

## **MNE strategies and implications for economic development – The role of infrastructure**

*ABSTRACT: This paper explores the paradoxical relationship between MNE current strategies and economic development. There is evidence that positive developmental impacts of FDI flows are conditional on high levels of human capital and thus on the existence of ‘good’ infrastructure in recipient countries. In this paper we suggest that current MNE strategies have a negative impact on the development of infrastructure in LDCs. The justification for this argument arises from the low developmental impact of current FDI patterns and from rising costs of attracting increasingly footloose investment. The overall effect is to aggravate government financial constraints on the development of basic infrastructure. We develop propositions for future empirical research. We also consider implications for MNE strategy and argue that current MNC strategies are not only ineffective for delivering poverty reduction but that current strategies in developing countries do not necessarily serve the interest of MNEs either.*

### **1 Introduction**

In recent years several international business (IB) scholars have explored the issues around impact of MNE activities on economic development and poverty reduction. This is a significant development in the IB literature, and constitutes an extension of the domain of international business as a field of study. In the past international business scholarship was not particularly concerned with the development issue, probably reflecting the notion that inquiries beyond the firm as unit of analysis are not in the domain of international business (Nehrt, Truitt, and Wright 1970; Ricks 1985). The more engaged stance of international business scholarship with the development issue (see e.g. Meyer 2004; Ramamurti 2004) is in part a reflection of the fact that the earlier optimism regarding FDI as ‘an engine of development’ (UNCTAD 1992) has virtually evaporated and replaced with an arguably more realistic assessment. There is now a general realization that positive developmental impacts from FDI are not automatic and that the realization of potential benefits from FDI is a challenging process at which relatively few countries have been successful (Dunning and Narula 2004; Lall and Narula 2004; Nunnenkamp 2004; Nunnenkamp and Spatz 2004; UNCTAD 1999). The recent interest in poverty issues by a number of International Business (IB) scholars can be seen in a broader context which is witnessing a more nuanced and critical evaluation of the development impact of MNEs in LDCs (Ghauri and Buckley 2002, 2006; Ghauri and Cao 2006; Kolk and van Tulder 2006; London and Hart 2004; O'Brien and Beamish 2006; Yamin and Ghauri 2004). The present paper seeks to add to this literature by focusing on the impact of current MNE strategies on the development of basic infrastructure in LDCs. The focus on infrastructure is highly apposite from a poverty reduction perspective (Datt and Ravallion 1998; Fay et al. 2005) and yet is neglected in the discussion of the MNC impacts on poverty reduction.

## 2 Research problem and motivation

There is a paradox in the relationship between MNE current strategies and economic development. On the one hand there is evidence that the positive developmental impact of FDI flows are strongly conditional on high levels of human capital and thus on the existence of 'good' infrastructure in recipient countries, as levels of human capital are a product of cumulative investment in basic infrastructure such as health and education over an extended period of time. On the other hand current MNE strategies have a negative impact on the development of infrastructure in LDCs. Specifically, MNE strategies are, *inter alia*, creating a pattern of FDI that has, except in a small number of 'catching up' countries (Dunning and Narula 2004), a low developmental potential - aggravated by the rising costs of attracting increasingly footloose investment. This creates pressures on public revenue which, given that investment in basic infrastructure is largely dependent on public taxation and government revenue (Swaroop 1994), translates into constraints on the development of infrastructure. In this paper we articulate this paradox more fully. This is a useful exercise for two reasons. First it potentially enriches the emerging literature by enhancing understanding of the connection between MNE strategies and poverty reduction. Second an important implication of the paradox we articulate is that current MNE strategies are not only failing in terms of poverty reduction but may not be in the best interest of MNEs themselves as they also benefit from the development of infrastructure in host countries, through, for example, better opportunities for subsidiary capability development.

The remainder of the paper is organized as follows. Section 3 provides an overview of changes in the strategy and structure of MNEs. A basic driver is that the relative decline is the imperative for national responsiveness on the one hand and the enhancement of the global integration imperative on the other. Section 4 focuses on the pattern of FDI flows to less-developed-countries (LDCs) associated with emerging MNE strategies. It highlights the low development potential (low domestic linkages and positive spillovers) of FDI. Section 5 discusses the methodology of our conceptual research, by providing an overview of the literatures linking infrastructure with, on the one hand, positive impact of FDI flows on economic development and, on the other, the positive effect of infrastructure on poverty reduction. Section 5.2 focuses on the reverse of the first relationship, namely, on the impact of MNE strategies on the development of infrastructure in LDCs. Here the key consideration is the rising cost of attracting FDI in terms of forgone expenditure on the development of infrastructure (public revenues and public administrative and related resources taken up in attracting FDI). Section 6 concludes the paper by considering implications for MNE strategies in LDCs.

## 3 Changing MNE strategies and structures

Traditionally IB scholarship assumed that the key strategic issue for the MNE was the handling of the tension between the imperative of global integration on the one hand and the need for national responsiveness on the other (Bartlett and Ghoshal 1987). The need for national responsiveness, in part, reflected an environment in which national governments had significantly more bargaining power in their dealings with MNEs than they generally do nowadays. This dual imperative was reflected in the organization of the MNE. The seminal work of Ghoshal and Bartlett (1990) explained why multinationals would tend to be federative rather than unitary structures, although industry and other contingencies would also be influential in shaping the structure. In the federative structure, *national* subsidiaries (by which we mean a

subsidiary whose focus is very much on the national environment and market of the host country) were an important part of the organization of MNE. Thus, Ghoshal and Bartlett (1990, 607) argued that one reason for the limit to the efficacy of headquarters *fiat* in MNEs was that (some) subsidiaries ‘control critical linkages with the host governments’. The basis for the power of national governments was of course control over access to the national economy and in particular to their markets. Multinational expansion frequently took the form of establishing ‘miniature replicas’, i.e. subsidiaries which performed several value chain activities in an integrated way and whose main function was to adopt or adapt the products and technologies of the MNE to the market and customer environment of the host countries. Over time however, miniature replicas could become more powerful; focus on the national economy would lead to significant degrees of ‘embeddedness’ in the national market, meaning that the subsidiary would become rooted in a network of business, technological and institutional actors in the host country (Ghauri 1992; Phene and Almeida 2003). In the words of Phene and Almeida (2003) subsidiaries grow ‘progressively closer to local host country networks both in terms of sourcing and sharing knowledge’ (Phene and Almeida 2003, p.363). It has also been found that subsidiary embeddedness in local business and technology networks is an important source of subsidiary strategic capabilities (Andersson, Forsgren, and Holm 2002). From the perspective of economic development, this ‘old model’ of MNE expansion had a positive quality - compared to what has replaced it - in potentially encouraging linkages in the domestic economy and the development of industrialization, although in practice the models’ implementation was often mired in excessively protectionist policies. Moreover the smaller markets and lower purchasing power of many LDCs constrained the scope for subsidiary development and linkage formation. However the experience of MNE assisted import substitution is not wholly negative (Hirschman 1968).

Globalization has reduced the need for national responsiveness. MNE strategies are shifting towards greater global (or at least regional) integration<sup>1</sup> and their investment decisions are increasingly motivated by efficiency and strategic asset seeking. The MNEs’ emerging strategies are underpinned, on the one hand, by their increasingly knowledge-based, intangible and hence mobile core assets and capabilities and, on the other hand, by lower and falling barriers to cross-border operations. This gives MNEs more locational choices, particularly with respect to production and operational activities. Thus MNE strategies revolve around the disintegration of the value chain (Birkinshaw 2001; Buckley and Ghauri 2004) reflecting an increasing ability ‘to segment their activities and to seek the optimal location’ for narrowly specialized activities (Buckley and Ghauri 2004, p.83). In a number of recent contributions Dunning (2002), Dunning and Narula (2004) and Narula and Dunning (2000) provide a similar analysis of how growing liberalization of markets and greater mobility of firm-specific assets are key influences on MNE strategies. The pattern of FDI flows is influenced by the fact that, increasingly, host countries fit into the strategic calculation of MNEs as sites for key resources or capabilities rather than markets. This does not mean that MNEs are not interested in markets but that, due to falling trade barriers, market access is not usually a major issue. Most host markets are open and need not be ‘sought’ although there will be greater competitive pressures at work affecting specific individual markets, particularly in the larger and the more rapidly growing

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<sup>1</sup> The debate over global versus regional MNEs (see e.g. Aharoni 2006; Rugman 2005) is not particularly germane to our focus. The key issue is that MNE strategies are now seeking a higher level of firm level integration and a more ‘optimal’ mapping between activities and locations. In fact the debate arises *because* there is a general consensus that MNEs have moved away from the more federative – or ‘multi-domestic’ structures that were prominent in much of the post war period (Yamin and Forsgren 2006).

markets (e.g. China or India). Markets for some services are still more subject to restrictive regulation but even here there is pressure towards greater liberalization (UNCTAD 2004). Another factor influencing the pattern of FDI flows is that MNEs are also investing in alliance formation and collaborative arrangements, particularly in relation to sourcing strategic and knowledge based assets from outside of the MNE's home country.

All of this has led to a reduction in the importance of nationally focused subsidiaries. Birkinshaw (2001) in fact has observed that the national subsidiary is an 'endangered species'. They have typically experienced a significant reduction in the value chain scope and a shift towards greater operational integration into the MNE and less integration in the host economies where they are located. However despite this general trend, the potential impact of the MNEs' new globalizing strategies is likely to be systematically different between developed countries and LDCs. The demise of the national subsidiary has not necessarily meant that subsidiaries have become totally powerless organizations. They have lost control over market positioning (that is where and who they sell to) as their focus is no longer typically the local market. But they retain the potential to develop resources and capabilities which are valuable in meeting demands of the MNE customers. These are increasingly defined on global or regional rather than individual country basis. There is ample of evidence that subsidiaries in *developed* countries can become major players in the MNE through developing 'global mandates' or becoming 'centers of excellence' (Andersson and Forsgren 2000; Birkinshaw 1996). Thus the narrowing of the value chain scope of subsidiaries does not necessarily imply a withering of subsidiary capabilities – in fact they can become capable specialists with a global or regional reach. It all seems to depend on the subsidiary's ability to develop its internal capabilities often in the process of interacting with external counterparts in its local environment (Andersson and Forsgren 2000; Birkinshaw and Ridderstrale 1999). However the situation seems to be radically different in most LDCs.

#### **4 FDI flows to LDCs: low development potential**

Most developing countries, due to their small population and low per capita income are unlikely to attract much market seeking FDI. Market seeking investment in LDCs is, at any rate, mostly focused on the higher end of the income distribution, incorporating product offerings and marketing policies that mostly bypass the majority of potential (but poor) consumers. However, this may be more a consequence of a weakness of MNE strategies in the LDCs rather than an inherent difficulty in reaching the poor (Dawar and Chattopadhyay 2002; London and Hart 2004). We shall return to this point in the concluding section of the paper.

In general, LDCs are overwhelmingly attracting 'asset-exploiting' investment<sup>2</sup>, comprising of the transfer of relatively low technology and low value activities to be combined with the main location bound advantages of these countries- mostly cheap and unskilled labor. There are of course rare exceptions in this regard. India's ability to attract FDI and other types of MNE investment in its software sector is largely due to its plentiful supply of educated labor with highly specialized relevant skills. However the dominant trend is LDCs's participation in MNE controlled production networks. LDCs usually enter these networks as sites for the

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<sup>2</sup> Asset-exploiting FDI takes place when the company's primary purpose is to generate economic rents through the use of firms existing technological and organizational assets and capabilities. Asset-augmenting FDI is motivated to gain new technological and other strategic assets and is mainly attracted to a relatively small number of regional clusters within the OECD countries, as these locations provide ample supply of the required complementary resources such as high level specialised skills, sophisticated infrastructure and advanced research centres and universities (Dunning and Narula 2004).

production of highly specified and narrow range of low value-adding activities ('slivers of specialized activity', Buckley and Ghauri 2004). This is a main reason for the rapid expansion of *trade* in manufacturing and also helps to explain why manufacturing trade expansion has not produced the expected gains for LDCs (UNCTAD 2002).

The distinctive contribution of FDI to economic development revolves around its potential to generate positive spillovers. This is the 'external economy' associated with FDI. FDI can generate benefits that are not fully captured by the MNE undertaking the investment. Thus in theory LDC firms gain productivity and knowledge advantages that they don't pay for in full (Zanfei 2005). The mechanisms through which spillover can occur have been discussed at length in the literature (see e.g. Bloomström, Kokko, and Zejan 2000) and include learning by and knowledge transfer to domestic firms and enhanced productivity through greater competition induced by the entry of the MNE. The interest in the extent and depth of MNE linkages in the host economy reflect an expectation of the enhanced possibility of knowledge and productivity benefits accruing to the MNEs' local partners at a lower cost than would otherwise be the case. However such an outcome is not automatic. The literature suggests only a positive correlation rather than a definite cause and effect relationship between linkages and spillovers. Generally, the greater the degree of an MNEs' resource commitment to the host economy, through linkages and sourcing of intermediate inputs (Rodriguez-Clare 1996), the greater the degree of positive spillovers are likely to occur in LDCs.

Few studies have examined the MNE affiliates in LDCs or the pattern of their linkages in host countries (UNCTAD 2001). But aggregate data on FDI flows provide clear indications that, although there has been a very large influx by MNEs into LDCs, these have typically resulted in extremely 'shallow' levels and types of investment in these countries with low or absent potential for positive spillovers. In other words in most LDCs, FDI is associated with a low level of resource commitment to the economy. Thus there is a sharp disparity between the share of LDCs in inward FDI stocks/flows on the one hand and their share of the number foreign affiliates on the other hand. According to the World Investment Report, whilst in the year 2000, 51.5 percent of all MNE affiliates were located in LDCs, they accounted only for 24 percent of FDI inflows. The developed countries by comparison accounted for 14 percent of all affiliates but 73 percent of FDI inflows (UNCTAD 2001). Some disparity would of course be expected, as investment in less developed countries may be more labor intensive and absorb lower amounts of FDI. However the magnitude of the disparity is also due to a change in the structure of MNE activity in many LDCs away from a focus on local markets and towards their incorporation in the rationalized production networks that they control.

Studies focusing on individual LDCs conform to the above picture. A recent study by Edwards et al. (2002) on MNE subsidiaries in Malaysia shows that subsidiary autonomy is generally very limited even for MNEs that are ostensibly decentralized. The authors note that Malaysian subsidiaries are highly integrated in the MNEs of which they are a part of but have low integration in the Malaysian economy. Mirza and Giroud (Mirza and Giroud 2004), focusing on Vietnam, also find low integration of foreign subsidiaries in the country but high levels of integration in MNE supply chains. An indication of cost sensitivity and the associated 'foot-loose' character of MNE operations in emerging countries is the rate of divestment. A study by Beldorbos et al. (2001) focusing on East Asia indicated an average divestment rate of 3 percent by Japanese electronic MNEs. They found that divestments are much more frequent in higher labor cost countries and in approximately one-third of cases are accompanied by relocations to

lower wage countries, particularly to China. Studies focusing on linkages have generally observed low degrees of linkages and have suggested that indigenous local firms (as distinct from foreign owned suppliers located in the economy) are usually second or third rather than first tier suppliers vis-à-vis MNEs (Belderbos, Capannelli, and Fukao 2001; Kelegama and Foley 1999; Mirza and Giroud 2004; Sanchez-Ancochea 2006; UNCTAD 2001). Luo's (2004) study of the determinants of resource commitments in emerging economies provides a rationale for the low degrees of subsidiary linkages. Linkage formation entails a greater degree of commitment of resources to long term business relationship in the host country and, as Luo's study clearly shows, resource commitment is lower when MNE strategies stress cost rather than demand side gains. (Luo 2004). Kokko et al.'s (2001) study, focusing on Uruguay, points to a similar conclusion.

Overall, there is a consensus relating to the low development potential of FDI patterns in LDCs. Earlier optimism regarding FDI as 'an engine of development' (UNCTAD 1992) has virtually evaporated and been replaced with an arguably more realistic assessment. There is now a general recognition that positive developmental impacts from FDI are not automatic and that the realization of the potential benefits from FDI is a challenging process at which relatively few countries have been successful (Dunning and Narula 2004; Lall and Narula 2004; Nunnenkamp 2004; Nunnenkamp and Spatz 2004; UNCTAD 1999).

## 5 Analytic procedure – Tabulation of literature

The analytical procedure in this paper is conceptual in nature. It involves the tabulation of key literatures on the relationship between infrastructure, FDI inflows and economic development on the one side and the poverty and infrastructure relationship on the other. We performed a systematic literature search of material published over the last decade using the ABI/Inform and EBSCO databases. The following subsections discuss details of the procedure; results are produced in tabular format.

### 5.1 *Infrastructure, FDI inflows and Economic Development*

The literature on the relationship between infrastructure in recipient countries and FDI has only examined one side of the 'coin'. There is a large literature demonstrating that the benefits of foreign direct investment is strongly contingent on the existence of appropriate infrastructure in the recipient countries and that in many LDCs the absence of such infrastructure detracts from or negates the potential positive effect on productivity and income growth. Over the last decade many studies have been undertaken to examine the effects of globalization on economic development of host countries. The systematic literature search on ABI/Inform and EBSCO databases included the following keywords, "foreign direct investment", "multinational enterprises"<sup>3</sup> "infrastructure" and "human capital", "globalization" and combinations thereof. The basic rationale was to understand how FDI-flows may improve economic growth and development in recipient countries. Results were further refined by visiting specific journal issue websites for those journals which were identified in the first stage. Overall we identified about 17 papers which demonstrated a dependence of the benefits of FDI on human capital in the recipient countries. Specifically, the literature strongly suggests that the impact of FDI on

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<sup>3</sup> Keywords such as 'multinational company' or 'transnational company' instead of 'multinational enterprise' did not yield any other studies than those already identified.

economic productivity growth is much stronger in developed economies than in less developed economies. This is explained by the existence of adequate and appropriate infrastructure in the former recipient countries. For example the study by Xu (2000) shows that a country needs to reach a minimum human capital threshold level in order to benefit from the technology transfer of MNEs. He further observes that most LDCs do not benefit from FDI flows because they fail to meet this threshold requirement. This relationship is also maintained within the developing countries as a group. One particularly interesting study (Alsan, Bloom, and Canning 2006) shows a strongly positive relationship between population health (an important dimension of human capital) and inflows of FDI in low and middle income countries; the authors' estimate suggest that raising life expectancy by one year increases FDI flows by 9 percent after controlling for other relevant variables. The overall finding from the literature is that only a small numbers of emerging economies (labeled by Dunning and Narula as 'catching-up' countries) have effectively benefited from FDI flows as they possess relatively high levels of human capital and related infrastructure (Dunning and Narula 2004; Narula and Dunning 2000). Table 1 provides greater detail regarding this relationship.

**Table 1: FDI benefits and human capital**

<i>Authors</i>	<i>Context</i>	<i>Main findings</i>	<i>Implications</i>
Alsan, Bloom & Canning (2006)	Cross-country comparison, panel data, 74 industrialized and developing countries	Gross inflows of FDI positively influenced by population health in low- and middle-income countries	Health an integral component of human capital in developing countries. Health significantly enhances FDI benefits
Bende-Nabende and Ford (1998)	Taiwan as a relatively advanced emerging economy	FDI promotes growth.	Growth is highly sensitive to infrastructure improvements.
Borensztein, De Gregorio, and Lee (1998)	FDI flows from industrial countries to 69 developing countries over the last two decades	FDI is an important vehicle for the transfer of technology, contributing relatively more to growth than domestic investment. However, the higher productivity of FDI holds only when the host country has a minimum threshold stock of human capital.	Effect of FDI on economic growth is dependent on the level of human capital available in the host economy.
Elmawazini, Saadi, and Ngouhouo (2005)	Conceptual approach, building on literature relying on firm-level data and industry-level data, mostly single-country studies.	Recent empirical models indicate that the impacts of FDI on productivity growth in developing countries are generally not significant, and are less than in the developed countries	The weakness of technological capabilities of local firms and human capital level are key challenges for developing countries to benefit from foreign direct investment inflows
Globerman and Shapiro (2002)	Governance infrastructure comprises public institutions and policies created by governments as a framework for economic and social relations. Index data is used from BERI, DRI, HDI, etc.	Governance infrastructure is an important determinant of both FDI inflows and outflows.	Investments in governance infrastructure not only attract capital, but also create the conditions under which domestic multinational corporations emerge and invest abroad.
Kosack and Tobin (2006)	Unbalanced panel of 103 countries—both developed and developing—from 1970 to 1999, Model variables: Aid, FDI, Level of democracy, and co-variates	Aid and FDI affect development differently. Aid contributes to both economic growth and human development. FDI has no effect on economic growth and actually slows the rate of human development in less-developed countries.	No evidence that the degree of democratic responsiveness in government conditions the effectiveness of either aid or FDI, although we do find that democracy independently increases human development in all but the most developed countries. Poor countries need democracy and aid, not FDI
Kottaridi (2005)	Examines the link between Foreign Direct Investment (FDI) and growth of recipient EU economies for the last two decades	FDI, human capital and trade volume are found to be growth-enhancing factors for a group of EU core countries, this not being the case for peripheral economies on the contrary, domestic investment and employment levels are found to be fuelling growth in the peripheral economies; (3) macroeconomic conditions (here measured by growth persistence and interest rates) are found to be significant growth factors for all economies.	Bi-polar EU, higher value-added activities are concentrated in core countries. To enable peripheral economies to attract and maintain FDI, governance should be changed, e.g. by enlarging their human capital basis.
Li and Liu (2005)	Investigation of whether FDI affects economic growth, based on panel of data	Significant endogenous relationship between FDI and economic growth is identified from the mid-	Interaction of FDI with human capital exerts a strong positive effect on economic growth in



	for 84 countries over the period 1970-99.	1980s onwards. FDI not only directly promotes economic growth by itself but also indirectly does so via its interaction terms.	developing countries, while that of FDI with the technology gap has a significant negative impact.
Makki and Somwaru (2004)	Analysis of the role of FDI and trade in economic growth of developing countries. Cross-country framework utilizing data from sixty-six developing countries over the three decades, 1971-1980, 1981-1990, 1991-2000	FDI and trade contribute toward advancing economic growth in developing countries.	The contribution of FDI to economic growth is enhanced by its positive interaction with human capital, macroeconomic policies and institutional stability.
Mencinger (2003)	Examination of the impact of FDI on economic growth. Sample of Eastern European EU accession candidates, in post-transition period.	FDI growth enhancing effect contingent on domestic firm absorptive capacity	Actual size of productivity spillovers from FDI should not be overrated. Absorptive capacity is a correlate of human capital.
Noorbakhsh, Paloni and Youssef (2001)	FDI inflow has largely been restricted to a limited number of countries only. LDCs might enhance their location attractiveness with appropriate policies. Uses panel data based on three-year averages, FDI, human capital and control variables.	Human capital is a statistically significant determinant of FDI inflows; It is one of the most important determinants; and its importance has become increasingly greater through time.	The level of human capital in host countries affects the geographical distribution of FDI. LDCs can increase their attractiveness for FDI by investing in human capital.
Nunnenkamp and Spatz (2004)	Empirical studies on FDI and economic development demonstrate inconclusive evidence because of aggravated data used. Use sectorally disaggregated FDI data for large number of host economies. Data from Bureau of Economic Analysis.	Positive growth effects of foreign direct investment are not guaranteed automatically	Link between FDI and economic growth varies according to country classifications based on human capital.
Nunnenkamp (2004)	For FDI to help alleviate poverty and stimulate economic growth in LDCs, these countries need to be attractive to investors. Also, the host-country environment in which foreign investors operate must be conducive to favorable FDI effects	In particular, the empirical evidence suggests that host-country conditions typically prevailing in poor countries, including weak institutions and an insufficient endowment of complementary factors of production, constrain the growth-enhancing and poverty-alleviating effects of FDI. The crux is that creating an environment in which FDI may deliver social returns will take considerable time exactly where development needs are most pressing.	It is more difficult to benefit from FDI than to attract FDI. The mobilization of domestic resources is more important than attracting FDI for financing investment and stimulating economic growth. High inward FDI is no guarantee for poverty alleviation and positive growth effects.
Todo and Miyamoto (2006)	Examines whether there are differences in spillover effects between R&D-performing and non-R&D-performing foreign firms using plant-level panel data for the Indonesian manufacturing sector for the period 1994-97	Results indicate that the effect of R&D performing foreign firms on domestic TFP growth is positive, statistically significant, and quantitatively large, whereas the effect of non-R&D-performing foreign firms is insignificant. Hence, foreign knowledge spills over from R&D-performing foreign firms but not from non-R&D-performing foreign firms	Although FDI has been considered a major channel of technology transfer to less developed countries, FDI promotion has significant spillover effects only when FDI is associated with local R&D activities. Hence, to benefit from FDI, more local R&D is necessary.

Xu (2000)	Investigates US multinational enterprises MNEs as a channel of international technology diffusion in 40 countries from 1966 to 1994	Technology transfer provided by US MNEs contributes to the productivity growth in DCs but not in LDCs	Countries needs to reach a minimum human capital threshold level in order to benefit from the technology transfer of US MNEs
Zhang (2001)	Empirical assessment on the link between FDI and economic growth in LDCs, using data for 11 economies in East Asia and Latin America.	The extent to which FDI is growth-enhancing appears to depend on country-specific characteristics. FDI tends to be more likely to promote economic growth when host countries adopt liberalized trade regimes, improve education and thereby human capital conditions, encourage export-oriented FDI and maintain macroeconomic stability.	Institutional and political governance factors determine the benefit which can be accrued from FDI.

‘Good’ infrastructure is a hallmark of economic development. The development economics literature has established, very robustly, that access to basic infrastructure is fundamental to poverty reduction. As of today, however, the IB literature has not been particularly concerned with this link, which can probably be seen as a function of the fact that the engagement of IB scholarship with economic development is only of recent origin and is not yet very extensive. In an attempt to bridge this gap and facilitate discussion within international business, we therefore focus on the importance of access to infrastructure to the wellbeing of the poor; the vast majority of the population in LDCs. Table 2 summarizes 16 published studies that establish the link between access to basic infrastructure and poverty reduction. For this particular literature search, keywords comprised “poverty”, “infrastructure”, “less developed countries” and combinations thereof.

A general feature of the economic development literature on infrastructure is that poverty reduction requires policy intervention targeted on the development specific infrastructure such as health and education. It is relevant that the Millennium Development Goals (United Nations Development Programme 2006) identify specific targets in such areas as health and education raising the question that since gains in *per capita* income are highly correlated with most development indicators why bother with specific targets in these areas (Fay et al. 2005). The answer lies partly in the fact that there are quite wide disparities in basic indicators (e.g. child mortality) within income groups (ibid). Attacking poverty may thus require direct intervention. However, as argued by Fay et al. (2005) such intervention needs to be multi- rather than uni-directional. For example, improvement in child mortality not only depends on ‘health’ interventions (e.g., building and staffing rural health clinics) but also on access to clean water and perhaps even more crucially on gender equality and educational attainment of maternal parents (Kolk and van Tulder 2006). Thus poverty reduction is more effectively delivered where there is access to multiple basic infrastructures in such areas as health, sanitation, education and transport.

**Table 2: The poverty and infrastructure relationship**

<i>Poverty and Infrastructure relationship</i>	<i>Context</i>	<i>Findings</i>	<i>Implications</i>
Abu-Ghaïda and Klasen (2004)	As growing empirical literature suggests that gender equity in education promotes economic growth, reduced fertility, child mortality, and under nutrition. Millennium development goals therefore set target is the achievement of gender equity in primary and secondary education by the year 2005 in every country of the world.	Countries that are off track MDG achievement, are likely to suffer lower per capita growth rates, will have more children per woman, higher rates of under five mortality, and higher prevalence of underweight children under five.	MDGs cannot be seen as narrow objectives with uni-dimensional interventions. Promotion of equity in education requires investment in education but at the same time other infrastructure investments (e.g. transport, water, health).
Adato, Carter and May (2006)	Explores The lack of social capital and social mobility, which will act as building blocks, for slow pace of development in South Africa.	A dynamic asset poverty threshold is identified that signals that large numbers of South Africans are trapped at a low-level poverty trap without a pathway out. Active social capital and networks are more helpful for non-poor households. For the poor, social capital at best helps stabilize livelihoods at low levels and does little to promote upward mobility.	Elimination of the polarized economic legacy in South Africa requires proactive efforts to assure that households have access to a minimum bundle of assets.
Agenor, Bayraktar, Moreira, and El Aynaoui (2006)	Assesses a macro model which captures key linkages between foreign aid, public investment (disaggregated into education, infrastructure and health), the supply side and poverty in Sub-Saharan Africa. Key MDG indicators (malnutrition, infant mortality, life expectancy) are correlated.	Discusses model outcomes. A) Effects of an increase in foreign aid on the MDGs, under the assumption that public investment is relatively efficient. B) Same policy experiment in the alternative case where public investment is less efficient.	Model provides strategy implications for decision makers in terms of the level and area of foreign aid and their implications on the MDG.
Ahmad, Gorman, and Werhane (2004)	Case study from the 1970s, describing marketing activities of Hindustan-Lever in India and a then unknown entrepreneur Nirma. Lever focused on urban middle-class and elite while ventured to become the second largest seller in terms of volume by focusing on the poor.	Bottom-of-pyramid (BOP) market segmentation can have a psychological impact on marketing strategy formulation, over and above the real effects of absent infrastructures.	Mental sets regarding market segmentation and positioning can help determine success. BOP can be a base-camp from which an MNC can launch a very effective attack upon all levels of the pyramid.
Boadi, Kuitunen, Raheem, and Hanninen (2005)	In Africa, high population growth and inadequate infrastructure coincide in urban areas with increasing urbanization. This pressures the health and well-being of urban residents.	Urbanization has eroded the subsistence base of rural agricultural communities and further ignited rural urban migration. The failure of industry to absorb the increasing labor force has created massive unemployment and deepening poverty crisis in urban	Poverty alleviation implies infrastructure investments, creating job opportunities, enhancing education and training, International development aid, and democratization.

		centers.	
Datt and Ravallion (1998)	Changes of rural poverty rankings in Indian states between 1960 and 1990	States starting with better infrastructure and human resources saw significantly higher long-term rates of poverty reduction. Rural poor adversely affected by inflation.	Differences in the growth rates and development history largely accounted for by differences in the initial conditions of physical and human resource development.
Fay, Leipziger, Wodon, and Yepes (2005)	Analysis of the determinants of three child-health outcomes related to the Millennium Development Goals: the infant mortality rate, the child mortality rate, and the prevalence of malnutrition. Data from Demographic and Health Surveys.	Apart from traditional variables (income, assets, education, and direct health interventions), better access to basic infrastructure services has an important role to play in improving child-health outcomes.	Investments in infrastructure service improve child-health related MDG.
Fedderke, Perkins, and Luiz (2006)	Examination of the relationship between investment in economic infrastructure and long-run economic growth in South Africa, time-series context.	Investment in infrastructure leads economic growth in South Africa and does so both directly and indirectly. There is weak evidence of feedback from output to infrastructure; while the finding of an infrastructure growth impact is robust.	Productive public expenditure in the area of infrastructure (such as roads, transportation, and housing) can play an important role in promoting economic growth and encouraging private investment.
Fukuda-Parr (2004)	This article reviews the prospects for achieving the Millennium Development Goals by 2015. It shows that Crisis proportions have been reached in deterioration of life expectancy and falling incomes, but also in a wide range of other indicators in countries such as Zambia as well as Nepal.	Current trends sharply contrast countries on their way to meeting the goals and those in a poverty trap. Origins of gap between rich and poor are not just poor governance or poor macroeconomic policies, but rather the difficulties of competing in global markets.	A priority for countries where the prospects for achieving the Millennium Development Goals are weak is to invest in basic education and health, infrastructure, agriculture and manufacturing.
Gibson and Rozelle (2003)	The Papua New Guinea (PNG) economy is taken as a background to study the effect of access to infrastructure on poverty. PNG is a late-developing country characterized by mountainous and rugged terrain, therefore suffers from a fragmented systems of transportation. Uses data from PNG consumer household survey 1996	Poor areas have the least access to infrastructure; people in those areas may benefit the most from new investments.	Infrastructure spending, whether on new assets or maintenance of existing facilities, can provide a form of targeted interventions that favors the poor.
Krishna, Kapila, Porwal, and Singh (2005)	Poverty in 36 villages located in the northeastern part of Gujarat is examined over the decade of the 1990s.	Escape from and descent into poverty is not symmetric: different reasons account for escaping poverty than those for declining into poverty.	Growth alone is hardly sufficient to achieve poverty reduction on any significant scale. Public policies will be needed to address directly the separate causes for descent into poverty.
Levesque, Haddad, Narayana, and Fournier (2006)	Study confirms high utilization of private outpatient care in Kerala, India and suggests problems of access for the poorest.	Even in a context of high public availability and considering the health transition factor, relying on the development of the private sector to respond to increasing health care needs could create inequalities in access.	Investing in the public urban primary care system and ensuring access to quality health care for the poorest is warranted.
Mirza and Giroud	Examine whether, and to what degree, Vietnam	There is little evidence that the halo or market effects	Development in most ASEAN

(2004)	has benefited from foreign direct investment (FDI) since its entry into ASEAN in 1995. Investigation involves assessment of 'halo' and market creation effects, and linkages into the regional and global value chain.	have affected TNC entry into Vietnam. However, foreign subsidiaries in Vietnam are closely integrated into regional and global value chains and ASEAN-based TNCs are a very promising source for further investment into Vietnam	economies is largely a scale effect and the Holy Grail of spillover effects has scarcely been glimpsed. In other ASEAN countries such as Malaysia and Thailand, direct effects (e.g. employment) and consumption multipliers are high, but value-chain multipliers and spillovers remain low.
Ruben and Clercx (2003)	Analysis of the relationship between financial services provided by different agents, the adoption of agro-forestry systems, and the implications for food security and sustainable soil management in Honduras.	Credit provision performs critical functions for reinforcing the resilience of rural livelihoods in less-favored areas. Unfavorable agro-climatic conditions and the scarcity of infrastructure lead to extreme poverty.	Access to rural finance thus reinforces food security and enables income diversification as a precondition for subsequent in-depth investments.

Combining the research insights from tables 1 and 2 we come to the following conclusion: ‘Good’ infrastructures in recipient countries are necessary for the realization of FDI benefits (Table 1). Furthermore, access to basic infrastructure is fundamental to poverty reduction (Table 2). However, previous research has ignored the question how MNE strategies and the consequent pattern of FDI may affect the levels of infrastructure, especially of ‘basic’ infrastructure in such areas as education and health. We do know that while MNEs ‘consume’ infrastructure, they are not major investors in infrastructure<sup>4</sup>. However, we still need to know how they may affect investment in basic infrastructure indirectly. The rest of the paper is devoted to this question and its implications for MNE strategy in the LDCs.

## 5.2 *Implications infrastructure development in LDCs*

This section highlights the implication of MNE strategies with respect to the development of infrastructure in LDCs. Implications for infrastructure are an important aspect of evaluating the developmental impact FDI, since, as we have already noted, investment on infrastructure is highly dependent on public funds. MNEs strategies in LDCs affect the latter in two ways.

### 5.2.1 *Reduced spillover and linkage effect*

First as the discussion of the literature in section 4 has already indicated, a consequence of the current MNE strategies is that the ‘quality’ of FDI flows to LDCs has declined, meaning that - other things being equal - the prospect that efficiency seeking FDI may promote economic growth is rather discouraging. The reduced spillover and linkage effects associated with the dominant pattern of FDI in LDCs imply a low value added multiplier (Bende-Nabende and Ford 1998; Mirza and Giroud 2004) in the economy and *ceteris paribus* a reduced ability to increase public revenue through taxation.

A second effect which we have not yet considered, relates to the rising cost of attracting FDI. This will be discussed in the following sub-section.

### 5.2.2 *Attracting FDI: Rising costs and administrative ‘crowding out’*

MNE strategies and the consequent general pattern of FDI flows generate competition between countries to attract footloose FDI which bids up the ‘price’ that MNEs can extract for locating activities in a particular country or region within the country. The price is further bid up if LDCs have to compete with (the poorer regions of) developed economies whose governments have much greater resources to subsidize incoming FDI (Dunning and Narula 2004, 30). An important manifestation of this is the increase in the incentive elasticity of FDI flows (Easson 2001; Mutti and Grubert 2004; Taylor 2000; UNCTAD 2003). In their review of the empirical literature on the link between FDI and taxation, deMooij and Edvereen (2003) report a median tax elasticity (across 23 studies) of -3.3 (i.e. a 1%-point reduction in the host-country tax rate raises foreign direct investment in that country by 3.3%). Easson observes that while MNE

<sup>4</sup> There was an upsurge in infrastructure FDI in developing countries in the early 1990s, overwhelmingly in the form of the acquisition of privatization assets in public utilities (largely water and power). As Ramamurti and Doh (2004) have argued this reflected specific conditions, notably a perception on the part of MNEs that infrastructure projects were losing their ‘natural monopoly’ characteristics and that first movers could benefit handsomely from the globalization of this sector (p.151). However these expectations were subsequently disappointed and consequently (after 1997) infra-structural FDI in developing countries declined to its historically low levels (Ramamurti 2004).

executives used to downplay the role of incentives, they now readily acknowledge their increasing importance for investment decisions (Easson 2001, p.272). The World Investment Report (UNCTAD 2003, p.125) puts recent findings in perspective, noting that locational incentives have become more important as the mobility of firms has increased. Econometric studies that previously found incentives ineffective, now find that they have become more significant determinants of FDI flows. The study by Mutti and Grubert (2004) puts emphasis on the variability of (tax) incentive sensitivity across different activities and countries: “empirical estimates indicated that investment geared towards export markets, rather than the domestic market, is particularly sensitive to host country taxation, that this sensitivity appears to be greater in developing countries than developed countries, and *that it is becoming greater over time*” (Mutti and Grubert 2004, p.337, emphasis added). MNEs’ increasing sensitivity to incentives is itself in part a function of unregulated and uncoordinated competition between countries. As incentives become ever more generous, their weight in the investment calculation of MNE inevitably increases. As Easson has noted, decisions that would not have been influenced by a ‘mere’ two year tax holiday may well be swayed by a 10 year holiday (Easson 2001, p.372).

Clearly tax incentives aimed at attracting FDI only become ‘costs’ if a country is successful in attracting FDI<sup>5</sup>. Nevertheless there are other costs involved in competing for incoming FDI which are incurred irrespective of whether a country is successful in actually attracting FDI. Thus many LDCs have created national and regional investment agencies to promote the country or region to foreign investors. A key aim of such agencies is to help improve the investment climate by reducing bureaucratic and administrative costs for investors. Because MNEs can choose amongst different locations and compare transaction and administrative costs across countries, ‘attracting them requires not just that transaction costs be lowered, but also, increasingly, that they be benchmarked against those of competing host countries’ (UNCTAD 1999). One measure that many LDCs have adopted to ensure that international investors face minimal costs is to set up one-stop promotion agencies to guide and assist them in getting necessary approvals (UNCTAD 1999). However, as the UNCTAD report notes, unless the agencies have the authority needed to provide truly one-stop services, they will not be effective. The authority exercised by such an agency is partly a political issue but it does require having competent administrative leadership and operational manpower. The case study of the development of the ‘one-stop -shop’ investment promotion agency in Egypt suggests that it only became successful after managing to attract a number of highly qualified and experienced administrators to occupy leading positions in the agency (MIGA 2004). Earlier failure of the agency was partly explained in terms of its staff lacking the ‘knowledge, competency, training and authority to grant approvals or licenses, and so were not able to help investors

However attracting MNE through high-powered one stop-shop probably can entail a degree of administrative ‘crowding out’ in many developing countries, depriving other public policy priorities not only of funding but also of adequate administrative support. This is all the more concerning when we take account of the fact that LDC typically suffer from a generally low level of (public) administrative resources. The absence of skilled and competent state bureaucracy has been held to be an obstacle to economic development and a key difference between the small group of Asian ‘tigers’ and many other less successful developing countries

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<sup>5</sup> However, it is possible that in anticipation of a take-up of tax incentives by MNEs, the government may reduce planned expenditures in other areas. This effect can become cumulatively important if the tax incentive schemes persist over a number of years.



(World Bank, 1993). In its influential 2001 Report on ‘Attacking Poverty’ (World Bank 2001) bemoaned the low quality of state apparatus and its lack of responsiveness to the poor, in particular. The Report puts stress mostly on the institutional aspect of poor public service to the poor; such as the high level of corruption and the arbitrary and non-transparent decision making of state bodies. However it is clear that the development of physical infrastructure may be similarly constrained by inadequate state funding and low organizational capabilities of the state bureaucracy. Thus we put forward the following proposition:

*P1: Attracting FDI diverts resources from public investment in infrastructure and thus constrains basic infrastructure development.*

Furthermore as most FDI is probably attracted to the already better off regions of the country there will be a greater effort to improve infrastructure in these areas, depriving the poorer regions and the rural areas in particular. In China, for example, only 27 percent of the rural population had access to sanitation 2000, whilst in India only 15 percent of the rural population had access to sanitation (Asian Development Bank 2003). Thus, the opportunity cost of attracting FDI in terms of constraints on public infrastructure is likely to be even greater for the poorer rural areas in LDCs:

*P2: The negative impact of attracting FDI on infrastructure development is greater in the rural areas and poorer regions in LDCs more generally.*

Finally we note that the impact of attracting FDI is likely to be greater in the large group of non-‘catching up’ economies. China and India are leading members of the ‘catching up’ group of emerging economies which have not only attracted large amount of FDI but have also managed to benefit from it. In this group of economies the likelihood that FDI flows may contribute to economic growth is somewhat greater (Zhang 2006; Zhang 2001) and thus the constraint on infrastructure development is eased. In most other LDCs, it has been much easier to attract FDI than to benefit from it, mostly due to absent or low level of complementary human capital and absorptive capacity (Nunnenkamp 2004). A focus on the implications of MNE strategies for LDC infrastructure is particularly justified for the larger group of non- catching up counties.

*P3: The negative impact of attracting FDI on infrastructure is greater in countries with low levels of human capital.*

## **6 Conclusions and implications for MNE strategies in LDCs**

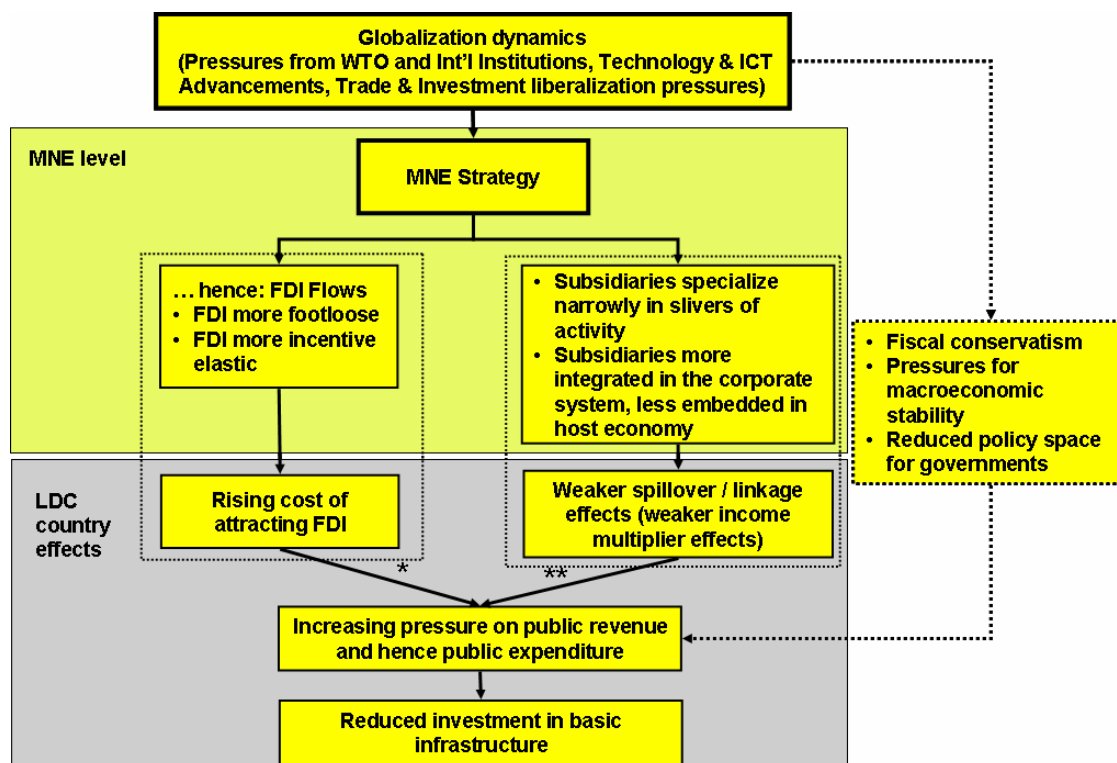
Our arguments regarding the impact of MNE strategies on LDCs can be summarized in the following Figure 1. As the figure shows, we consider that impacts on infrastructure development are generated from the interaction between MNE strategies and host country characteristics in terms of existing infrastructure. However, both MNE strategies and LDCs are affected by fundamental environmental changes that can rather roughly be described as ‘globalization’ (Dunning and Narula 2004)<sup>6</sup>. The key dynamics of globalization include

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<sup>6</sup> We note that a number of studies have recently examined the impact of globalization on economic development, inequality and poverty in LDCs (Aggarwal 2006; Bardhan 2006; Basu 2006; Harrison and McMillan 2007; Huq and Tribe 2004; Ligon 2006). However these studies do not adopt a specifically IB focus or highlight changing MNE strategies as a major

liberalization relating to trade and investment regulation, and technological advance, particularly in information and communication (ICT) technologies enabling, inter alia, production modularization and geographical flexibility. In our paper these forces have been not been in the forefront of the analysis; we have concentrated on the effects of MNE strategies on infrastructure (see also footnote 6). However, as indicated in Figure 1, MNE-related effects constraining the development of infrastructure can be magnified, as LDCs also face pressures emanating from the globalization dynamics which effectively reduce policy ‘space’ available to their governments (UNCTAD 2004).

**Figure 1: Linking MNE strategies to infrastructure development in LDCs**



Note: \* increases for countries with weak infrastructure; \*\* weaker for economies with weak infrastructure

Thus as Wade (2003, p.622) has argued trade and investment liberalization measures (such as TRIMS and GATS) have resulted ‘in the ‘development space’ for diversification and upgrading policies in developing countries being shrunk behind the rhetorical commitment to universal liberalization and privatization. The rules being written into multilateral and bilateral agreements actively prevent developing countries from pursuing the kinds of industrial and technology policies adopted by the newly developed countries of East Asia, and by the older developed countries when they were developing, policies aimed at accelerating the ‘internal’ articulation of the economy’. Similarly fiscal ‘conservatism’ and the demands for macroeconomic stability imply a reduction in the scope for public expenditure (Islam 2005; Ocampo 2002). The MNE – related constraints on infrastructural development in a particular country is shaped by its macro context in terms of its ability to adapt to globalization pressures.

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plank of their analysis. Thus they do not specifically inform the question of the effect on FDI flows on poverty. In our study we have adopted a specifically IB perspective.

We have not brought this into the forefront of our discussion as we believe that such country capabilities are themselves influenced by the level of infrastructure development.

In this study we have endeavored to explore how FDI flows may have negative effects on public investment on basic infrastructure. Our paper essentially attempts to examine the opportunity costs of FDI in terms of the forgone resources that are not devoted to basic infrastructure. More specifically we have argued that shifts in MNE strategy have two related consequences: weaker spillover and linkage effects and greater incentive elasticity of incoming FDI. The first implies a lower income multiplier in the economy and *ceteris paribus* a reduced ability to increase public revenue through taxation. The effect of the second is to increase competition between actual and potential recipients of incoming FDI and to encourage a more proactive stance with respect to attracting FDI. Thus a relatively greater portion of public revenues and public administrative and related resources are taken up in attracting incoming FDI.

### 6.1 Implications for MNE strategy

Recent IB discussions of the MNE–development connections have implicitly and - occasionally explicitly - questioned the efficacy of the dominant MNE strategies in the LDCs (Dawar and Chattopadhyay 2002; London and Hart 2004; Ramamurti 2004). The focus on poverty in some recent writings is arguably also a reflection of a critical stance vis-a-vis MNE strategies (Ghauri and Buckley 2006; Jain and Vachani 2006; Kolk and van Tulder 2006). Others have observed the absence of a governance structure to manage the interdependence between LDCs and MNEs (Ghauri and Cao 2006; Zanfei 2005). The key point in the recent discussion is not so much that LDCs have not gained sufficiently from their engagement with MNEs but that current strategies do not serve the MNEs very well either. Thus Dawar and Chattopadhyay (2002) chastise MNEs for being ‘trapped by their own devices in gilded cages, serving the affluent few but ignoring the potential of the billions of new consumers’. A similar criticism is developed by London and Hart (2004) who recommend a ‘reinvention’ of MNE strategies for LDCs and emerging economies and propose a departure from the current low involvement strategies and operational modalities in LDCs. This is an important observation and one that gains significant credence from the investment behavior of MNEs in developed countries where they have developed collaborative strategies to effectively tap into the created assets of countries and companies (Dunning and Narula 2004). Recent research on spillovers has suggested that, in cases where subsidiaries are effectively embedded in the host economy there maybe spillovers from the local environment *to* the subsidiary and hence to the MNE as whole. Nor is such ‘reverse’ spillover limited to developed economies only, as the recent research by Marin and Bell (2006) indicates. Anderson and Persson (2006) show that MNE headquarters direct more investment funds towards those subsidiaries that, through their embeddedness in their local economies, have gained capabilities which are important to the rest of the organization. Interestingly, subsidiary market performance or profitability per se did not appear to be a significant factor in attracting headquarters’ investment. These findings support the notion that the long-term investment behavior of MNEs in developed countries is focused on capability development. In fact, there is a line of analysis that suggests such capability development in the local economy of subsidiaries is an ‘advantage’ of multinationality (Regner 2003; Yamin 2002).

London and Hart (2004) cite cases of companies succeeding with ‘non-traditional’ strategies in LDCs. These strategies include developing relationships with non-traditional partners, co-inventing custom solutions, and building local capacity. London and Hart (2004)

conclude that, these successful strategies suggest the importance of MNEs developing a global capability in 'social embeddedness' - in other words policies that are not very different from those already working well in developed economies.

Zanfei (2005) develops a similar point and, applying the prisoner dilemma logic, argues that the dominant MNE strategies in LDCs create a low payoff outcome for *both* parties. LDCs resources are focused on attracting FDI rather than investing in human capital and infrastructure so as to benefit more fully from incoming FDI. On the other hand current MNE strategies readily ignore the benefits they themselves could incur by helping to develop local capabilities (Zanfei 2005, p.12). Many LDCs have great potential of becoming strategic markets and in particular may become important sites for developing new products and services, oriented towards large markets with distinctive cultural and institutional patterns. Furthermore, in the medium to long term, MNEs could shape and influence the development of potential competitors based in emerging markets. By developing linkages with them and helping to shape their capabilities they reduce the likelihood of competitive 'surprise' by an emergent competitor that MNEs do not know or understand very well. However, as in the typical prisoner dilemma situation, mutually beneficial outcomes in the MNE-LDC relationship are difficult to obtain as these require credible and sustained cooperation between the parties.

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