of forms. They include fiscal incentives such as lower taxes for foreign investors, financial incentives such as grants and preferential loans to MNCs, as well as other incentives like market preferences and monopoly rights.² Although no reliable statistics of the size of these incentives are available, a detailed study by UNCTAD (1996) suggests that incentive activities have increased considerably since the mid-1980s.

Empirical research shows that international investment incentives play only a limited role in determining the international pattern of foreign direct investment (see e.g. Blomström, *et al.*, 2000). Factors like market characteristics, relative production costs and resource availability explain most of the cross-country variation in FDI inflows. Nevertheless, it is clear that international investment incentives might play a role for MNC decisions on the margin. For instance, if a firm has two more or less similar location alternatives for its investment, incentives can tilt the investment

² See UNCTAD (1996) for definitions of various FDI incentives.

decision. This is particularly the case for financial incentives like grants and other types of subsidies, since they reduce the initial costs of the investment and lower the risk of the FDI project. The question is whether the host country's costs for providing the incentives – in terms of grants, subsidies, and other expenses – are justified. Are investment incentives likely to yield benefits that are at least as large as the costs?

To answer this question, it is convenient to begin by considering a hypothetical case where foreign MNCs do not differ in any fundamental way from local firms (although we know from the last section that MNCs typically possess firm-specific intangible assets that are not generally available in the host countries). Even in this extreme case, it may be possible to construct theoretical arguments in favor of investment incentives that are based on expected employment gains or faster economic growth resulting from FDI inflows. The costs of the initial investment incentive could arguably be recouped over time as the economy (and thereby the tax base) grows thanks to the FDI inflows. However, there are several strong arguments against this type of incentives. Firstly, there are obvious problems in identifying those marginal cases that would not enter the host economy without the incentives. Secondly, it is difficult to make reliable calculations about the expected future benefits in terms of growth, employment, or tax revenue. This is particularly complex in cases where FDI projects are driven by investment incentives rather than economic fundamentals of the host country. The reason is that these investors are likely to be relatively footloose, and could easily decide to move on to other locations offering even more generous incentives before the expected benefits in the first location have been realized (see e.g. Flamm, 1984). Thirdly – and most importantly – if foreign investors do not differ in any fundamental way from local investors, subsidizing FDI will distort competition and may generate significant losses among local firms.

Thus, it is hardly possible to justify investment incentives focusing on foreign MNCs that do not differ fundamentally from local companies. At the same time, it should be noted that this conclusion does not rule out public policy intervention in situations where unemployment, insufficient investment, and weak growth are central policy problems. Instead, the policy prescription is that the problems should be addressed with policies that do not differentiate between foreign and local investors.

In the more realistic case where foreign firms differ from local firms it appears easier to motivate financial incentives to foreign owned companies with the argument that there may be some market failure that is specific to MNC production. The most

common source of market failure is related to externalities or spillovers of FDI. As we discussed above, a firm must possess some asset in the form of knowledge of a public-good character (for example product and process technology or management) to be able to compete in foreign markets. If the multinational corporation cannot capture all quasi-rents due to its productive activities in the host economy, or if the affiliate increases the competitive pressure and removes distortions, the host country's private sector can gain indirectly when productivity spills over to locally owned firms. Thus, when markets fail to reflect the social benefits of the FDI, government action can be justified to bridge the gap between social and private return for FDI projects that create positive spillovers.

If the rationale for subsidizing inward FDI is to correct for the failure of markets to reflect the spillover benefits, we need to know whether the spillover benefits of FDI are sufficient to justify investment incentives. What does the existing academic research tell us about this?

4. Foreign Direct Investment and Spillovers³

The earliest discussions of spillovers in the literature on foreign direct investment date back to the 1960s. The first author to systematically include spillovers (or external effects) among the possible consequences of FDI was MacDougall (1960), who analyzed the general welfare effects of foreign investment. Other early contributions were provided by Corden (1967), who looked at the effects of FDI on optimum tariff policy, and Caves (1971), who examined the industrial pattern and welfare effects of FDI.

The common aim of these studies was to identify the various costs and benefits of FDI. However, productivity externalities were discussed together with several other indirect effects that influence the welfare assessment, such as those arising from the

³ Since FDI is essentially technology driven, we concentrate on the transfer and diffusion of technology, broadly speaking, from foreign multinationals to their host countries. One could, of course, also include a discussion of the long-term balance-of-payment effects of FDI, since foreign investment does not only appear as a one-time effect on the host country's capital account, but results in long-term effects on both the current and capital accounts of the host country. The initial investment is often financed with a combination of equity capital and international loans. In addition, the operations of the MNC affiliate often generate flows of imports and exports. A discussion of the net impact of these transactions on the host country external accounts could be relevant, but unfortunately, very few studies have tried to measure it.

impact of FDI on government revenue, tax policies, terms of trade, and the balance of payments. The fact that externalities were taken into account was generally motivated by empirical evidence from case studies rather than by comprehensive theoretical arguments. Yet, the early analyses made clear that multinationals may improve allocative efficiency by entering into industries with high entry barriers and reducing monopolistic distortions, and induce higher technical efficiency if the increased competitive pressure or some demonstration effect spurs local firms to more efficient use of existing resources. They also proposed that the presence may lead to increases in the rate of technology transfer and diffusion. More specifically, case studies showed that foreign MNCs may:

- contribute to efficiency by breaking supply bottlenecks (but that the effect may become less important as the technology of the host country advances);
- introduce new know-how by demonstrating new technologies and training workers who later take employment in local firms;
- either break down monopolies and stimulate competition and efficiency or create a more monopolistic industry structure, depending on the strength and responses of the local firms;
- transfer techniques for inventory and quality control and standardization to their local suppliers and distribution channels; and,
- force local firms to increase their managerial efforts, or to adopt some of the marketing techniques used by MNCs, either on the local market or internationally.

Although this diverse list gives some clues about the broad range of various spillover effects, it says little about how common or how important they are in general. In the literature we find detailed case studies discussing various aspects of FDI in different countries and industries, and these studies often contain valuable "circumstantial evidence" of spillovers (see Blomström, et al., 2000 for a survey). For instance, many analyses of the linkages between MNCs and their local suppliers and subcontractors have documented learning and technology transfers that may make up a basis for productivity spillovers or market access spillovers. However, these studies seldom reveal whether the MNCs are able to extract all the benefits that the new technologies or information generate among their supplier firms, so there is no clear proof of spillovers, but it is reasonable to assume that spillovers are positively related to the extent of linkages. Similarly, there is much written on the relation between

MNC entry and presence and market structure in host countries, and this is closely related to the possible effects of FDI on competition in the local markets. There are also case studies of demonstration effects, technology diffusion, and labor training in foreign MNCs. However, although these studies provide much detailed information about the various channels for spillovers, they say little about the importance of such spillovers.

The statistical studies of spillovers, by contrast, may reveal the overall impact of foreign presence on the productivity of local firms, but they are generally not able to say much about how the effects come about. These studies typically estimate production functions for locally owned firms, and include the foreign share of the industry as one of the explanatory variables. They then test whether foreign presence has a significant positive impact on local productivity (or productivity growth) once other firm and industry characteristics have been accounted for. Although the data used in these analyses are often limited to few variables, aggregated to industry level rather than plant level, and in several cases of a cross-section rather than time-series or panel character, they do provide some important evidence on the presence and pattern of spillover effects.

Almost all of the statistical analyses of spillovers have focused on intra-industry effects, but there are a few exceptions. One of them is Katz (1969), who notes that the inflow of foreign capital into the Argentine manufacturing sector in the 1950s had a significant impact on the technologies used by local firms. He asserts that the technical progress did not only take place in the MNCs' own industries, but also in other sectors, because the foreign affiliates forced domestic firms to modernize "by imposing on them minimum standards of quality, delivery dates, prices, etc. in their supplies of parts and raw materials" (Katz, 1969, p. 154). Also Aitken and Harrison (1991) include some discussion about inter-industry effect in Venezuelan manufacturing, and argue that forward linkages generally brought positive spillover effects, but that backward linkages appeared to be less beneficial because of the foreign firms' high import propensities (although there were differences between industrial sectors). Moreover, Sjöholm (1999b) identifies a geographical dimension of positive inter-industry spillovers in Indonesian manufacturing. His results suggest that the presence of foreign multinational companies may raise the productivity of locally owned firms in other industries, presumably through various linkages, but only if they are located in close proximity of the foreign multinationals. Finally, Kugler (2001),

which is the most comprehensive study of the sectoral diffusion of spillovers from FDI, finds that the greatest impact of MNCs in Colombian manufacturing is across rather than within the subsidiaries own industries. However, the subsequent discussion will rarely touch upon this kind of inter-industry links, but rather focus on intra-industry effects. To the extent that FDI affects other industries than that where the foreign investor operates, it is obvious that there is a risk that effects – negative as well as positive – are underestimated.

The earliest statistical analyses of intra-industry spillovers include studies for Australia by Caves (1974), for Canada by Globerman (1979), and for Mexico by Blomström and Persson (1983). These authors examine the existence of spillovers by testing whether foreign presence has any impact on labor productivity in local firms in a production function framework. Foreign presence is simply included among other firm and industry characteristics as an explanatory variable in a multiple regression. All three studies conclude that spillovers are significant at this aggregate level, although they cannot say anything about how spillovers take place.

Some more recent studies also claim that inward investment has made an important and significant contribution to economic growth in the recipient countries. For instance, Driffield (2001), Liu et al. (2000) and Pain (2001) all find statistically significant spillovers in the UK, as do Chuang and Lin (1999), Dimelis and Louri (2002), and Lipsey and Sjöholm (2001) in their studies of Greece, Taiwan, and Indonesia, respectively. Similar results are reported in Blomström and Wolff (1994), who also try to determine the size of these effects by asking whether the spillovers in the Mexican manufacturing sector were large enough to help Mexican firms converge toward US productivity levels during the period 1965-1982. Their answer is affirmative: foreign presence seems to have a significant positive impact on the rates of growth of local productivity. Similar conclusions is reached by Nadiri (1991), in a study of the impact of US direct investment in plant and equipment on the manufacturing sectors in France, Germany, Japan, and the UK between 1968 and 1988. Increases in the capital stock owned by US multinationals seem to stimulate new domestic investment in plant and equipment, and it appears that there is also a positive impact of FDI on the growth of total factor productivity in the host countries' manufacturing sectors.

On the other hand, there are several studies that find negative effects of the presence of multinationals on domestic firms. For instance, Haddad and Harrison

(1991 and 1993), in a test of the spillover hypothesis for Moroccan manufacturing during the period 1985-1989, conclude that spillovers do not take place in all industrial sectors. Like Blomström (1986), they find that foreign presence lowers the average dispersion of a sector's productivity, but they also observe that the effect is more significant in sectors with simpler technology. This is interpreted to mean that foreign presence forces local firms to become more productive in sectors where best practice technology lies within their capability, but that there are no significant transfers of modern technology. Furthermore, they find no significant effects of foreign presence on the rate of productivity growth of local firms, and interpret this as additional support to the conclusion that technology spillovers do not occur.

Aitken and Harrison (1991 and 1999) use plant-level data for Venezuelan manufacturing between 1976 and 1989 to test the impact of foreign presence on total factor productivity growth. They conclude that domestic firms exhibited higher productivity in sectors with a larger foreign share, but argue that it may be wrong to conclude that spillovers have taken place if MNC affiliates systematically locate in the more productive sectors. In addition, they are also able to perform some more detailed tests of regional differences in spillovers. Examining the geographical dispersion of foreign investment, they suggest that the positive impact of FDI accrued mainly to the domestic firms located close to the MNC affiliates. However, effects seem to vary between industries.

Also Perez (1998), in a study of UK industries and Cantwell (1989), who investigates the responses of local firms to the increase in competition caused by the entry of US multinationals into European markets between 1955 and 1975, argue that positive technology spillovers did not occur in all industries. Cantwell's analysis differs notably from the other studies discussed in this section - he does not focus on productivity, but rather on changes in the market shares of foreign and local firms - but his conclusions are interesting. He asserts that "the technological capacity of indigenous firms ... was the major factor in determining the success of the European corporate response" (p. 86) to the US challenge, and that the size of the national market was an additional determinant. More specifically, Cantwell suggests that the entry of US affiliates provided a highly beneficial competitive spur in the industries where local firms had some traditional technological strength, whereas local firms in other industries - especially in countries where markets were too small to allow both

kinds of firms to operate at efficient scale - were forced out of business or pushed to market segments that were ignored by the foreign MNCs.

So the results on the presence of spillovers seem to be mixed⁴. However, recent studies suggest that there is a systematic pattern where various host industry and host country characteristics influence the incidence of spillovers. For instance, the foreign affiliates' levels of technology or technology imports seem to influence the amount of spillovers to local firms. The technology imports of MNC affiliates, in turn, have been shown to vary systematically with host country characteristics. These imports seem to be larger in countries and industries where the educational level of the local labor force is higher, where local competition is tougher, and where the host country imposes fewer formal requirements on the affiliates' operations (Blomström *et al.* 1994, Kokko and Blomström 1996).

Some recent studies have also addressed the apparent contradictions between the earlier statistical spillover studies, with the hypothesis that the host country's level of technical development may matter as a starting point. Kokko (1994), for instance, argues that spillovers should not be expected in all kinds of industries. In particular, foreign MNCs may sometimes operate in "enclaves", where neither products nor technologies have much in common with those of local firms. In such circumstances, there may be little scope for learning, and spillovers may not materialize. Conversely, when foreign affiliates and local firms are in more direct competition with each other, spillovers are more likely.

Examining data for Mexican manufacturing, Kokko (1994) finds that spillovers are positively related to the host economy's capacity to absorb them. Similar findings for the Uruguayan manufacturing sector are reported in Kokko *et al.* (1996), although their study suggests that weak technological capability at the firm level may also be an obstacle for spillovers. This is consistent with some recent research results from Ireland and India. Görg and Strobl (2000 and 2001) show that the presence of foreign companies in the Irish economy has a life enhancing effect on indigenous firms and plants in high tech industries, suggesting the presence of technological spillovers, but no effect on indigenous low tech firms and plants. Kathuria (1998, 2000, and 2001) suggest that the indirect gains or spillovers from FDI are not an automatic consequence of MNC presence in the Indian economy. Rather they depend to a large

⁴ See Görg and Strobl (forthcoming) for a meta-analysis of the spillover literature.

extent on the efforts of local firms to invest in learning and R&D activities so as to de-codify the spilled knowledge. Moreover, no evidence of spillovers to low-tech Indian companies was reported.

Another possible explanation for the divergent findings from the earlier statistical spillover tests is suggested by Kokko (1996), who analyzes the effects of competition in Mexican manufacturing. The earlier studies have tested the hypothesis that productivity spillovers are strictly proportional to foreign presence, but Kokko argues that this is not always the case. Spillovers from competition, in particular, are not determined by foreign presence alone, but rather by the simultaneous interactions between foreign and local firms. Hence, it is possible that the spillovers are larger in cases where a few foreign MNC stir up a previously protected market than in a situation where foreign affiliates hold large market shares, but refrain from competing hard with local firms. In fact, in some cases, large foreign presence may even be a sign of a weak local industry, where local firms have not been able to absorb any productivity spillovers at all and have therefore been forced to yield market shares to the foreign MNCs. Analyzing the operations of foreign and domestic firms in Mexican manufacturing in a simultaneous framework, Kokko (1996) finds support for these hypotheses. The labor productivity of foreign and local firm appears to be *simultaneously determined, and competition from foreign affiliates seems to have an independent effect on the productivity of local firms, even after accounting for the demonstration and contagion spillovers that are directly proportional to foreign presence.* Sjöholm (1999a) also concludes that competition enhances the positive productivity spillovers from FDI.

While most of the studies mentioned above have focused on differences between industries in a given host country, Blomström *et al.* (1994) have examined the role of the host country's overall development level as a determinant of spillovers. The results of their comprehensive cross-country study of 101 economies suggest that spillovers are concentrated to middle-income developing countries, while there was no evidence of such effects for the poorest developing countries. Just as the analyses of individual host countries, these findings highlight the importance of local competence and competition for spillovers. Few local firms in the poorest countries are in direct competition with foreign MNCs, and few of these countries possess the technical skills needed to absorb modern MNC technologies. Similar results are reported in Balasubramanyam (1998). He concluded that FDI can be a potent

instrument of development, but only in the presence of a threshold of human capital, well developed infrastructure facilities, and a stable economic climate. Thus, “FDI is a rich country good” (p. 18) and only the most advanced developing countries are able to benefit from FDI.

Thus, it seems clear from these studies that host country and host industry characteristics determine the impact of FDI, and that systematic differences between countries and industries should therefore be expected. There is strong evidence pointing to the potential for significant spillovers benefits from FDI, but also ample evidence indicating that spillovers do not occur automatically. Whether these potential spillovers will be realized or not depends on the ability and motivation of local firms to engage in investment and learning to absorb foreign knowledge and skills.

5. Are International Investment Incentives then Justified?

Based on the argument that foreign firms can promote economic development and growth, many countries have introduced various investment incentives to encourage foreign MNCs to invest in their market. As we argued in Section 3, such incentives can only be justified if the foreign firms differ from local companies in that they possess some firm specific intangible asset that can spill over to local firms. In that case, the foreign investor’s private benefits are lower than the social benefits (including the spillovers) and total foreign investment will fall short of the optimal amount unless various investment incentives compensate the foreign investor. Given the empirical evidence on spillovers presented in Section 4, there are therefore reasonable arguments in favor of investment incentives.

At the same time, there are good reasons to remain cautious in granting incentives focusing exclusively on foreign investors. In addition to the problems identified in Section 3, we have seen above that it is not easy to determine where and how spillovers will occur, which creates problems of “picking winners.” It is also difficult to calculate the value of the externalities, which is important, since national welfare will increase only if the investment incentive is smaller than the value of the externality.

Another problem with international investment incentives is that they prepare the ground for rent seekers. It is well known from the trade literature that selectivity, in combination with lack of transparency, increases the risk for rent-seeking and corruption (see e.g. Bhagwati, 2001). Policy measures that focus on broad and general

forms of support that are available to all firms, irrespective of nationality, tend to reduce rent-seeking and corruption (see Kokko, 2001).

Moreover, competition among governments (national or local) to attract FDI may create problems (see Oman, 2000). When governments compete to attract FDI there is a tendency to overbid and the subsidies may very well surpass the level of the spillover benefits, with welfare losses as a result. These problems may be particularly severe if the incentives discriminate against local firms and cause losses of local market shares and employment.

However, the most important argument against investment incentives focusing exclusively on foreign firms is based on the evidence that spillovers are not automatic, but depend crucially on the conditions for local firms. The potential for spillovers is not likely to be realized unless local firms have the ability and motivation to learn from foreign MNCs and to invest in new technology. This implies that investment incentives aiming to increase the potential for spillovers may be inefficient unless they are complemented with measures to improve the local learning capability and to maintain a competitive local business environment.

Taking these arguments into account, it is possible to propose some conclusions for the design of investment incentives. First and foremost, the incentives should be available on equal terms to all investors irrespective of industry and nationality of investor, rather than based on discretionary decisions. The motive for supporting foreign investors – including existing investors that may consider expanding their activities – is to equalize social and private returns to investment. The reason for subsidizing local firms is to strengthen their capacity to absorb foreign technology and skills. The incentives should not be of an *ex ante* type that is granted prior to the investment, but they should instead promote those activities that create a potential for spillovers. In particular, these include education, training, and R&D activities, as well as linkages between foreign and local firms.⁵ An advantage of performance based incentives is that they may affect the entire stock of investments, rather than just the flow of new investment. Given their broad scope, the investment incentives in question should be considered part of the economy's innovation and growth policies rather than a policy area that is only of relevance for foreign investors.

⁵ UNCTAD (2001) includes a detailed discussion about policies to promote linkages between foreign and local firms.

In addition to investment incentives of the type discussed above, governments should also consider their efforts to modernize infrastructure, raise the level of education and labor skills, and improve the overall business climate as parts of their investment promotion policy. As noted repeatedly above, these are important component of the economic fundamentals that determine the location of FDI. In addition to attracting FDI and facilitating the realization of spillovers, these policies will also promote growth and development of local industry. This, after all, is one of the ultimate goals of government intervention in general.

Ireland seems to be an excellent example of the advantages of such policies. There is no doubt that the Irish success in attracting FDI and benefiting from such investments, to a large extent stems from having the right “fundamentals” (see e.g. Barry, et al., 1999). Ireland has for a long time been considered a preferred location for FDI, but it should be noted that the various incentives attracting foreign investors, including low taxes, good infrastructure, access to the EU market, and continuously increasing labor skills, have also been available to local companies. This is a likely reason for the positive effects of inward FDI on local industry as found by e.g. Görg and Strobl (2000 and 2001). A similar example is provided by Sweden, which was the world 7th largest recipient of foreign investment during the second half of the 1990s. While Sweden provides an attractive business environment, industrial policies do not distinguish between foreign and domestic investors.

6. Concluding Remarks

Foreign direct investment can play an important role in raising a country’s technological level, creating new employment, and promoting economic growth. Many countries are therefore actively trying to attract foreign investors in order to promote their economic development. However, there are different ways to attract FDI. In this paper we have argued that the use of investment incentives focusing exclusively on foreign firms, although motivated in some cases from a theoretical point of view, is not a recommended strategy. The main reason is that the strongest theoretical motive for financial subsidies to inward FDI – spillovers of foreign technology and skills to local industry – is not an automatic consequence of foreign investment. The potential spillover benefits are realized only if local firms have the ability and motivation to invest in absorbing foreign technologies and skills. To motivate subsidization of foreign investment, it is therefore necessary, at the same

time, to support learning and investment in local firms as well. Hence, rather than proposing narrowly defined FDI policies, we argue that effective investment incentive packages should be seen as part of the country's overall industrial policy, and be available on equal terms to all investors, foreign as well as local. The incentives should focus in particular on those activities that create the strongest potential for spillovers, including linkages between foreign and local firms, education, training, and R&D. It should also be noted that the country's industrial policies in general are important determinants of FDI inflows and effects of FDI. By enhancing the local supply of human capital and modern infrastructure and by improving other fundamentals for economic growth, a country does not only become a more attractive site for multinational firms, but there is increased likelihood that its private sector benefits from the foreign participation through spillover benefits.

References

- Aitken, B. and A. Harrison (1991), "Are There Spillovers From Foreign Direct Investment? Evidence from Panel Data for Venezuela", mimeo, MIT and the World Bank, November.
- Aitken, B. and A. Harrison (1999), "Do Domestic Firms Benefit from Foreign Investment? Evidence from Venezuela", *American Economic Review*, Vol. 89, 605-618.
- Balasubramanyam, V.N. (1998), "The MAI and Foreign Direct Investment in Developing Countries", Discussion Paper EC10/98, Lancaster University.
- Barry, F., J. Bradley and E.O'Malley (1999), "Indigenous and Foreign Industry: Characteristics and Performance", in F. Barry, ed., *Understanding Ireland's Economic Growth*, London: Macmillan.
- Bhagwati, J. (2001), *Free Trade Today*, Princeton: Princeton University Press.
- Blomström, M. (1986), "Foreign Investment and Productive Efficiency: The Case of Mexico", *Journal of Industrial Economics*, Vol. 15, 97-110.
- Blomström, M. and A. Kokko (2001), "From Natural Resources to High-Tech Production: The Evolution of the Industrial Competitiveness in Sweden and Finland", Mimeo, The World Bank, August.
- Blomström, M., A. Kokko and M. Zejan (1994), "Host Country Competition and Technology Transfer by Multinationals", *Weltwirtschaftliches Archiv*, Band 130, 521-533.
- Blomström, M., A. Kokko and M. Zejan (2000), *Foreign Direct Investment. Firm and Host Country Strategies*, London: Macmillan.
- Blomström, M. and H. Persson (1983), "Foreign Investment and Spillover Efficiency in an Underdeveloped Economy: Evidence from the Mexican Manufacturing Industry", *World Development*, Vol. 11, 493-501.
- Blomström, M. and F. Sjöholm (1999), "Technology Transfer and Spillovers: Does Local Participation with Multinationals Matter?", *European Economic Review*, Vol 43, 915-923.
- Blomström, M. and E. Wolff (1994), "Multinational Corporations and Productivity Convergence in Mexico", in W. Baumol, R. Nelson and E. Wolff, eds.,

- Convergence of Productivity: Cross-National Studies and Historical Evidence*, Oxford: Oxford University Press.
- Buckley, P.J. and M. Casson (1976), *The Future of the Multinational Enterprise*, London: Macmillan.
- Cantwell, J. (1989), *Technological Innovation and Multinational Corporations*, Oxford: Basil Blackwell.
- Caves, R.E. (1971), "International Corporations: The Industrial Economics of Foreign Investment", *Economica*, Vol. 38, 1-27.
- Caves, R.E. (1974), "Multinational Firms, Competition and Productivity in Host-Country Markets", *Economica*, Vol. 41, 176-193.
- Caves, R.E. (1996), *Multinational Enterprise and Economic Analysis*, Second Edition. Cambridge: Cambridge University Press.
- Chen, E.K.Y. (1983), *Multinational Corporations, Technology and Employment*, London: Macmillan.
- Chuang, Y-C and C-M Lin (1999), "Foreign Direct Investment, R&D and Spillover Efficiency: Evidence from Taiwan's Manufacturing Firms", *Journal of Development Studies*, Vol. 35, 117-137.
- Coase, R. H. (1937), "The Nature of the Firm", *Economica*, Vol. 4, 386-405.
- Corden, W.M. (1967), "Protection and Foreign Investment", *Economic Record*, Vol. 43, 209-232.
- Dimelis, S. and Louri, H. (2002), "Foreign Ownership and Production Efficiency: A Quantile Regression Analysis", *Oxford Economic Papers* (forthcoming).
- Driffield, N. (2001), "The Impact on Domestic Productivity of Inward Investment in the UK", *Manchester School*, Vol. 69 (1), 103-119.
- Dunning, J. (1980), "Toward an Eclectic Theory of International Production: Some Empirical Tests", *Journal of International Business Studies*, Vol. 11, 9-31.
- Dunning, J. (1993), *Multinational Enterprises and the Global Economy*, Reading: Addison-Wesley Publ. Co.
- Flamm, K. (1984), "The Volatility of Offshore Production", *Journal of Development Economics*, Vol. 16 (December), 231-248.
- Globerman, S. (1979), "Foreign Direct Investment and 'Spillover' Efficiency Benefits in Canadian Manufacturing Industries", *Canadian Journal of Economics*, Vol. 12, 42-56.
- Globerman, S. and D. Shapiro (1999), "The Impact of Government Policies on Foreign Direct Investment: The Canadian Experience", *Journal of International Business Studies*, Vol. 30 (3), 513-532.
- Görg, H. and E. Strobl (2000), "Multinational Companies, Technology Spillovers, and Firm Survival: Evidence from Irish Manufacturing". GLM Research Paper 2000/18, University of Nottingham.
- Görg, H. and E. Strobl (2001), "Multinational Companies, Technology Spillovers, and Plant Survival: Evidence from Irish Manufacturing", EIJS Working Paper 131, Stockholm School of Economics.
- Görg, H. and E. Strobl (forthcoming), "Multinational Companies and Productivity Spillovers: A Meta-Analysis with a test for Publication Bias", *European Economic Review*.
- Haddad, M. and A. Harrison (1991), "Are there Positive Spillovers from Direct Foreign Investment? Evidence from Panel Data for Morocco", mimeo, Harvard University and the World Bank, September.

- Haddad, M. and A. Harrison (1993), "Are there Positive Spillovers from Direct Foreign Investment? Evidence from Panel Data for Morocco", *Journal of Development Economics*, Vol. 42, 51-74.
- Hymer, S. (1960), "The International Operations of National Firms: A Study of Direct Investment", unpublished PhD thesis, Massachusetts Institute of Technology.
- Katz, J.M. (1969), *Production Functions, Foreign Investment and Growth*, Amsterdam: North Holland.
- Kindleberger, C.P. (1969), *American Business Abroad*, New Haven: Yale University Press.
- Kokko, A. (1994), "Technology, Market Characteristics, and Spillovers", *Journal of Development Economics*, Vol. 43, 279-293.
- Kokko, A. (1996), "Productivity Spillovers from Competition between Local Firms and Foreign Affiliates", *Journal of International Development*, Vol. 8, pp. 517-530.
- Kokko, A. (2001), "Export-Led Growth in East Asia", Mimeo, Stockholm School of Economics, August.
- Kokko, A. and M. Blomström (1995), "Policies to Encourage Inflows of Technology through Foreign Multinationals", *World Development*, Vol. 23, 459-468.
- Kokko, A., R. Tansini and M. Zejan (1996), "Local Technological Capability and Spillovers from FDI in the Uruguayan Manufacturing Sector", *Journal of Development Studies*, Vol. 34, 602-611.
- Kokko, A., R. Tansini and M. Zejan (2001), "Trade Regimes and Effects of FDI: Evidence from Uruguay", *Weltwirtschaftlischers Archiv*, Vol. 137, 124-149.
- Kugler, M. (2001), "The Sectoral Diffusion of Spillovers from Foreign Direct Investment", Mimeo, University of Southampton, August.
- Lipsey, R.E. and F. Sjöholm (2001), "Foreign Direct Investment and Wages in Indonesian Manufacturing", NBER working paper No 8299 (May).
- Liu, X. and P. Siler, C. Wang and Y. Wei (2000), "Productivity Spillovers from Foreign Direct Investment: Evidence from UK Industry Level Panel Data", *Journal of International Business Studies*, Vol. 31 (3), 407-425.
- MacDougall, G.D.A. (1960), "The Benefits and Costs of Private Investment from Abroad: A Theoretical Approach", *Economic Record*, Vol. 36, 13-35.
- McManus, J.C. (1972), "The Theory of the International Firm", In G. Paquet, ed., *The Multinational Firm and the Nation State*, Don Mills Ontario: Collier-Macmillan.
- Nadiri, M.I. (1991), "U.S. Direct Investment and the Production Structure of the Manufacturing Sector in France, Germany, Japan, and the U.K.", mimeo, New York University and NBER, December.
- Oman, C. (2000), *Policy Competition for Foreign Direct Investment: A Study of Competition among Governments to Attract FDI*, Paris: OECD.
- Pain, N., ed. (2001), *Inward Investment, Technological Change and Growth. The Impact of Multinational Corporations on the UK Economy*, Houndsmills: Pelgrave.
- Perez, T. (1998), *Multinational Enterprises and Technological Spillovers*, The Netherlands: Harwood Academic Publishers.
- Shapiro, D. and S. Globerman (2001), "National Infrastructure and Foreign Direct Investment", mimeo, Simon Fraser University (February).
- Sjöholm, F. (1999a), "Technology Gap, Competition and Spillovers from Direct Foreign Investment: Evidence from Establishment Data", *Journal of Development Studies*, Vol. 36 (1), 53-73.

- Sjöholm, F. (1999b), "Productivity Growth in Indonesia: The Role of Regional Characteristics and Direct Foreign Investment", *Economic Development and Cultural Change*, Vol. 47 (3), 559-584.
- UNCTAD (1996), *Incentives and Foreign Direct Investment*, Current Studies, Series A, No. 30, New York and Geneva: United Nations.
- UNCTAD (2001), *World Investment Report 2001: Promoting Linkages*, New York and Geneva: United Nations.

