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FDI in Strengthening Regional Knowledge-based Competitiveness

Analytical Compendium

Compiled by Boštjan Šinkovec, SBRA

1. FDI Strategies & Policies

Many studies do not find a univocal positive growth-effect related to FDI inflows but find instead that certain conditions need to be fulfilled in order to benefit from FDI (table 5). Borensztein, De Gregorio, and Lee (1998) and Xu (2000) find that FDI contributes more to growth than domestic investment when the country has a highly educated workforce that can exploit the FDI spillovers. Balasubramanyam (1998) finds similar results and concludes that FDI can be a strong instrument of development, but only if a certain threshold of human capital, well developed infrastructure facilities and a stable economic climate is attained in the host country. Balasubramanyam et al. (1996) show that the impact of FDI on growth is larger for countries that pursued a policy of export promotion rather than import substitution. In the context of export promoting trade regimes they find that FDI is more growth-enhancing than domestic investment. Alfaro et al. (2004) find that FDI promotes economic growth where financial markets are sufficiently developed. Blomström, Lipsey and Zejan (1994) find no evidence of the importance of education but they argue that FDI has a positive growth-effect only when the country is rich enough. Li and Liu (2005) support the theory of a positive growth effect of FDI and indicate that a sufficient level of human capital is needed and that the technology gap may not be too large, for experiencing a positive growth impact from FDI. **(*Foreign Direct Investment as an Engine for Economic Growth and Human Development: A Review of the Arguments and Empirical Evidence*, pg. 26)**

Contrasting empirical evidence suggesting that the technological gap is not important or confirming the hypothesis that lower developed countries can benefit more from FDI because of a larger 'catch-up effect'. For example, Carkovic and Levine (2002) and Hansen and Rand (2006) do not find evidence of the suggested thresholds when accounting for heterogeneity and country-specific effects. Bende-Nabende et al. (2003) find a positive impact of FDI on output for the less-advanced Philippines and Thailand, but a negative effect in the more economically developed Japan and Taiwan. Their results generally indicate that spillover effects are more likely to be positive in the less developed countries. **(*Op.cit*, pg. 26)**

Some empirical studies have addressed this need for *absorptive capacity* at firm level. Kokko et al. (1996) find evidence of productivity spillovers to those domestic firms with moderate technology gaps, but not for firms that use considerably lower levels of technology. Barrios and Strobl (2002) and Girma (2005) find similar results. Also *regional dimensions* might play a role, since domestic firms that are located close to MNCs may be more likely to experience spillovers from human capital acquisition and imitation. Several empirical studies (Aitken and Harrison, 1999; Sjöholm, 1999; Haddad and Aitken, 1993) did not find clear evidence for this hypothesis. Yet, the findings of Aitken et al. (1997) for Mexico, suggest that proximity to MNCs, in general, provides domestic plants with better access to foreign markets. **(*Op.cit*, pg. 27)**

1.1 International (global)

International co-operation, whether under the auspices of international organisations or bilaterally, may assist and reinforce the FDI-related efforts of host countries, home countries and multinational enterprises (a point touched upon in the previous section). The added value of co-operation in the context of home countries, or developed countries more broadly, lies in the fact that the fields for policy action suggested above cannot easily be pursued by countries acting alone. Embarking on the vast array of policy measures proposed above for host countries is beyond the capabilities of many poorer nations. This creates a scope for other countries and organisations to help via measures aimed at technical assistance and capacity building. **(*Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs.* pg. 31)**

Against the background of the Doha and Monterrey Declarations, which identify capacity building as a priority area for international co-operation, international organisations and relevant national agencies should carefully assess the need for activities in the field of international investment – particularly FDI. Increased capacity-building measures would focus on assisting developing countries to develop stronger competences in the following fields: general supply-side challenges; formulation and implementation of broad-based policies toward FDI; and the specific architecture for negotiating and implementing international treaties and agreements related to foreign investment.

The OECD has a key responsibility to act as a forum for sharing Members' experience with capacity building and with investment instruments of co-operation. The OECD's distinctive methodology relies on a peer-review process based on long-tested benchmarking for FDI policies, recommendations from governments with diverse perspectives and cultures, and the monitoring of process. **(*Op.cit,* pg. 32)**

The promise of FDI as an engine for economic development has gained momentum over the last twenty years. In the 1970s, many developing countries were mistrustful of multinational corporations (MNCs), fearing a loss of sovereignty and preferring to borrow from banks to finance development projects. After the debt crisis of the 1980s, FDI became highly sought after, especially with the widespread embrace of export-oriented development strategies in the 1990s.

Competition for FDI, among both developing and developed countries, is intense. To attract it, developing countries were told in the 1980s to "get the prices right," that is, to eliminate micro policies, such as energy and food subsidies, which create a cleavage between domestic and global prices. In the 1990s, the prescription preferred by the IMF was to "get the policies right": developing countries should embrace macro-economic policies, especially financial market deregulation, which promote global integration. ***(Searching for the Holy Grail Making FDI work for Sustainable Development,* pg. 5*)***

1.2 National (host & exporting country)

Investment in general education and other generic human capital is of the utmost importance in creating an enabling environment for FDI. Achieving a certain minimum level of educational attainment is paramount to a country's ability both to attract FDI and to maximise the human capital spillovers from foreign enterprise presence. The minimum level differs between industries and according to other characteristics of the host country's enabling environment; education in itself is unlikely to make a country attractive to foreign direct investors. However, where a significant "knowledge gap" is allowed to persist between foreign entry and the rest of the host economy, no significant spillovers are likely. (***Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs.* pg. 14)**

The first of these points establishes the fact that every aspect of host countries' economic and governance practices affects the investment climate. The overall goal for policy makers must, therefore, be to strive for the greatest possible macroeconomic stability and institutional predictability.
More concretely (and while macroeconomic and financial enabling environments have not been the focus of the main report), the following recommendations are widely supported:
• Pursue sound macroeconomic policies geared to sustained high economic growth and employment, price stability and sustainable external accounts.
• Promote medium-term fiscal discipline, efficient and socially just tax systems, and prudent public-sector debt management.
• Strengthen domestic financial systems, in order to make domestic financial resources available to supplement and complement foreign investment. A priority area is the development of capital markets and financial instruments to promote savings and provide long-term credit efficiently. This will help alleviate funding constraints in general and allow local enterprise development to benefit those business opportunities arising from foreign corporate activities. This process will entail a progressive implementation of multilaterally agreed financial standards. ***(Op.cit,* pg. 25)**

The broader enabling environment for FDI is generally identical with best practices for creating a dynamic and competitive domestic business environment. The principles of transparency (both as regards host country regulatory action and business sector practices) and non-discrimination are instrumental in attracting foreign enterprises and in benefiting from their presence in the domestic economy. FDI is unlikely unless investors have a reasonable understanding of the environment in which they will be operating. Moreover, a lack of transparency may lead to illicit and other unethical practices, which generally weaken the host country's business environment. In this context, host-country authorities should undertake the following measures:
• Strengthen their efforts to consolidate the rule of law and good governance, including by stepping up efforts against corruption and enhancing policy and regulatory frameworks (e.g. as regards competition, a larger share of the informal economy into the open, they will also have important secondary effects on countries' ability to attract investment.

• Work toward increased openness to foreign trade, so the domestic enterprise sector can participate fully in the global economy. This approach should be undertaken jointly with efforts to increase business sector competition. A combined approach would allow a greater domestic and international openness to business to go hand-in-hand with safeguards against the negative effects of a rise in concentration. Moreover, the successful elimination of global and regional trade barriers makes participating countries more attractive for FDI, owing to the concomitant expansion of the "relevant" market.
• Enshrine the principle of non-discrimination in national legislation and implement procedures to enforce it through all levels of government and public administration. Given the importance of competition for resource allocation and sustained economic growth, it is essential that foreign entrants should be able compete without government prejudice, and that incumbent enterprises are not unduly disadvantaged vis-à-vis foreign-owned ones. **(*Op.cit,* pg. 27)**

To reap the maximum benefits from corporate presence in a national economy, domestic competences, technologies and infrastructure need to be sufficiently well developed to allow nationals to take full advantage of the spillovers that foreign-owned enterprises generate. Hostcountry authorities should therefore – with due regard to the balance between costs and expected benefits, and the state of development of the domestic economy – undertake measures to the following effect:
• Put in place, and raise the quality of, relevant physical and technological infrastructure. The presence of such infrastructure is instrumental in attracting MNEs, in allowing national enterprises to integrate the technological spinoffs from foreign-owned enterprises in their production processes, and in facilitating their diffusion through the host economy. Allowing foreign investment in infrastructure sectors and leveraging such investment by means of ODA may assist in these efforts.
• Given the importance of basic, widespread education for development, raise the basic level of education of national workforces. The provision of specialised skills beyond basic education should build on existing competences in the host economy, rather than target the short-term or specific needs of individual foreign-owned enterprises. A healthy workforce population is also needed, which requires basic public health infrastructure (*e.g.* clean water).
• Implement internationally agreed. Efforts to reduce child labour, eliminate workplace discrimination and remove impediments to collective bargaining are important in their own right. They also serve as tools to upgrade the skills and raise the motivation of the labour force and facilitate linkages with MNEs operating on higher standards. Additionally, a comparatively sound environmental and social framework becomes increasingly important for countries seeking to attract international investments operating on high standards.
• Consider carefully the effects of imposing performance requirements on foreign investors. Rather than justifying performance requirements as a necessary counterweight to generous FDI incentives, countries may wish to reassess the incentive schemes themselves. Moreover, it should be recognised that such requirements may work against efforts to attract higher quality FDI. **(*Op.cit,* pg. 28)**

Ireland's Industrial Development Authority (IDA) developed new policies that targeted 'flagship' emerging high technology sectors such as electronics, computer software, biotechnology and healthcare. Often, the IDA focused on relatively young firms in these new key sectors. The Irish government subsequently extended incentives to cover firms engaged in internationally traded services (e.g. financial services, call centres). Reflecting the nature of such activities and the policy objective of generating employment, firms received employment grants as well as capital grants (that is, payments per job created). In addition, a broad range of policy tools such as training grants, subsidized rents, technology transfer grants and low interest loans were used by the IDA to tailor packages that would be attractive to specific firm needs (MURPHY and RUANE, 2004). The Irish government also sought to increase the flow of trained graduates to industry by creating new National Institutes of Higher Education (tertiary colleges with a focus on vocational skills). **(*The Knowledge Spillover Theory of Entrepreneurship and Foreign Direct Investment.* pg. 9)**

The key reasons why firms have chosen to locate in Ireland more recently include the following: low corporate tax regime, access to capital and employment grants, IDA lobbying, a pro-business regulatory environment and government, 'demonstration effects' and the availability, at a low cost, of a young, English-speaking, educated and trained workforce. Reviewing the effectiveness of policies aimed at attracting FDI, MURPHY and RUANE (2004:135) argue that three factors partly explain Ireland's success: (a) the emergence of self-sustaining clusters in area such as software, electronics, pharmaceuticals and financial services that resulted from the targeted approach of the IDA and efforts to build vertical linkages; (b) the extension of incentives to include internationally traded services; and

(c) the emergence of a pro-FDI reputation, that reflects the consistency and pro-active nature of Irish government policies towards FDI. ***(Ibid.)***

A coherent development strategy and effective policies to promote it are central in utilising FDI to promote sustainable development. Economic "openness" and the liberalisation of investment, even with efforts to create "an enabling environment" and strong protections for foreign investors, do not guarantee either that FDI will materialise or that it will promote development or environment goals.

Moreover, developing countries differ widely in the way they can utilise FDI for sustainable development. In most of Africa, argues John Mugabe, a leading African analyst, FDI is not and will not be a leading driver. Instead, development strategies should aim to develop local scientific, social and financial capacities--and be aimed at expanding local markets. What is important is to harness FDI to these goals.

Even with a coherent development strategy, numerous obstacles exist to successful technology cooperation. Some of these obstacles are bureaucratic and policy-driven, while others derive from the desire of MNCs to protect proprietary technologies and the rents they provide. National governments need to examine carefully and seek to reduce disincentives to technology transfer and capacity-building. ***(Searching for the Holy Grail Making FDI work for Sustainable Development,* pg. 25*)***

From a policy perspective this is a potentially important result. It is often taken as given in the policy literature that inward investment stimulates productivity growth, particularly at the industry or regional level. The results here show that FDI may indeed stimulate the development of the domestic sector, but only in cases where the FDI is to some extent motivated by the desire (or capacity) of the incoming firm to transfer firm-specific knowledge into the host country. Significant sums of public money are spent in attracting internationally mobile capital, and this paper demonstrates that it should not be simply taken as given that public gains can justify this expenditure. Instead, it is crucial that policy makers focus on the motivation for the investment on the part of the firm, and the extent to which the technology employed by the MNE can be seen as a genuine benefit to the host region. ***(Does the Motivation for FDI Affect Productivity Spillovers to the Domestic Sector,* pg. 12*)***

Thus, R&D subsidies or tax breaks should be accompanied by the promotion of foreign investment. Second, it may be beneficial for the host government to target oligopolistic industries to attract FDI because the benefits of spillovers will be greater provided that domestic industries possess competitiveness in research activities. ***(R&D and technology spillovers via FDI: Innovation and absorptive capacity,* pg. 20*)***

Studies have found that the most unambiguous and consistent "pull" factor is the market size of the host economy. For the most part, MNCs invest in order to get access to large markets. There is also close to a consensus that macroeconomic stability is needed to attract FDI. Countries with volatile exchange rates and high and growing trade deficits tend to be negatively correlated with FDI. ***(Searching for the Holy Grail Making FDI work for Sustainable Development,* pg. 8*)***

On the expectation that foreign 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.s domestic firms, governments across the world have lowered various entry barriers and opened up new sectors to foreign investment. An increasing number of host governments also provide various forms of investment incentives to encourage foreign owned companies to invest in their jurisdiction. These include fiscal incentives such as tax holidays and lower taxes for foreign investors, financial incentives such as grants and preferential loans to MNCs, as well as measures like market preferences, infrastructure, and sometimes even monopoly rights. ***(The Economics of Foreign Direct Investment Incentives,* pg. 3*)***

Trade liberalization - be it globally, through GATT and WTO, or regionally, in the form of EU, NAFTA, AFTA and other regional agreements has led to increasing market integration and reduced the importance of market size as a determinant of investment location. Hence, even a small country may now compete for FDI, given that it can provide a sufficiently attractive incentive package. At the same time, national decision-makers have lost many of the instruments traditionally used to promote local competitiveness, employment, and welfare. The scope for active trade policy has diminished as a result of successful trade liberalization, and the internationalization of capital markets has limited the

possibilities to use exchange rate policy as a tool to influence relative competitiveness. Most clearly, this has been seen in Europe, where the Single Market program and the EMU have shifted the responsibility for trade and exchange rate policies from national governments to the EU Commission and the European Central Bank. ***(Ibid.)***

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 at least two arguments against this type of incentives. Firstly, it is difficult make reliable calculations about the expected future benefits in terms of growth, employment, or tax revenue, which is necessary to determine how large the subsidies should be. This is particularly complex in cases where FDI projects that 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 and McLure 1999). Secondly and most importantly . if foreign investors do not differ in any fundamental way from local investors, subsidizing FDI may distort competition and generate significant losses among local firms. ***(Op.cit,* pg. 8*)***

1.3 Regional and Local

In sum, we would conclude that foreign investors‟ decisions to locate technological activities are not random. They are attracted into regions that offer external technological economies, and in turn foreign investment can reinforce such externalities. However, this „virtuous circle‟ depends on existing regional endowments and capabilities as well as subsidiaries‟ strategy. If foreign locations offers appropriate technological capabilities and foreign investors follow an explorative or competence augmenting strategy, linkages between the foreign subsidiary and other actors in a regional innovation system are more likely, and so are technological externalities from FDI. **(*How does FDI interact with domestic innovation systems – evidence from East Germany.* pg. 4)**

To promote regional development the Government has designated certain geographical parts of Great Britain for industrial grant support for the past fifty years or so. Inward FDI has formed an important component of this policy, taking about half the regional aid budget since the mid-1980s. The principal instrument is the Regional Selective Assistance scheme, a discretionary grant that seeks to “encourage sound projects which will improve employment opportunities in the Assisted Areas” (House of Commons, 1985). It was introduced in 1972 and little changed since 1984. It has criteria relating to project viability; ‘proof of need’; benefit to the regional and national economy; and a job link. Under the European Union (EU) state aid rules, projects must involve fixed capital investment (plant, machinery or buildings), such that 90 per cent of the grant has gone to manufacturing, although non-local services are eligible (NAO, 2003). **(*Assessing the Regional Impact of Grants on FDI Location*, pg. 6)**

Nevertheless, related to this last point, the regions are designated for grants to differing extents (but always less than 100% of the land area), which may influence the location decision both between and within regions. This is because in return for a grant a firm may be willing to select an alternative location, but only within a limited distance of its preferred location (Potter and Moore, 2000), which suggests that FDI will increase with the coverage of Assisted Areas. **(*Op.cit,* pg. 13)**

Regional integration has similar effects, allowing MNCs to supply all or several member states from a single location within the region. Incentives have also become increasingly important for national policymakers who are trying to promote local production, employment, and welfare. The scope for active national trade and exchange rate policy has diminished most clearly for present and potential EU members, who are largely bound by decisions taken by the EU Commission and the European Central Bank and shifted attention to industrial policy, including measures such as investment incentives. As a result, the incentives provided by many countries have become more generous over the years, and .decisions that would not have been influenced by a mere two-year tax holiday may well be swayed by a 10-year holiday.(Easson 2001:272). Considering that market integration has reached further at the regional rather than global level, it is also clear that the effects of incentives are likely to be particularly strong in the competition for FDI within regions (or even countries), when the

initial investment decision has been taken and the investor is choosing between alternative locations in a given region. ***(The Economics of Foreign Direct Investment Incentives,* pg. 7*)***

1.4 Corporate

A proviso relates to the relevance of the technologies transferred. For technology transfer to generate externalities, the technologies need to be relevant to the host-country business sector beyond the company that receives them first. The technological level of the host country's business sector is of great importance. Evidence suggests that for FDI to have a more positive impact than domestic investment on productivity, the "technology gap" between domestic enterprises and foreign investors must be relatively limited. Where important differences prevail, or where the absolute technological level in the host country is low, local enterprises are unlikely to be able to absorb foreign technologies transferred via MNEs. **(*Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs.* pg. 13)**

The private sector (notably foreign investors) plays a vital role in generating economic growth, and contributing to achieving sustainable development goals. Therefore, the way private enterprises behave and are governed is important in maximising the benefits of FDI for economic development.
OECD countries have launched several initiatives to promote responsible corporate behaviour. Among these are the OECD Guidelines for Multinational Enterprises.

Along with provisions for national treatment and other elements of the OECD Declaration on International Investment and Multinational Enterprises, voluntary principles and standards for responsible business conduct are provided by the Guidelines for Multinational Enterprises, recommended by 36 OECD and non-OECD governments to MNEs operating in and from their countries. These recommendations can be read as an approach to the Development Agenda now facing the international community in areas such as technology transfer, human capital management practices, transparency and competition. Moreover, companies should refrain from seeking exemptions from national environmental, labour and health standards.

Multinational enterprises have attempted to respond to public concerns by issuing policy statements, or codes of conduct, which set forth their commitments in various areas of business ethics and legal compliance. Management systems have been designed to stimulate compliance with these commitments, and a number of standardised management systems have emerged. The Guidelines can be used by governments, business associations and other stakeholders to support these initiatives and enlist a larger number of companies in the search for best development practices. **(*Op.cit,* pg. 31)**

In each of the case studies, the company worked in close partnership with a variety of partners: municipal and regional governments; national governments; local businesses; research institutes; and multilateral ODA organizations. In many of them, the company defined its commercial opportunity by fitting in with development objectives set by governments or government-ODA partnerships. In others, the company helped to define the development or environment objective. ***(Searching for the Holy Grail Making FDI work for Sustainable Development,* pg. 25*)***

Bilateral and multilateral ODA organizations play a key role in sustainable development partnerships, especially in the poorest developing countries. Understanding how to align with ODA partners is an important skill for MNCs—and vice versa. As the Overseas Development Institute argues, the goal is to improve development performance "through company-led strategies" which align "business core competencies with those of potential partners from international donors, government and civil society". ***(Op.cit,* pg. 26*)***

TNCs' behaviour has the most direct influence on the structure and effects of FDI. In managing the environmental problems connected with their activities, many corporations have introduced environmental management systems. Whether the introduction of those systems leads, a priori, to a better environmental performance also in the host countries of FDI is not certain; it depends crucially on whether the TNC uses different standards in different countries, or whether it uses an integrated cross-border environmental management policy with company-wide standards, regardless of the

location of the plant. This decision of the TNC depends on numerous actors which may vary from case to case. However, a new empirical study shows that, according to the affiliates of TNCs, the policy of the parent company at headquarters and the local regulatory environment are very important factors in influencing the environmental performance of TNCs and their affiliates (Hansen, 1999 a and b). Similar considerations apply to technology transfer, where many firms face a choice between modern (and more environmentally friendly) or older, and more pollution-intensive, technologies in the host countries. ***(Making FDI Work for Sustainable Development,* pg. 18*)***

Overall there is not much empirical evidence of "pollution havens" affecting either FDI or trade flows on a systematic basis. The evidence shows that most investment location decisions are not made on the basis of environmental criteria. Environmental costs are typically a small element in these decisions. If anything, the imposition of higher environmental standards seems more likely to generate a technological response, rather than leading to capital flight. ***(Ibid.)***

For instance, direct financial subsidies are likely to have their main influence on the location decision itself, while tax holidays may well effect operational decisions for several years (in particular at the time when the tax holiday is running out). This notwithstanding, while MNC executives used to downplay the role of incentives, they now readily admit their increasing importance for investment decisions (Easson 2001:272). Moreover, recent econometric studies on the effects of FDI incentives, in particular fiscal preferences, suggest that they have become more significant determinants of international direct investment flows (e.g. Taylor 2000).4 This is interesting, not least since most FDI incentives apply in particular to greenfield investments rather than foreign acquisitions of existing companies: the latter dominate aggregate FDI flows, especially in developed countries. ***(The Economics of Foreign Direct Investment Incentives,* pg. 6*)***

Based on the ideas of Hymer (1960) it has been argued that MNEs have firm-specific advantages that allow them to operate profitably in foreign countries. Examples of firm- specific advantages include superior technology, scale economies and management. It is possible to link the idea of firm-specific advantages to the concept of knowledge capital. Knowledge capital has been important for recent development of FDI theories and has been included in new trade models analysing FDI, such as Carr et al (2001) and Markusen and Maskus (2002). Knowledge capital is a broad concept that consists of intangible assets such as brand name, human capital, patents, trademarks and technology. Markusen (1995) and Markusen (2002) argue that knowledge-capital is important for MNEs based on the fact that MNEs tend to have large R&D expenditures, a large share of technical workers and produce technically advanced products. It is primarily MNE possession of knowledge-capital that is important for providing firm-specific advantages allowing MNEs to operate profitably in multiple economies.
According to Markusen (1995), knowledge-capital assets share two characteristics that allow an MNE to perform FDI. Firstly, it is easy and inexpensive to transfer knowledge-capital assets to new geographical locations. Secondly, since knowledge has a joint character it can create a flow of services at several different production facilities without affecting its productivity. Knowledge capital has the nature of a public good. The characteristics of knowledge capital provide the possessing firm with an ability to transfer production to foreign economies. The fact that the MNE can use its knowledge capital simultaneously in multiple locations provides an incentive to perform horisontal FDI implying that the same production process is duplicated in several different locations. This could explain why horisontal FDI tends to dominate over vertical FDI as suggested by Markusen (2002). ***(The Effects of FDI Inflows on Host Country Economic Growth,* pg. 5*)***

2. FDI Impact

2.1 Benefits, advantages

FDI can contribute to economic growth by expanding the capital stock, just like all other types of capital inflow. Following the traditional neo-classical approach to growth, this capital accumulation can affect growth only in the short run (Solow, 1956 and 1957). Long run growth is only possible through a permanent increase in the level of technology and is taken to be exogenous in neo-classical growth models. Yet, more recent growth models consider technology to be endogenous and see a role for capital in the creation of technological advances (Romer, 1990). Capital allows for investment in the development of new ideas and skills, and since knowledge is – to some extent at least – a public good, it raises the level of technology not only within the firm, but in the entire economy. These

externalities account for the permanent advance of the level of technology, which is needed to promote growth in the long run. Thus, according to the new growth theories, capital – including FDI – can permanently affect output growth through increased investment in technology and know-how, increasing the overall level of knowledge and technology in the economy. **(*Foreign Direct Investment as an Engine for Economic Growth and Human Development: A Review of the Arguments and Empirical Evidence*, pg. 13)**

FDI in particular is believed to be more important for growth than other sources of capital. Besides a general provision of capital – that can be invested in the adoption and imitation of more advanced technologies and knowledge – FDI in itself often embodies higher levels of technology and know-how. FDI is described as a whole package of resources: physical capital, modern technology and production techniques, managerial and marketing knowledge, entrepreneurial abilities and business practices (Todaro, 1985; de Mello, 1997). Therefore FDI would contribute directly – and more strongly than domestic investment – to accelerated levels of growth in an economy because of the more advanced levels of technology, managerial capacity and know-how, resulting in higher levels of efficiency and productivity. **(*Ibid.*)**

Another argument on the beneficial impact of FDI on economic growth relates to the stability of FDI flows. It has been argued that FDI has a larger impact on growth than other international capital flows – such as portfolio investment and bank loans – because of the limited volatility of FDI. This relates to the fact that FDI can not easily be withdrawn while profits, losses and risks are shared among the foreign and the host entity. FDI is thus attracted by the long term prospects of the country and its policies, and is therefore more stable than other capital investments (Albuquerque, 2000). Other types of external capital are known to be less stable and of shorter term, thereby hindering sustainable growth (Stiglitz, 2000). **(*Op.cit*, pg. 15)**

FDI is often associated with increased international trade and therefore has an impact on the current account of the host economy. The main argument is that foreign owned companies export more because they have better access to international markets through their link with the home economy. Especially efficiency-seeking and strategic-asset-seeking FDI into the manufacturing sector (and services) would lead to increased exports (Aitken et al., 1997; UNCTAD, 2002). The impact of FDI on the current account is difficult to assess but it is estimated that exports by foreign owned companies are very high in certain developing countries. For example, FDI would account for around half of total exports in China, Malaysia, Costa Rica and some Eastern European countries, and for a quarter or more in Latin America, Slovenia and Romania (Sumner, 2005). Aitken et al. (1997) find for the Mexican manufacturing sector that multinationals are more likely to export than domestic firms. Through its contribution in exports FDI may positively affect the balance of payments which is important for countries with a large current account deficit as in many African and Southeast Asian countries – and bring about more balanced growth. **(*Op.cit*, pg. 16)**

In contrast, *vertical spillovers* (inter-industry) through forward and backward linkages with domestic companies are desirable for the MNC and it is thought that these spillovers to suppliers and buyers can play a very important role. While MNCs tend to prevent the transfer of technologies to home country competitors, they are likely to voluntarily increase the efficiency of domestic suppliers or customers through vertical input-output linkages. MNCs provide incentives to local firms by imposing high standards and help them to increase productivity and quality (Gow and Swinnen, 1998; Görg and Greenaway, 2004). **(*Op.cit*, pg. 17)**

Imitation is simply the copying of products, technologies and production processes by a local firm, often referred to as reverse-engineering (Wang and Blomström, 1992). Such reverse-engineering can result in horizontal productivity spillovers and growth advances for the economy. For the imitation of advanced technologies, a certain level of technical skills in the imitating domestic firm may be required, while managerial and organizational innovations might be easier to imitate. **(*Op.cit,* pg. 18)**

FDI can contribute to the formation of human capital – resulting in spillover effects to the rest of the economy – both by demanding and by supplying skills (Slaughter, 2002). A large share of FDI to developing countries is attracted by the relatively low wages in these countries. Nevertheless multinational firms are generally more skill-intensive than local firms and tend to have a higher demand for relatively skilled labor (Te Velde, 2002; Te Velde and Morrissey, 2001). When MNCs

enters the market they may increase the *demand for skilled workers* if they do not substitute the local demand for employment. An increased demand for skills is expected to raise the wage and employment opportunities of skilled workers, creating incentives for overall investment in human capital. **(*Ibid.*)**

Spillovers resulting from the training of employees and general investment in education can be horizontal or vertical. Horizontal spillovers can take place through externalities or through labor turnover. When MNCs support industry or regional skill development institutions, it is expected that skills will spill over to domestic firms that receive training at these institutions supported by MNCs. Another important form of horizontal spillovers consists of employees that move to domestic firms after having been employed and trained at an MNC. Spin-offs occur when such employees decide to use the acquired skills to start up a new company (Miyamoto, 2003). These types of horizontal spillover effects may only become apparent after some time (Fosfuri et al., 2001; Blomström and Kokko, 2002). Vertical spillover effects through human capital formation may be more immediate; for example, when training is provided by a MNC to their local suppliers. Such training and learning by downstream suppliers and upstream buyers may result in immediate productivity gains for these companies. **(*Op.cit,* pg. 19)**

The entry of a foreign firm or affiliate generally increases competition. Even if local firms are unable to imitate the technology of multinational firms, increased competition forces them to increase efficiency of existing technologies, to adopt or develop new, more efficient technologies, or to invest in human capital – generally benefiting productivity and growth (Wang and Blomström, 1992; Glass and Saggi, 2002; Gow and Swinnen, 2001). Young (1993) states that the innovations embodied in FDI may create rents accruing to older technologies, making domestic investment more profitable. **(*Ibid.*)**

Some argue that rather than creating competition that crowds out local firms, FDI stimulates domestic investment and leads to crowding-in of domestic firms. The technologies, know-how and new market opportunities brought in by MNCs might attract domestic investors into the sectors where MNCs entered (Borensztein et al., 1998). ***(Ibid.*)**

Most developing countries prefer Greenfield investment because it immediately and directly adds to the existing industrial capacity in host countries, whereas M&As transfers ownership of local assets from domestic to foreign interests. Concerning the creation of jobs, it is similarly argued that M&As are less likely to create new jobs. However, in the longer term M&As may receive supplementary capital and employment may rise (UNCTAD, 1998). On the other hand, Greenfield investment is more likely to operate as an enclave with close links to other units in their international corporate network, but limited interaction with the host economy, thereby limiting spillovers to domestic firms. In contrast, M&As tends to have a more developed network of local and regional suppliers, since it is simply a take-over of a domestically developed company (Szanyi, 2001). ***(Op.cit*, pg. 25)**

The relation between economic growth and poverty has been the subject to an extensive economic literature and the link between growth and poverty – especially in the long run – has become a well-established fact. Dollar and Kraay (2002) show, using country panel data for four decades, that growth is inequality neutral and leads to proportional income raises for the poorest income quintile. In a critique on this study, Ashley (2008) agrees that in periods of economic growth also the poor benefit from this growth, although not equiproportionally. Also Ravallion and Chen (1997) show that poor people benefit from rising average income, using micro-econometric analysis and household survey data from more than 40 countries. Ravallion and Datt (2002) find that economic growth is positively related to poverty reduction across Indian states, using survey data over about four decades. In a recent paper Kraay (2006) investigates the cross-country variation in changes in the headcount measure of poverty for a large set of developing countries for the 1980s and 1990s. He finds that average income growth is the main source of poverty reduction, counting for 70% of the variation in poverty in the short run and for 97% in the long run. These results[5] all underscore the importance of economic growth for poverty reduction. ***(Op.cit*, pg. 29)**

A second channel through which FDI could indirectly affect poverty in the host countries is through the creation of employment. Additional investments are likely to create employment. Increased employment benefits workers by adding to their per capita income, which can help some people to move out of poverty. In addition, FDI might cause employment multiplier effects. Through vertical

linkages with local suppliers or crowding-in effects, additional employment might be created in the sector as a whole or in downstream and upstream sectors. ***(Op.cit*, pg. 30)**

FDI can alleviate poverty if foreign firms pay higher wages than local firms and by investing more in training, thereby benefiting employers and creating incentives that can benefit the entire economy. The reason why multinationals would pay higher wages is related to the multinational firms' ownership, implying that they use higher levels of technology than domestic firms. By entering the market, also domestic firms will be forced to pay higher wages to attract workers. ***(Op.cit*, pg. 31)**

FDI can affect poverty is by contributing to the governments' tax revenue, which can be used for redistributive measures benefiting the poor or spent on the development of social safety nets for the poorest (Klein et al., 2001). In some developing countries, the importance of FDI in overall tax revenue is quite important, creating opportunities for poverty-reducing policy measures. For example, 50% of Botswana's government budget results from the mining industry (UNCTAD, 2007). However, in countries where governments, in order to attract FDI, extend tax exemptions to MNCs - as is the case in many developing countries - the potential for poverty-reducing effects through tax revenues and redistributive measures are limited. ***(Op.cit*, pg. 31)**

The larger the technology gap, the more and faster technology and knowledge can spill over, which would predict that FDI contributes to convergence among countries. Evidence is limited, but Choi (2004) finds that the level and growth of per capita income converges as bilateral FDI flows increase between two countries. ***(Op.cit*, pg. 32)**

Despite some anecdotal evidence that foreign companies support repressive governments[6], empirical studies find a positive relation between FDI inflows and democracy and respect for human rights (Oneal, 1994; Meyer, 1996; Richards et al., 2001; Harms and Ursprung, 2002; Busse, 2004; Blanton and Blanton; 2006). This finding, however, must be considered with caution. Specification of indicators of FDI flows and different human rights and democracy datasets (measuring narrower or broader concepts of human rights) lead to considerably different results. Moreover, the studies merely present statistical correlations rather than a causal impact: it is unclear whether higher human rights standards attract greater FDI inflows, or if increased FDI causes – directly of indirectly – an increase in the level of societal freedom. ***(Op.cit*, pg. 36)**

There have been some highprofile cases showing that MNCs do at times subcontract to enterprises that employ children. Yet, especially with respect to child labor reputational damage can be very large (Neumayer and De Soysa, 2004). Empirical studies find no effect of globalization on primary school nonattendance and generally indicate that more FDI is associated with lower child labor incidence (Neumayer and De Soysa, 2004; Cigno et al., 2002). ***(Op.cit*, pg. 37)**

While multinationals have been accused of investing in developing countries to take advantage of low environmental regulations (the pollution haven hypothesis), they are more recently seen as leaders in the introduction of good environmental practices and 'green technologies' into developing countries (Chudnovsky and Lopez, 1999). The existing literature has found little evidence to support the pollution haven hypothesis (Dean, 1992; Zarsky, 1999). Eskeland and Harrison (2003) find some evidence that foreign investors are concentrated in sectors with high levels of air pollution, although evidence is weak at best. They find that foreign plants are significantly more energy efficient and use cleaner types of energy. ***(Op.cit*, pg. 38)**

Most empirical studies conclude that FDI contributes to both factor productivity and income growth in host countries, beyond what domestic investment normally would trigger. It is more difficult, however, to assess the magnitude of this impact, not least because large FDI inflows to developing countries often concur with unusually high growth rates triggered by unrelated factors. Whether, as sometimes asserted, the positive effects of FDI are mitigated by a partial "crowding out" of domestic investment is far from clear. Some researchers have found evidence of crowding out, while others conclude that FDI may actually serve to increase domestic investment. Regardless, even where crowding out does take place, the net effect generally remains beneficial, not least as the replacement tends to result in the release of scarce domestic funds for other investment purposes. ***(Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs.* pg. 9)**

The main trade-related benefit of FDI for developing countries lies in its long-term contribution to integrating the host economy more closely into the world economy in a process likely to include higher imports as well as exports. In other words, trade and investment are increasingly recognised as mutually reinforcing channels for cross-border activities. However, host-country authorities need to consider the short and medium-term impacts of FDI on foreign trade as well, particularly when faced with current-account pressures, and they sometimes have to face the question of whether some of the foreign-owned enterprises' transactions with their mother companies could diminish foreign reserves. ***(Op.cit.*** **pg. 10)**

As countries develop and approach industrialised nation status, inward FDI contributes to their further integration into the global economy by engendering and boosting foreign trade flows (the link between openness to trade and investment is illustrated by Figure 2). Apparently, several factors are at play. They include the development and strengthening of international networks of related enterprises and an increasing importance of foreign subsidiaries in MNEs' strategies for distribution, sales and marketing. In both cases, this leads to an important policy conclusion, namely that a developing country's ability to attract FDI is influenced significantly by the entrant's subsequent access to engage in importing and exporting activities. This, in turn, implies that would-be host countries should consider a policy of openness to international trade as central in their strategies to benefit from FDI, and that, by restricting imports from developing countries, home countries effectively curtail these countries' ability to attract foreign direct investment. Host countries could consider a strategy of attracting FDI through raising the size of the relevant market by pursuing policies of regional trade liberalisation and integration. ***(Op.cit,*** **pg. 12)**

Technology transfer and diffusion work via four interrelated channels: vertical linkages with suppliers or purchasers in the host countries; horizontal linkages with competing or complementary companies in the same industry; migration of skilled labour; and the internationalisation of R&D. The evidence of positive spillovers is strongest and most consistent in the case of vertical linkages, in particular, the "backward" linkages with local suppliers in developing countries. MNEs generally are found to provide technical assistance, training and other information to raise the quality of the suppliers' products. Many MNEs assist local suppliers in purchasing raw materials and intermediate goods and in modernising or upgrading production facilities. ***(Op.cit,*** **pg. 13)**

FDI has the potential significantly to spur enterprise development in host countries. The direct impact on the targeted enterprise includes the achievement of synergies within the acquiring MNE, efforts to raise efficiency and reduce costs in the targeted enterprise, and the development of new activities. In addition, efficiency gains may occur in unrelated enterprises through demonstration effects and other spillovers akin to those that lead to technology and human capital spillovers. Available evidence points to a significant improvement in economic efficiency in enterprises acquired by MNEs, albeit to degrees that vary by country and sector. The strongest evidence of improvement is found in industries with economies of scale. Here, the submersion of an individual enterprise into a larger corporate entity generally gives rise to important efficiency gains. ***(Op.cit,*** **pg. 17)**

The technologies that are transferred to developing countries in connection with foreign direct investment tend to be more modern, and environmentally "cleaner", than what is locally available. Moreover, positive externalities have been observed where local imitation, employment turnover and supply-chain requirements led to more general environmental improvements in the host economy.
There have been some instances, however, of MNEs moving equipment deemed environmentally unsuitable in the home country to their affiliates in developing countries.
(Op.cit, **pg. 19)**

Empirical studies have found little support for the assertion that policy makers' efforts to attract FDI may lead to "pollution havens" or a "race to the bottom". The possibility of a "regulatory chill", however, is harder to refute for the lack of a counterfactual scenario. Apparently, the cost of environmental compliance is so limited (and the cost to a firm's reputation of being seen to try to avoid them so great) that most MNEs allocate production to developing countries regardless of these countries' environmental regulations. The evidence supporting this argument seems to depend on the wealth and the degree of environmental concern in the MNEs' other countries of operation. ***(Op.cit,*** **pg. 20)**

There is little evidence that foreign corporate presence in developing countries leads to a general deterioration of basic social values, such as core labour standards. On the contrary, empirical studies

have found a positive relationship between FDI and workers' rights. Low labour standards may, in some cases, even act as a deterrent to FDI, due to investors' concerns about their reputation elsewhere in the world and their fears of social unrest in the host country. ***(Op.cit,* pg. 21)**

Does the knowledge spillover theory of entrepreneurship therefore provide at least a partial explanation for the greater emergence of knowledge-based entrepreneurship in Ireland compared with Wales? We argue it does. The cases suggest that FDI in Ireland assisted the emergence of high technology entrepreneurship to a much greater extent than has been the case in Wales. The GEM data indicates, broadly, that Ireland has a more robust entrepreneurial sector than does Wales and crucially it also appears that Ireland invoked policies to both encourage and to take advantage of knowledge spillovers from FDI, (for example, in the software industry), to a greater and more coordinated extent than has occurred in Wales. In Ireland, policies directed at attracting inward FDI were also linked over a longer time period to those focused on indigenous entrepreneurial activity, seeking therefore to maximize the benefits of inward FDI on indigenous industry. In contrast, Wales does not appear to have taken full advantage of FDI, partly as a result of an original policy focus more related to pure job-creation in deprived areas. **(*The Knowledge Spillover Theory of Entrepreneurship and Foreign Direct Investment*, pg. 22)**

Overall, the results confirm that spillovers seem to have a regional dimension. Domestic firms appear to gain only from firms locating in the same sector and region as them, while they simultaneously loose out from foreign firms locating in the same sector but not the same region. Positive information and demonstration spillovers appear to have a regional dimension, while negative competition effects are limited to the sector. **(*Are There Regional Spillovers from FDI in the UK*, pg. 18)**

These results suggest that the investment grants have had a significant effect on FDI location at the UK regional level. Evaluating the GRANT coefficient for all plants in column (3) of Table 2 at the mean regional FDI share (of a tenth) indicates that £23.6 million of grant increases the regional FDI share by 1%, from 10% to 11% (supposing the grant is held constant elsewhere). To interpret this, the mean regional number of FDI projects is 56.6 per year, which indicates an extra 5.66 projects. Each project has a mean of about 150 jobs (40 jobs at the median), so that £23.6m of grant generates 850 jobs. This works out at £27,500 for each job on average (1995 prices), which seems high, but the jobs last for many years. ***(Assessing the Regional Impact of Grants on FDI Location: Evidence from UK Regional Policy,* pg. 23)**

Previous studies have defined the benefits that FDI can bring to the host country. Concurrent with physical capital is advanced technology, managerial experience, and competition as well. Indeed, De Mello (1997) states that FDI is often thought of as 'a composite bundle of capital stocks, knowhow, and technology, and hence its impact on growth is expected to be manifold'. In the same line, Borensztein (1998) made a comparison between FDI and domestic investment in term of contributing to growth and recognized that FDI is an important vehicle for the transfer of advanced technology to developing countries. In addition, he found that FDI contributes to economic growth by enhancing the level of human capital in the host country. More extent, the Organization for Economic Co-operation and Development OEDC (2002a) reports that "FDI triggers technology spillovers, assists human capital formation, contributes to international trade integration, helps create a more competitive business environment and enhances enterprise development". In this report, they also mentioned the "cleaner" technologies transferred by FDI might lead the improvement of environmental and social conditions in the host country. ***(Foreign Direct Investment Absorptive Capacity Theory,* pg. 4*)***

Kokko (1992) indicates four ways that FDI might transfer technology to other firms namely: the demonstration - imitation effect, the competition effect, the foreign linkage effect, and the training effect. More specific, Damijan, Kell, Majcen & Rojec (2003) provide information on different channels of international technology transfer to local firms in transition countries. One channel comes from parent firm to Foreign Direct Investment Absorptive Capacity Theory local affiliates. The other channel is from foreign affiliates to domestic firms. The technology is transferred by two ways of horizontal and vertical spillover. They also classified the vertical spillover into backward and forward linkages. ***(Op.cit,* pg. 5*)***

By evaluating the theories on productivity, wage, and export spillovers in developing, developed, and transition economies, Görg & Greenaway (2004) identify a range of possible spillover channels that might boost productivity in the host country. Four channels are listed; imitation, skills acquisition,

competition, and exports. In this research, they also mentioned the empirical evidence of horizontal spillovers effects that have occurred from multinational firms to domestic firm. Nunemkamp (2004) supports the idea that local companies might benefit by hiring workers who were previously trained by multinational corporations. Widely, Fu (2008) shows that FDI can contribute to regional innovation. He categorizes four ways, namely R&D and other forms of innovation; knowledge transfer through the supply chain, skilled labour turnovers, demonstration effects; competition effects; and advanced practices and experiences in innovation management effects. In summary, the benefits from FDI can be transferred to recipient country through two levels: macro-economic (nation) and micro-economic (firms) factors. In macro level, benefits of FDI will be transferred to host country by several channels. The first one that is technology goes through competition, imitation, foreign linkage and doing business with local firm. The second one is labor force by training, learning by doing, and accumulating experience. In micro level, domestic firm is counted as a main channel to receive the benefits of FDI involving the horizontal and vertical spillovers effects, and training effect, skill acquisition, knowledge transfer, and labor turnover. ***(Ibid.)***

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 Economics of Foreign Direct Investment Incentives,* pg. 4*)***

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. ***(Op.cit,* pg. 11*)***

Foreign Direct Investment (FDI) is considered, in most countries, to be an important component of their development strategy, and policies are accordingly designed to stimulate inward flows. An important motivation for this interest is the possible existence of FDI spillovers, a concept that embodies the fact that MNEs (multinational enterprises) own technology2 which can be transmitted to domestic firms and thereby raise their productivity level. The spread of productivity spillovers is thus a matter of externalities being transmitted from established foreign producers to domestic ones. **(*Determinant Factors of FDI Spillovers – What Do We Really Know?*, pg. 1)**

FDI spillovers can occur through five main channels: demonstration/imitation, labor mobility, exports, competition and backward and forward linkages with domestic firms.
Demonstration (by MNEs)/imitation (by domestic firms) is probably the most evident spillover channel (Das, 1987; Wang and Blomström, 1992). The introduction of a new technology into a given market may be too expensive and risky for a domestic firm to undertake due to the costs inherent in acquiring its knowledge and the uncertainty of the results that may be obtained. If a technology is used successfully by a MNE, this will encourage domestic firms to adopt it.[...]
The second channel is related to the possibility of domestic firms hiring workers who, having previously worked for a MNE, know about the technology and are able to implement it in the domestic firm (Fosfuri et al., 2001; Glass and Saggi, 2002).
Exports are a third channel through which the presence of MNEs may benefit domestic firms [...]. Among other aspects, export activity involves costs associated with the establishment of distribution networks, transport infrastructures or knowledge of consumers' tastes in foreign markets (Greenaway et al., 2004), which MNEs are better able to afford. By following the export processes of foreign firms (through imitation or, in specific circumstances, through collaboration), domestic firms may reduce the costs of entry into the foreign market.4 The gains obtained in this way may have favorable repercussions on the productive efficiency of domestic firms.

The increased competition induced by MNEs is a fourth channel of FDI spillovers (Wang and Blomström, 1992; Markusen and Venables, 1999). Competition in the domestic economy between MNEs and domestic firms is an incentive for the latter to make a more efficient use of existing resources and technology or even to adopt new technologies; it may also restrict the market power of domestic firms.[...]
A final channel concerns the relationships that domestic firms establish in local markets with MNEs as their suppliers (backward linkages) or customers of intermediate inputs (forward linkages)6 as pointed out, for instance, by Lall (1980), and formalized by Rodríguez-Clare (1996), Markusen and Venables (1999) or Lin and Saggi (2004). ***(Op.cit,* pg. 2*)***

Let us firstly consider the case of backward linkages. With increasing returns to scale, the presence of MNEs may benefit domestic suppliers if it increases the demand for local inputs. In their attempts to assure a certain quality pattern, MNEs may also benefit domestic suppliers in several ways: providing technical support for the improvement of the quality of goods or for the introduction of innovations, through labor training for instance; providing support for the creation of productive infrastructures and for the acquisition of raw materials, as well as support at the organizational and management levels, among other aspects (Lall, 1980). We should also consider the possible increase in the efficiency of domestic firms brought about by the competition among them to become MNE suppliers. Furthermore, Matouschek (1999) considers that the benefits for domestic suppliers resulting from the presence of MNEs may be extended to other domestic firms that produce end-user consumer goods.
(Op.cit,* pg. 3*)

National and regional governments have a long history of offering financial and other inducements to multinational enterprises in order to encourage the establishment of local production facilities. While this is done partly in order to benefit from expected direct and indirect employment increases, there is a recognition among many agencies that the benefits of foreign direct investment (FDI) go far beyond those of employment. From a welfare perspective, encouraging inward investment may be justified if the social returns to FDI exceed the private returns. In practice, such an effect is usually regarded as being most likely in terms of productivity spillovers, with local firms deriving some benefit from gaining access to the firm-specific knowledge which incoming MNEs bring with them. Policy makers are clearly alive to this possibility. In the UK, for example, inward investment bodies such as Scottish Enterprise have long encouraged MNEs to locate research and other high level functions in their areas, in the explicit belief that local firms will benefit from spillover benefits which are unlikely to be present in mere assembly operations. ***(Does the Motivation for FDI Affect Productivity Spillovers to the Domestic Sector,* pg. 1*)***

At the firm level, local firms in the host country can benefit from FDI via roughly four channels.8 First, foreign technology embodied in FDI can be transferred from foreign to local firms as local firms imitate what foreign firms do. Firms invest abroad in order to exploit firm-specific capabilities and they are thus typically characterized as efficient firms that possess intangible assets. Second, the productivity growth of local firms may be affected by competitive pressures due to the entry of efficient foreign firms. Third, by purchasing intermediate inputs from foreign suppliers or by selling output to foreign producers of final goods, local firms may be able to produce output with a higher standard or be forced to use more efficient technology, respec- tively. Finally, foreign firms may engage in training workers in local firms especially when they are joint venture partners. ***(R&D and technology spillovers via FDI: Innovation and absorptive capacity,* pg. 5*)***

In the case of a backward link the MNE buys intermediate goods from a domestic supplier. In this situation it can actually be in the interest of the MNE to try to maximise spillovers to the supplier. For example, in order to improve product quality the MNE can provide technical advising resulting in a voluntary spillover of technology that increases the supplier's productivity.
A forward link implies that an MNE sells intermediate inputs to domestic firms in the host country. Javorcik (2004) argues that the domestic firms could become more productive as they get access to improved MNE input goods. For this scenario there is no reason to believe that the MNE should have a strong incentive to actively try to avoid technology spillovers to the domestic firm.***(The Effects of FDI Inflows on Host Country Economic Growth,* pg. 9*)***

2.2 Challenges, threats, damage

However, others have argued that the assumption of foreign firms being more efficient than domestic firms is not necessarily true (Krugman, 1998, Hausmann and Fernandez-Aria, 2000). Especially when FDI takes the form of M&As the inflow of capital might not always be accompanied with improved technologies, managerial capacity and entrepreneurial ability. Foreign investment can take place because foreigners have a superior cash position and can take advantage of liquidity constrained domestic investors' fire sales, rather than because of a technological advantage. **(*Foreign Direct Investment as an Engine for Economic Growth and Human Development: A Review of the Arguments and Empirical Evidence*, pg. 14)**

Critics argue that the impact of FDI is overstated since profits are largely repatriated instead of reinvested in the developing host country. In 2000-2001 for every dollar of net FDI inflow, about $0.30 left the host country in profit repatriation. Profit repatriation is typically higher in Africa and lower in South Asia and Central and Eastern Europe (Sumner, 2005). Moreover, Nunnenkamp (2004) and Haussman and Fernandez-Aria (2000) argue that the stability of FDI is often overstated since there are other ways than repatriating FDI to flee a country in financial crisis, for example through changes in the capital account. **(*Op.cit*, pg. 15)**

FDI in extractive industries is said to cause adverse macroeconomic effects, particularly through appreciating exchange rates, which can damage other sectors such as manufacturing. FDI in extractive industries had a negative effect on the balance of payments in some African economies because of profit remittances surging above new FDI inflows (Nunnenkamp, 2004; UNCTAD, 2005). In Botswana, for example, mineral exports by TNCs have enabled the country to run current account surpluses and to accumulate substantial foreign exchange reserves. In Chile, on the other hand, the recent surge in commodity prices has led to a surge in the share of FDI through reinvested earnings, but also to an increase in profit repatriation, which negatively affects the balance of payments (UNCTAD, 2007). **(*Op.cit*, pg. 16)**

MNCs are among the most technologically advanced firms and account for a substantial part of the world's investment in research and development (Caves, 1974, Borensztein et al., 1998). When starting up a foreign affiliate, MNCs are not likely to give the source of their competitive advantage away for free. They will thus try to limit *horizontal spillovers* (intra-industry) of productivity and market access advances to competing domestic firms that operate in the same market. Yet, technology and knowledge are characterized by imperfect markets with important externalities, so spillover of technology or trained labor to domestic competitors can never be completely prevented. **(*Op.cit*, pg. 17)**

Multinational firms might affect the supply side of skills by investing in training of their workers and the development of human capital. The type of training can range from informal on-the-job training to official training, seminars or even investment in formal education. Foreign owned firms may organize informal and official training for their own employees. In addition, MNCs can involve in general education by the voluntary provision of grants and assistance to community development, including formal education, in the name of Corporate Social Responsibility. MNCs might (engage in the) start up of R&D or education centers to develop local skills for their high-tech industries or business education (Te Velde, 2002). **(*Op.cit*, pg. 18)**

Te Velde (2002) emphasizes that the importance of training is related to the motive for foreign investment. Natural resource investment is usually capital intensive and requires the training of only a small number of high skilled workers. Efficiency seeking manufacturing MNCs usually search for low-skilled low-wage labor and need for training is limited. Especially strategic-asset seeking FDI organizes training in very specific skills to relatively well-educated workforce. Finally, market-seeking FDI might involve technological or marketing training of local people, but only to a limited extent. **(*Op.cit*, pg. 19)**

Increased competition can also result in the crowding out of local firms and reduce domestic investment. For example, multinationals can have lower marginal costs due to some firm-specific advantages, which allow them to attract demand away from the domestic firms. This effect can offset the positive productivity spillover effects of increased competition (Aitken and Harrison, 1999). **(*Ibid.*)**

In poor countries, crowding-in might be hampered since governments lack the ability to direct FDI projects such that they do not displace local firms (Agosin and Mayer, 2000). Additionally, policies offering preferential treatment and incentives to attract FDI – such as export free zones and other tax incentives – may introduce a distortion that negatively affects domestic investment and limits growth spillover effects through crowding-in (Borensztein et al., 1998). **(*Ibid.*)**

A last source of spillovers arises from the export activity of foreign firms (Aitken et al., 1997). MNCs link local suppliers and sub-contractors to international markets, provide information on foreign markets conditions and consumer preferences and offer distribution networks, transport infrastructure and export management skills (Blomström and Kokko, 1998). **(*Op.cit*, pg. 21)**

In the short run, there might be a trade-off between growth and poverty reduction. Economic growth might indeed not directly benefit the poor. Especially in countries characterized by high income and asset inequality, economic growth might not be related to poverty reduction in the short run (Pasha and Palanivel, 2004; Ravallion, 2004). Income growth will generally not immediately and directly benefit those who are trapped in poverty because of initial asset inequality coupled with market failures and because of spatial externalities. **(*Op.cit,* pg. 30)**

Not all types of FDI are likely to create substantial additional employment in the host economies. When FDI represents additional investment (Greenfield investment), it generally provides employment, while M&As are less likely to create additional jobs (UNCTAD, 2005). Also, especially in the case of efficiency-seeking investment, FDI might be associated with increased employment since such investment is often motivated by the low wages and abundant labor force in low-income countries. On the other hand, in mining sectors local job creation is expected to be very limited. **(*Ibid.*)**

Since foreign firms are usually more capital intensive than domestic firms and have more advanced technologies than local firms, it is likely that they increase employment only for the relatively better skilled workers while excluding the poorest, uneducated people from employment benefits. Moreover, when foreign firms compete with local firms resulting in crowding-out, employment in domestic companies and in the sector as a whole may be reduced. Hence, the magnitude and sign of the employment effect will depend on the industry of investment, mode of entry of FDI and country characteristics. **(*Ibid.*)**

FDI can also deteriorate income distribution by raising wages of the corresponding sector, relative to wages in traditional sectors (Tsai, 1995). Except for agribusiness investment, FDI is mainly directed to the urban areas, leaving the rural poor out. Moreover, it is questionable that FDI benefits the poorest segment of the population working in the informal sector (Nunnenkamp, 2004). Thus, since FDI has been mainly directed towards the skill-intensive sectors it is unlikely to have reduced wage inequality (Te Velde and Morrissey, 2002). Also the provision of training is likely to be biased towards the better educated workforce, which is not the poorest group in society (Miyamoto, 2003). **(*Op.cit*, pg. 32)**

Ghosh (2001) finds that the share of women in India's industrial sector is declining and attributes this to the rising importance of subcontracting to women working at home. She also finds that women are moving to the less valued parts of the production chain. There is also evidence that women have only temporary jobs, lose their jobs to more qualified men as industries upgrade, or they get pushed down the production chain into subcontracted work in order to lower the costs (Braunstein, 2006). **(*Op.cit*, pg. 34)**

Foreign firms are attracted to places where net profitability is highest, not where costs are lowest (Klein et al., 2000). For example, property rights of MNCs might be better insulated in democratic, rather than authoritarian regimes (Jensen, 2003; Li and Resnick, 2003). In addition, low labor costs may be an advantage, but there is also need for a certain quality of labor: the disadvantage of higher wages can be offset by the higher productivity of labor (Kucera, 2002). Moreover, foreign investors have a strong interest in preserving their brand reputation (Oman, 2000). Especially when firms are selling to developed country markets, they are held responsible for the behavior of not only their own company, but also for that of local subcontractors (Spar, 1999). Spar (1999) also emphasizes the importance of the global information network in driving the 'social corporate responsibility' idea of multinational companies. Foreign investors bring not only capital and technological know-how, but also a specific corporate culture of setting higher social and environmental standards for its operations,

compared to local competitors. Therefore, over time FDI would be a force for raising standards in developing countries (Oman, 2000) and create a 'climb to the top'. **(*Op.cit*, pg. 35)**

This study provides no evidence on the growth-effects of FDI. Indeed, according to the Arellano-Bond methodology, FDI ratio does not Granger-cause GDP per capita. The latter is only caused by the country's openness to trade. The system GMM estimator also suggests that FDI does not have a causal impact on economic activity and it indicates that gross fixed capital formation, primary completion rate and infant mortality rate have a significant influence on GDP. **(*Impact of Foreign Direct Investment on Economic Growth: Do Host Country Social and Economic Conditions Matter.* pg. 20)**

In addition to the potential drawbacks of inward FDI mentioned earlier, some micro-oriented problems could arise. For instance, while the overall impact of FDI on enterprise development and productivity is almost always positive, it generally also brings distributional changes and a need for industrial restructuring in the host economy. Changes give rise to adjustment costs and are resisted by social groups that do not expect to be among the beneficiaries. Structural rigidities in the host economy exacerbate such costs, not least where labour markets are too slow to provide new opportunities for individuals touched by restructuring. Overall, the costs are best mitigated when appropriate practices are pursued toward flexibility, coupled with macroeconomic stability and the implementation of adequate legal and regulatory frameworks. While the responsibility for this lies largely with host-country authorities, home countries, MNEs and international forums also have important roles to play. **(*Op.cit.* pg. 22)**

According to the knowledge spillover theory of entrepreneurship, low levels of knowledge-based entrepreneurship might result from two factors: (1) failure of private firms and public institutions to generate new knowledge; and (2) failure of individuals to exploit that new knowledge. First, the absence of an indigenous industry base and/or the absence of domestic knowledge-creating institutions, such as public research institutes, might militate against the emergence of knowledge-based entrepreneurship. Second, according to the knowledge spillover theory of entrepreneurship, individuals may fail to commercialise new knowledge via entrepreneurship. Individuals with new knowledge might under invest in commercialization activity as they do not see the benefits, or fail in their attempts to commercialize, due to a lack of market knowledge. Those individuals or organizations with market knowledge or other resources may not be aware of the new knowledge, and therefore fail to invest, or under-invest, in the knowledge or in new firms (ACS et al., 2006). **(*The Knowledge Spillover Theory of Entrepreneurship and Foreign Direct Investment.* pg. 2)**

To conclude, the expectation of regional spillovers from foreign to domestic firms appears reasonable. However, there is some evidence that in less-developed regions (i.e. those with Assisted Area status) the spillovers from foreign firms are lower than in other regions. This may partly be because other firms in those regions do not have the necessary knowledge and skills to benefit from the presence of foreign firms. Ironically, regional policies to attract FDI may limit exactly what they wish to attract. **(*Are There Regional Spillovers from FDI in the UK*, pg. 16)**

Overall, the key finding is that of a strongly significant grant effect on FDI location across British regions, which is invariant over time despite changes to the areas in which these grants are available. When calculated at the mean the paper finds that £25m in grant is associated with an extra 6 FDI projects, and that the grants have altered the location of about 75 projects per year across regions. This suggests an estimated job effect that is in the ballpark of other regional policy estimates. However, when set against the scale of FDI as a whole the impact is relatively small, and it suggests UK regional policy is no longer able to alter the distribution of incoming FDI across British regions. **(*Assessing the Regional Impact of Grants on FDI location,* pg. 26)**

FDI can also bring risks to host developing countries. Operating without global and often inadequate local regulatory oversight, MNCs have been the target of criticism for inflicting "direct harms"—pollution and natural resource degradation, toleration of worker abuse by subcontractors, inadequate protection of worker health and safety, and complicity in the violation of human rights.

But there is also the risk that FDI will thwart the economic development process itself. In a study for the International Institute for Economics, Theodore Moran cautions that "the possibility that FDI might

lead to fundamental economic distortion and pervasive damage to the development prospects of the country is ever present."

Risks stem from the possibility that FDI will lower, rather than raise, domestic savings and investment, including via profit repatriation; "crowd out" domestic companies from capital markets; increase demands for foreign exchange; support local oligopolies and be anticompetitive; distort local politics and thwart regulation; and create instability through increasing financial volatility. Moreover, MNCs may seek to protect technology rents rather than transfer technology, reducing or eliminating hoped-for spillovers and externalities.
(Searching for the Holy Grail Making FDI work for Sustainable Development,* pg. 9*)

Two key strategic and management decisions of MNCs affect their environmental performance. First is the choice of technology, viz, whether to invest in newer, cleaner "best available" or to "dump" older, dirtier technologies. In most industries, a range of technologies are in use. Efficiency and "clean-ness" may be a function as much of industry sector as of company choice: some industries are more technologically dynamic than others. ***(Op.cit,* pg. 10*)***

Many developing countries lack the capacity and/or political will to enforce environmental oversight of industry. In this context, MNCs are able to "self-regulate" and have one of three choices: 1) follow local practice and norms; 2) adopt internal, company-wide standards, either an average or the highest of relevant home country standards; or 3) adopt international standards or "best practice" norms for corporate social responsibility.

In the petroleum and mineral sector, a host of case studies suggest that, on average, MNCs have tended to follow—or even to worsen--local practice.xvii In all parts of the world, mining operations have generated severe environmental degradation and pollution, including the discharge of toxic substances into river systems, large volume waste disposal, the inadequate disposal of hazardous wastes, and the long run impacts of poorly planned mine closure. Multinational oil companies have been the target of protest and criticism for widespread pollution and human rights violations in the Amazon region, Nigeria, Indonesia and, increasingly, the Caspian region.
(Op.cit,* pg. 11*)

If true, the EKC suggests that, to a large extent, the pursuit of economic growth is itself a sustainable development strategy. One major concern, however, is that the environmental and resource degradation at lower levels of income might result in irreversible losses. Examples include loss of biological and genetic diversity and potable water due to degradation or destruction of "old growth" forests; depletion or destruction of fish stocks due to coastal degradation; and human deaths resulting from severe air pollution. Given the number of people on the planet living today at very low levels of per capita income, the potential environmental losses which must be endured before the global "turnaround" are staggering. ***(Op.cit,* pg. 12*)***

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, 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. ***(The Economics of Foreign Direct Investment Incentives,* pg. 14*)***

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 2002). Some of the main problems in this context are related tax holidays and tax breaks, which may appear to be simple and innocuous forms of incentives. However, they are likely to lead to transfer pricing and other distortions as firms try to shift as many transactions as possible to the sector or activity with low or no taxes, or set up new firms as the tax preferences of existing firms expire (McLure 1999). ***(Op.cit,* pg. 18*)***

When most governments compete actively for FDI, it is difficult for any individual country to stay out of bidding contests, which effectively shift profits from the host country to multinational enterprises. One reason is of course that strong promotion efforts show that the government is actively doing something to strengthen employment, productivity, growth, or some other policy objective (whether or not they get any FDI). Another reason is that some of the perceived benefits (in particular, the jobs created by FDI) are easily observable while some of the costs (particularly related to tax breaks and other fiscal incentives) are distributed over long periods of time and hard to measure. Consequently, there is a tendency to overbid and the subsidies may very well surpass the level of spillover benefits, with welfare losses as a result. ***(Ibid.)***

Nevertheless, it is important to stress a possible negative impact arising through this channel, as MNEs may attract the best workers from domestic firms by offering higher wages [...] ***(Determinant Factors of FDI Spillovers – What Do We Really Know?,* pg. 2*)***

However, the efficiency of domestic firms may also be negatively affected through this channel, as the presence of MNEs may imply significant losses of their market shares, forcing them to operate on a less efficient scale, with a consequent increase in their average costs (Harrison, 1994; Aitken and Harrison, 1999).***(Op.cit,* pg. 3*)***

As far as the channel of forward linkages is concerned, the most evident link consists in the MNEs' supply of a higher quality inputs and/or at a lower price to domestic producers of end-user consumer goods (Markusen and Venables, 1999). Nevertheless, it is not possible to exclude the fact that the upgrade of production quality may lead to an increase in prices. If domestic firms do not have the capacity to benefit from this upgrade of quality, they will suffer the negative effects associated with increased costs (Javorcik, 2004b).***(Ibid.)***

In this study, I explicitly introduce R&D investment as a part of the learning efforts by the host country firm. The empirical set-up in this study is manufacturing firms operating in the Czech Republic between 1995 and 1998. Total factor productivity (TFP) growth of these firms is determined by three factors: R&D, FDI, and the firmís absorptive capacity. I find that: (i) the learning effect of R&D is far more important than the innovative effect in explaining the productivity growth of a firm; (ii) there is no evidence of technology spillovers from having a foreign joint venture partner to local firms; and (iii) positive spillovers from FDI are found in electrical machinery and radio&TV sectors, which are also active investors in innovative R&D. ***(R&D and technology spillovers via FDI: Innovation and absorptive capacity,* pg. 2*)***

There are a few studies on the effects of FDI in transition countries. Djankov and Hoekman (1998) use the Czech data with coverage of manu- facturing and non-manufacturing firms and also find no spillovers from FDI. Rather, imports seem to be the driving force of productivity growth of these firms. Konings (2000) in a study of Poland, Bulgaria, and Romania reports that there are even negative spillovers from FDI in some cases.
All these studies point to the fact that technology spillovers from FDI are not at all automatic consequences from the mere presence of foreign firms. If there are any spillovers present, then they are conditional on some factors endogenous to the recipient firms or industries in the host economy. ***(Op.cit,* pg. 14*)***

3. Sustainable FDI

3.1 Criteria, conditions

When a firm wants to invest in a foreign country, there are two possible entry modes: Greenfield investment or M&A (Mergers and Acquisitions). Greenfield FDI refers to the establishment of new production facilities such as offices, buildings, plants, factories and the movement of intangible capital (mainly services) to a foreign country. Greenfield FDI thus directly adds to production capacity in the host country and, other things remaining the same, contributes to capital formation and employment generation in the host country. Cross-border M&As involve the partial or full takeover or the merging of capital and assets of an existing enterprise in the host country by transnational companies from the home country. M&A represent a change in ownership that does not necessarily involve any immediate additions to investment or employment in the country (UNCTAD, 2006). **(*Foreign Direct Investment***

***as an Engine for Economic Growth and Human Development: A Review of the Arguments and Empirical Evidence*, pg. 11)**

Greenfield investment is more important in developing countries than in industrialized economies (table 4). But the surge of FDI flows to developing economies in the 1990s was accompanied by a marked change in its composition. M&A investments grew much more rapidly than Greenfield investments and since the mid-1990s M&As have accounted for a third of FDI flows to developing countries, on average (UNCTAD, 2006). Latin America and transition countries are above the average, while Asia and Africa tend to have a significantly lower share of its inflows in M&As.
(*Ibid.*)

Recent theoretical work by Helpman et al. (2004) and others has highlighted the importance of firm heterogeneity in understanding FDI. Differences in absorptive capacity, regional dimensions, and vertical linkages may explain why certain local firms do and others do not benefit from FDI. It is hypothesized that whether a firm can benefit depends on the technology gap with the foreign firm and its capacity for absorbing new knowledge and technology. Some empirical studies have addressed this need for *absorptive capacity* at firm level. Kokko et al. (1996) find evidence of productivity spillovers to those domestic firms with moderate technology gaps, but not for firms that use considerably lower levels of technology. Barrios and Strobl (2002) and Girma (2005) find similar results. Also *regional dimensions* might play a role, since domestic firms that are located close to MNCs may be more likely to experience spillovers from human capital acquisition and imitation. Several empirical studies (Aitken and Harrison, 1999; Sjöholm, 1999; Haddad and Aitken, 1993) did not find clear evidence for this hypothesis. Yet, the findings of Aitken et al. (1997) for Mexico, suggest that proximity to MNCs, in general, provides domestic plants with better access to foreign markets. **(*Op.cit*, pg. 27)**

In the least developed economies, FDI seems to have a somewhat smaller effect on growth, which has been attributed to the presence of "threshold externalities". Apparently, developing countries need to have reached a certain level of development in education, technology, infrastructure and health before being able to benefit from a foreign presence in their markets. Imperfect and underdeveloped financial markets may also prevent a country from reaping the full benefits of FDI. Weak financial intermediation hits domestic enterprises much harder than it does multinational enterprises (MNEs). In some cases it may lead to a scarcity of financial resources that precludes them from seizing the business opportunities arising from the foreign presence. Foreign investors' participation in physical infrastructure and in the financial sectors (subject to adequate regulatory frameworks) can help on these two grounds. ***(Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs.* pg. 10)**

Among the other important elements of the enabling environment are the host country's labour market standards. By taking steps against discrimination and abuse, the authorities bolster employees' opportunities to upgrade their human capital, and strengthen their incentives for doing so. Also, a labour market where participants have access to a certain degree of security and social acceptance lends itself more readily to the flexibility that is key to the success of economic strategies based on human capital. It provides an environment in which MNEs based in OECD countries can more easily operate, applying their home country standards and contributing to human capital development. One strategy to further this goal is a wider adherence to the OECD Declaration on International Investment and Multinational Enterprises, which would further the acceptance of the principles laid down in the Guidelines for Multinational Enterprises.
***(Op.cit.* pg. 14)**

The beneficial effects of training provided by FDI can supplement, but not replace, a generic increase in skill levels. The presence of MNEs may, however, provide a useful demonstration effect, as the demand for skilled labour by these enterprises provides host-country authorities with an early indication of what skills are in demand. The challenge for the authorities is to meet this demand in a timely manner while providing education that is of such general usefulness that it does not implicitly favour specific enterprises. ***(Op.cit,.* pg. 15)**

While it is economically desirable that strongly performing foreign competitors be allowed to replace less productive domestic enterprises, policies to safeguard a healthy degree of competition must be in place. Arguably the best way of achieving this is by expanding the "relevant market" by increasing the host economy's openness to international trade. In addition, efficiency-enhancing national competition

laws and enforcement agencies are advisable to minimise the anti-competitive effects of weaker firms exiting the market. When mergers are being reviewed and when possible abuses of dominance cases are being assessed, the accent should be on protecting competition rather than competitors. Modern competition policy focuses on efficiency and protecting consumers; any other approach may lead to competition policy being reduced to an industrial policy that may fail to deliver longterm benefits to consumers. ***(Op.cit,* pg. 17)**

The privatisation of utilities is often particularly sensitive, as these enterprises often enjoy monopolistic market power, at least within segments of the local economy. The first-best privatisation strategy is arguably to link privatisation with an opening of markets to greater competition. But where the privatised entity remains largely unreconstructed prior to privatisation, local authorities often resort to attracting foreign investors by promising them protection from competition for a designated period. In this case there is a heightened need for strong, independent domestic regulatory oversight. ***Op.cit,* pg. 18)**

The direct environmental impact of FDI is generally positive, at least where host-country environmental policies are adequate. There are, however, examples to the contrary, especially in particular industries and sectors. Most importantly, to reap the full environmental benefits of inward FDI, adequate local capacities are needed, as regards environmental practices and the broader technological capabilities of host-country enterprises. ***(Op.cit,* pg. 19)**

The net benefits from FDI do not accrue automatically, and their magnitude differs according to host country and context. The factors that hold back the full benefits of FDI in some developing countries include the level of general education and health, the technological level of host-country enterprises, insufficient openness to trade, weak competition and inadequate regulatory frameworks. Conversely, a level of technological, educational and infrastructure achievement in a developing country does, other things being equal, equip it better to benefit from a foreign presence in its markets. ***(Op.cit,* pg. 21)**

Yet even countries at levels of economic development that do not lend themselves to positive externalities from foreign presence may benefit from inward FDI through the limited access to international funding. By easing financial restraint, FDI enables host countries to achieve the higher growth rates that generally emanate from a faster pace of gross fixed capital formation. The eventual economic effect of FDI on economies with little other recourse to finance depends crucially on the policies pursued by host-country authorities. The sectoral composition of an economy can also make a difference. While the service sectors of many developing countries may be underdeveloped and hence unable to attract large inflows of FDI, extractive industries in countries with abundant natural resources can be developed beneficially with the aid of foreign investors. ***(Op.cit,* pg. 22)**

FDI – like official development aid – cannot be the main source for solving poor countries' development problems. With average inward FDI stocks representing around 15 % of gross domestic capital formation in developing countries, foreign investment acts as a valuable supplement to domestically provided fixed capital rather than a primary source of finance. Countries incapable of raising funds for investment locally are unlikely beneficiaries of FDI. Likewise, while FDI may contribute significantly to human capital formation, the transfer of state-of-the-art technologies, enterprise restructuring and increased competition, it is the host country authorities that must undertake basic efforts to raise education levels, invest in infrastructure and improve the health of domestic business sectors. Domestic subsidiaries of MNEs have the potential to supplement such efforts, and foreign or international agencies may assist, for example through measures to build capacity. But the benign effects of FDI remain contingent upon timely and appropriate policy action by the relevant national authorities. . ***(Op.cit,* pg. 23)**

In respect to innovation policy it seems advisable to continue to use instruments that foster external network links between different actors within the East German innovation system. Such programmes have already been in place in East Germany for some time (e.g. InnoRegio, NEMO, ProInno). We would recommend that the role of external knowledge flows that come through FDI and trade is recognised more prominently. This applies to the potential contribution of inward FDI as well as domestic companies that internationalise trough exports or outward FDI. While exports of East German firms have been increasing in recent years (Zeddies 2007), outward FDI and the emergence of multinational headquarters within East Germany are still weak. In addition the introduction of a general tax allowance for R&D activities should be considered in German economic and innovation

policy. The vast majority of OECD countries has already introduced tax allowances for R&D performing firms. This provides an additional incentive to international investors to locate new or to keep and upgrade technological activities in East Germany. Finally, industrial promotion programmes at the federal level (GA-promotion programmes) emphasise the potential effects of investment projects mainly in terms of employment. Furthermore, with the exception of Saxony and Brandenburg there is no regional or sectoral focus in the project design (Titze 2007). However, it might be appropriate to measure the potential effects of funded investment projects in view of R&D and innovative capability. Greater selectivity in the distribution of investment funds might also strengthen the absorptive capacity of the East German innovation system. **(*How does FDI interact with domestic innovation systems – evidence from East Germany*, pg. 13)**

Thus, "absorptive capacity" denotes the maximum amount of FDI that a host economy can assimilate or integrate into the economy in a meaningful manner (Kalotay, 2000). Specifically, there are two stages of absorbability. One is to bring FDI projects to the practice and the next one is to convert the benefits of FDI into host country's competences. In another sense, Cohen & Levinthal (1990) point that organizations need prior related knowledge in order to be able to assimilate and use new knowledge. Succinctly, in order to absorb new knowledge and utilize the benefits of FDI as much as possible, the host country needs to have the initial development of related knowledge and capacities. The capacity mentioned most in previous studies is the technology factor of both national and domestic firm level, proxied by technological gap between the host and the home country of FDI. The larger the technological gap, the smaller is the impact of FDI on economic growth (De Mello, 1997). The second most mentioned factor is the labor force described by human capital and education, which are found to be essential for absorbing and adapting foreign technology, and to generate sustainable long-run growth (Blomström & Kokko, 2003). The third capacity is the R&D factor, which is the firm's ability to exploit external knowledge (Cohen & Levithal, 1990). These three factors work through the channels of FDI transfer that we have presented earlier. Beside, the host country likely needs more factors. The fourth one is financial system. A better developed financial system positively contributes to the process of technological diffusion associated with FDI (Hermes & Lensink, 2003). Finally, the institutional development seems to play a role. Kalotay (2000) defines institutions as an investment-friendly policy and administrative framework, while Durham (2004) uses the regulation of business, the protection of property rights and corruption as institutional indices. ***(Foreign Direct Investment Absorptive Capacity Theory,* pg. 5*)***

One is micro level proxies by domestic firms and one is macro level indicates by human capital, financial system, technological level, and institutional development. Local firms represents itself in micro level at the same time is one component of macro level to assimilate the benefits of FDI. Doing direct investment in abroad, investors can establish either economic organizations in the form of one hundred (100) percent capital of foreign investors or joint venture economic organizations with domestic firms or invest in the contractual forms of BCC6, BO, BTO, and BT, and the other forms. In whichever form, foreign business needs to cooperate with local business either being partners or sub-contractors or suppliers. Therefore, domestic firm is not only the main channel for transferring FDI benefits, but also a bridge for connecting foreign investors and host country. ***(Op.cit,* pg. 8*)***

In the co-operation with international enterprises, if domestic firms have at least initial development in technology, qualified of workers, and managerial skills, domestic firms can learn and easily absorb the advanced technology and business skills from foreign companies. In contrast, the international enterprises can acquire and merge domestic firms. Indeed, Katolay (2002) states that the absorption process depends on the skills and capabilities of local firms and on an affiliate's commitment to the host country. Benefits of FDI can be transferred to local firms by either vertical or horizontal channels as we presented above. No matter what channel it is, domestic companies are required to have initial technological level to assimilate or image the advanced technology from FDI. In similar vein, Chudnovsky, López, & Rossi (2004) find that domestic firms with high absorption capabilities reap positive spillovers from transitional corporations presence while those with low absorption capabilities were more likely to receive negative spillovers. In the other respect, to be supplier of foreign company, local firm's capacity has to satisfy their requirements, which always relate to quality and technological issues. In addition, technology brings productivity. Productivity is one of advantage factor in competition. The development of a country cannot only rely on foreign firms but also strongly on domestic firms. It is no doubt to address that the absorptive capacity of domestic firms is the most important factor determining the degree of absorptive capacity of host countries. ***(Ibid.)***

Consequently, labor is channel for transferring and receiving the FDI benefits. The transfer of benefits of FDI to labor goes through training, learning by doing, accumulating experience. Then, labor is the force to implement the know-how conveyed. Better educated and skilled labor is better know-how received, and better performance achieved. Borensztein, De Gregorio, & Lee (1998) express that FDI gives positive spillovers only in a country which has a minimum threshold stock of human capital with a sufficiently qualified labour force. Likely, Van den Berg (2001) states that the main condition is the quality of the labor force determine an economy's ability to create new ideas and adapt old ones. In the disbursement stage, labor force is indispensable to put project in practice. The shortage of qualified people might cause the slow and stuck implementation. The low educated and skilled workers of host country definitely impact on the disbursement of investment and mirror a negative image about host country capacity in FDI promotion. Chen (1990) confirms that countries with higher amounts of investment in human capital will be able to gain more benefit from FDI. Hence, to gain the benefits of FDI, the host country certainly need to have good quality of human capital. ***(Op.cit,* pg. 9*)***

With these function, financial system is a key tool to implement FDI activities such as disbursement of investment capital; transfer money from oversea into recipient country; payment for building material, raw material, labor cost; collection money after selling, transfer income out of country, and the other businesses. All such basic activities need to have a financial development. If the investment capital is not disbursed, the project process might be late or stagnant, even closed down. If the investment cannot be implemented, the attract FDI is nonsense; hence the host country receives nothing from FDI. For that reason, financial development is vital component to accelerate the recipient country's absorptive capacities and to facilitate the FDI operation in the host country. Alfaroa, Chandab, Kalemli-Ozcan, & Sayek (2004) state that FDI is associated with faster growth in host countries with comparatively well developed financial markets. ***(Op.cit,* pg. 10*)***

Borensztein et al. (1998) find that FDI contributes to economic growth only when a sufficient absorptive capacity of advanced technologies is available in the host economy. The higher efficiency of FDI would result from a combination of advanced management skills and more modern technology. De Mello (1997) states that the larger the technological gap between the host and the home country, the smaller the expected impact of FDI on economic growth is. The aim of host country while calling for FDI is to utilize the advanced technology of FDI to enhance the economy. This means the host country has to have an initial development in technology to assimilate this benefit. ***(Op.cit,* pg. 12*)***

Clearly, the development of institutions will facilitate the FDI business, and accelerate the absorptive capacity of the country. Durham (2002) addresses those countries with higher legal standards likely support FDI more efficiently. Similarly, Nunnemkamp (2004) concludes that institutional development seems to be required to benefit from FDI. Institutional development expresses the development of society and the governance level of the country. A stronger institutional development could lubricate the absorption in a more convenient process. ***(Op.cit,* pg. 14*)***

Controlling for this, the most common source of market failure is related to externalities or spillovers of FDI. As theory suggests, a firm must possess some asset in the form of knowledge of a public-good character (for example product and process technology or management skills) 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. ***(The Economics of Foreign Direct Investment Incentives,* pg. 9*)***

Moreover, the incentives should ideally not be of an ex ante type that is granted and paid out prior to the investment, but 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.14 An advantage of performance based incentives is that they may affect the entire stock of investments, rather than just the flow of new investment. An added advantage of focusing on education, training, and R&D is that these measures are compatible with WTO.s agreement on SCMs. 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. ***(Op.cit,* pg. 20*)***

The interactions between firms in R&D activities are often de- scribed in a oligopolistic model. Muniagurria and Singh (1997) show that technology spillovers from a more advanced foreign firm to the home firm are realized only when the home firm conducts its own R&D. In a similar vein, Kamien and Zang (2000) argue that a firm has to enter the R&D race by engaging in R&D, first of all, in order to benefit from spillovers from rival firms in research joint venture. It is natural to assume that these strategic incentives are stronger in an oligopolistic market such as electrical machinery and radio&TV than food, non-metallic, and others. ***(R&D and technology spillovers via FDI: Innovation and absorptive capacity,* pg. 19*)***

The annual rate of return on R&D investment for pooled samples is estimated as roughly around 3%. Once I include the learning effect of R&D investment in the model, the direct effect of R&D on productivity growth becomes insignificant. Both foreign joint venture (FORGN) and foreign pres- ence in the sector (FOR) are found to have no significant effect on the growth of productivity. But only when FOR is interacted with R&D does it have a positive and significant effect. This implies that the indirect effect of R&D via the development of the absorptive capacity is far more important than the direct effect of innovative R&D in increasing productivity growth of the firm, and that R&D and intraindustry spillovers from FDI go hand in hand. ***(Op.cit,* pg. 20*)***

[..]dynamics of competition lead to a non-linear relationship between economic development and received spillovers. In low income economies, a large technological gap may permit conventional demonstration effects. With economic development, these benefits decline, while foreign investors become more likely to compete directly with local firms and thus to cause crowding out effects (Aitken and Harrison, 1999). However, at advanced levels of economic development, local firms also develop their motivation and capability to react to foreign entry. Beyond a certain threshold, they are likely to generate net benefits from the interaction with inward investors based on their own capability to absorb latest technologies, and to react to increased competition by upgrading their productivity. ***(When and Where Does Foreign Direct Investment Generate Positive Spillovers? A Meta-Analysis,* pg. 3*)***

The study does not offer an answer to the question of whether, in general, FDI is a lever for eco-efficiency or contributes to sustainable development. It is difficult to build recommendations on the basis of four company-level case studies, and further empirical research will be needed to corroborate the conclusions. Nevertheless, the case studies hint at two main starting points for the improved integration of environmental aspects into FDI: corporate environmental reporting and "greening" of the supply chain. ***(Making FDI Work for Sustainable Development,* pg. 25*)***

An improvement in global environmental transparency, especially through global environmental reporting of TNCs in the host countries, could lead to the dissemination of environmentally sound management practices and technologies in the host countries. Environmental transparency plays an important role in increasing access to technology and knowledge and improving both the environmental performance and reputation of companies. This could inspire other companies to follow their example. FDI can thereby have positive environmental impacts and effects.
(Op.cit,* pg. 26*)

The incorporation of environmental standards and performance indicators into purchasing specifications can be an important driver for environmental improvements along the supply chain. A strong environmental policy contributes to a company's environmental credibility and can thus support the transfer of know-how as well as initiating technology transfer and dissemination. The enforcement of this driver certainly is a challenge for both TNCs and host countries. Therefore measures which could help such integration need to be designed and implemented bearing in mind different needs and interests. ***(Ibid.)***

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 Economics of Foreign Direct Investment Incentives,* pg. 16*)***

3.2 Case studies

The clearest examples of FDI boosting exports are found where inward investment helps host countries that had been financially constrained make use either of their resource endowment (e.g. foreign investment in mineral extraction) or their geographical location (e.g. investment in some transition economies). Targeted measures to harness the benefits of FDI for integrating host economies more closely into international trade flows, notably by establishing export-processing zones (EPZs), have attracted increasing attention. In many cases they have contributed to a raising of imports as well as exports of developing countries. However, it is not clear whether the benefits to the domestic economy justify drawbacks such as the cost to the public purse of maintaining EPZs or the risks of creating an uneven playing field between domestic and foreign enterprises and of triggering international bidding wars. ***(Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs.* pg. 12)**

In cases where domestic legal, competition and environmental frameworks are weak or weakly enforced, the presence of financially strong foreign enterprises may not be sufficient to assist economic development – although there are examples (notably in finance) where the entry of MNEs based in OECD member countries has contributed to an upgrading of industry standards. Where economic and legal structures create a healthy environment for business, the entry of strong foreign corporate contenders tends to stimulate the host-country business sector, whether through competition, vertical linkages or demonstration effects. FDI can be said to act as a catalyst for underlying strengths and weaknesses in the host countries' corporate environments, possibly exacerbating the problems in "nongovernance zones", while eliciting the advantages in countries with a more benign business climate and better governance. This reinforces the point made above about the need for host (and home) countries to work to improve regulatory and legal frameworks and other elements that help enable the business sector. ***(Op.cit,* pg. 23)**

Ireland's Industrial Development Authority (IDA) initiated the Enterprise Development Programme (EDP) that targeted managers, professionals (engineers and accountants) and academics to start businesses with high growth potential. Often the new EDP ventures supplied to foreign-owned firms or import substitution businesses. EDP entrepreneurs received extensive state assistance in terms of loan guarantees and 'soft supports'. Over the twenty years the EDP operated, about 350 businesses received state assistance, across sectors such as machinery/tool making/computers, electrical and electronics, food, instruments and medical devices and internationally traded services. The IDA also operated a 'Linkages Programme', under which it actively sought to encourage established and new firms to exploit sub-supply opportunities with foreign firms. This programme enjoyed moderate success in some sectors, such as electronics, although the nature of foreign firm activity required that a significant proportion of exports consist of components sourced from outside Ireland. ***(The Knowledge Spillover Theory of Entrepreneurship and Foreign Direct Investment,* pg. 10*)***

The analysis shows that 60 per cent of foreign subsidiaries report that they consider themselves as important for R&D and innovation of their East German suppliers. That is also true for 48 per cent of foreign subsidiaries in respect to their East German customers, whereas only 41 per cent come to this conclusion in respect to their East German competitors. These results show, that about half of all foreign subsidiaries surveyed are embedding their technological activities (R&D and innovation) with actors from the private sector (suppliers, customers) as well as public sector (universities and research labs) of the East German innovation system. Further, there are indications that spillover effects from foreign subsidiaries should be expected to be of vertical (suppliers and customers) rather than horizontal nature (competitors). The latter would be in line with findings for East and Central Europe (Stephan 2006). **(*How does FDI interact with domestic innovation systems – evidence from East Germany*, pg. 9)**

The mushrooming of Greenfield investments, Greenfield firms, domestic services and East-West Joint Ventures can be very well illustrated by the development of the automobile industry in some CEEC's. This process was laid by the creation of the Skoda – Volkswagen Joint Venture in 1991. The emerging automobile Cluster around the Mlada Boleslav Region led to a booming market for the Czech

production of car components. The high dynamic growth of Skoda-Auto in CR spilled over the whole automobile industry, which grew at an average rate of 12 per cent (in real value added). The share of Skoda-Auto exports in the total volume of CR exports amounts to 10%! Thanks to the close cooperation between the "core" enterprise VW Wolfsburg and the Skoda firm in Mlada Boleslav and to the accompanying learning process ("Tandem leadership Management"), local suppliers of components and car related services became so competitive that the Czech economy has been attracting a lot of FDI. **(*Regional Disparities in Central Eastern Europe as a result of FDI and Cluster buildings: Experience from Poland*, pg. 12)**

FDI is of special importance for developing countries. Although most of the worldwide FDI flows take place between OECD countries, they accounted for the largest share of capital flows to developing countries in the 1990s. Given that FDI flows, in particular to developing countries, are projected to increase further in the coming decades, while official capital flows (especially aid) are set to fall, it is safe to assume that the nature of the FDI flowing to developing countries will play a significant role in shaping their economies. Since German firms are the third largest investors in developing countries, they have an enormous potential to influence the economic and ecological performance in those countries, not only directly by using modern and environmentally friendly technologies, but also indirectly by providing examples for others to follow. ***(Making FDI Work for Sustainable Development,* pg. 16*)***

In the trade area, the path away from beggar-thy-neighbor policies has been multilateral negotiations where trade liberalization is coordinated across countries. It is clear that a similar solution would be first best also in foreign direct investment policy, in particular at the regional level (where competition is most fierce). However, although several multilateral agreements include clauses on incentives and investment rules, their coverage remains limited. For instance, the WTO regulates FDI incentives in its agreements on Subsidies and Countervailing Measures (SCMs) and Trade-Related Investment Measures (TRIMS), but these agreements leave much discretion to national decision-makers, and apply only to .specific subsidies. that are directed to individual enterprises. The OECD tried to negotiate a more ambitious Multilateral Agreement on Investment (MAI) during the second half of the 1990s, but these negotiations did not yield any results. More comprehensive regulation of FDI incentives is found only in advanced regional integration agreements like NAFTA and EU, where extensive market integration has made it necessary to harmonize incentive policies as well. ***(The Economics of Foreign Direct Investment Incentives,* pg. 19*)***

One thing that stands out from the case studies is that the "triggering mechanisms" for a successful FDI sustainable development project differed. In the DaimlerChrysler case, it was domestic industry policy—local content—in conjunction with a "best practice" MNC. In the LaFarge case, it was a joint venture, strongly supported by the Chinese government, along with internal company commitments. In the Bergey case, it was the persistence of a small, technologically dynamic company, along with commercial opportunities provided by the Chinese government. In Chile, it was government policy requiring better performance of foreign companies. And in the tourism case studies, it is the partnership between private sector companies and international organizations.

Some of these mechanisms, especially those relating to government industry and environmental policy, face scrutiny in investment agreements, especially if negotiated in the rubric of the WTO. Requiring higher standards of foreign than domestic companies, for example, may run afoul of "non-discrimination" clauses in investment agreements, even if the intent was to discriminate not on the basis of ownership (foreign versus domestic) but on the basis of environmental impacts (age of technology, management requirements, etc.) With the exception of the European Union, domestic and international institutions to determine whether discrimination was justified on environmental and social grounds are lacking.

Several insights can be teased out of the case studies, as well as the examination of trends and evidence in Part Two. These insights can be grouped into implications for 1) national governments; 2) MNCs; and 3) global investment rules.
(Searching for the Holy Grail Making FDI work for Sustainable Development,* pg. 25*)

R&D activity and FDI thus appear to be complementary in their effect on the productivity of domestic firms. Keller and Yeaple (2003) analyze the case of the USA and conclude that only firms operating in high technology sectors – which invest more in R&D – benefit from positive FDI spillovers. In a

sequence of studies for the Indian case, Kanturia (2000, 2001, 2002) separates “scientific” from “non-scientific” sectors and notes that, besides there being a distinct impact in the case of the group of sectors taken into account, as far as the “scientific sectors” are concerned, there is a positive impact in the case of firms with a higher absorptive capacity. The importance of absorptive capacity is also stressed by a vast group of additional studies, including those undertaken by Schoors and van der Tol (2002), Barrios et al. (2002), Girma (2003), and
10Karpaty and Lundberg (2004).11 The study of Damijan et al. (2003) is a partial exception to this evidence, as they obtain a positive relation in the case of Hungary and Slovakia, but a negative one in the cases of Estonia and Latvia.
It has also been shown that the particular characteristics and development level of the region/country are relevant for the occurrence of the spillover phenomenon. According to Ponomareva (2000) and Yudaeva et al. (2003), who used data for Russia, FDI spillovers depend positively on the education level of the region considered. In turn, Sgard (2001) analyzes the existence of a distinct impact of FDI in spatial terms in the Hungarian case. He considers a region between Budapest and the border with Austria – which is more developed than other parts of the country and closer to the EU border – and another region comprising the remaining area towards the border with Yugoslavia, Romania and Ukraine. Although there is a positive impact in both regions, it is stronger in the first one. Imbriani and Reganati (1999) develop a similar investigation, considering three large regions in the context of the Italian economy. The results show that only the North-West region (the most dynamic region and the one where, for example, a large part of the R&D activity developed by large firms is concentrated) benefits from the foreign presence. This last group of studies emphasizes an important message: although FDI may work as a convergence mechanism at a national level if it produces significant gains in efficiency for domestic firms, it can also increase domestic inequalities at a regional level. This is an important result that certainly justifies further investigation. ***(Determinant Factors of FDI Spillovers – What Do We Really Know?,* pg. 11*)***

Aitken and Harrison (1999) analyze the impact of the firms’ size on the existence of FDI spillovers. They distinguish between firms with more or less than 50 workers (on average, throughout the period analyzed) and conclude that the impact on the efficiency of domestic firms of the foreign presence at the sectoral level is negative in both cases, but only significant for the smaller firms. This result confirms the idea that such firms have a lower capacity for obtaining positive effects from the presence of MNEs and are less suited to face competition from MNEs. Nevertheless, Dimelis and Louri (2001) find evidence to the opposite. In their study, only small domestic firms (those with less than 50 workers) benefit from positive spillovers. Considering FDI from Japan and from the rest of the world (mainly Europe), Girma and Wakelin (2001) also conclude that small-sized firms are the ones which benefit more from FDI spillovers. However, in the case of FDI from the USA, the impact is not significant for either small or large domestic firms. Finally, Sinani and Meyer (2004) note that only small-sized domestic firms (with less than 50 workers) and medium-sized domestic firms (employing between 50 and 100 workers) benefit from FDI spillovers, the effect being greater in the first case. The impact is not significant when larger firms are considered. In short, the evidence concerning this determinant factor is inconclusive.
The interaction between the size of the domestic firms and absorptive capacity is emphasized by Girma and Wakelin (2001). They conclude that large and highly-skilled domestic firms do not benefit from foreign presence because they are “probably the
nearest to foreign multinationals in terms of technology and market share, and may already operate at the technological frontier” (Girma and Wakelin, 2001, pg. 17). However, the group of firms that gain most from foreign presence consists of small firms with a high proportion of skilled labor. ***(Op.cit,* pg. 13*)***

Another factor that may determine the magnitude of the spillover effect is related to the nationality of FDI. Banga (2003) concludes that Japanese FDI is more susceptible to create spillovers to Indian domestic firms than FDI from the USA. Haskel et al. (2002) detects evidence of positive spillovers associated with FDI from the USA and France (greater in the French case), a non-significant effect in the case of German MNEs and a negative one when Japanese FDI is considered. Using data for the Swedish economy, Karpaty and Lundberg (2004) distinguish between FDI from the USA, Japan and the rest of the world and, in spite of the fact that FDI spillovers are always significant, the greatest effect occurs in the Japanese case. The main lesson to be drawn from this group of studies is that the nationality of FDI is important for the existence of FDI spillovers. Hu and Jefferson (2002) investigate this aspect using evidence for the electronic and textile sectors in China. They examine whether there are relevant differences between the impact of FDI from Macao, Hong-Kong and Taiwan in

comparison with FDI from OECD countries. The results show that only FDI from OECD countries has a significant – and negative – effect on the performance of local firms, which they relate to the higher technological level of firms from OECD countries and the consequent stronger competition on the local market. ***(Op.cit,* pg. 15*)***

More recently, however, the empirical and theoretical literature has begun to examine the possibility that an important motivating factor for FDI might be the desire not to exploit technology in a foreign country, but to gain access to technology. There are several strands to this work, the first of which derives from the burgeoning literature on the internationalisation of R&D activity. Recent work in this area stresses the relative technological strengths of the capital exporting (i.e. 'home') firm or country versus that of the host. Kuemmerle (1999a) distinguishes between 'home-base exploiting' (HBE) FDI and 'home-base augmenting' (HBA) FDI. The former is undertaken in order to exploit firm-specific advantages abroad, while the latter is FDI undertaken to access unique resources and capture externalities created locally (i.e. technology sourcing FDI). His subsequent empirical work (Kuemmerle 1999b) finds evidence that that HBE and HBA sites are subject to different locational determinants.

In a study of patent citations in the US semiconductor industry, Almeida (1996) finds that foreign subsidiaries make more use of sector and geographically specific knowledge than do domestic firms, and concludes that Korean and European subsidiaries in particular use 'knowledge sourcing' from US firms to upgrade their technological ability in areas in which they are relatively weak. An analysis of foreign R&D direct investment in the United States by Serapio and Dalton (1999) concludes that the nature of such investment is changing, with more emphasis on gaining direct access to American technology and expertise, especially in biotechnology and electronics. They also conclude that foreign firms are increasingly investing in R&D sites in the United States to access technologies that are complementary to those of the investing firms. ***(Does the Motivation for FDI Affect Productivity Spillovers to the Domestic Sector,* pg. 4*)***

4. Other, general

UNCTAD (1999) identifies four different types of FDI: natural-resource-seeking, marketseeking, efficiency-seeking, and strategic-asset-seeking foreign investment.

- ***Natural-resource seeking FDI*** is the investment in exploitation of raw materials, which are mainly exported without being transformed. This corresponds thus mainly to investment in extractive industries as mining, quarrying and petroleum, thus in the primary sector. Natural-resource seeking FDI is believed to be more volatile than other investments, given the combination of capital-intensive projects and the sensitivity to the fluctuating world price of oil and minerals (UNCTAD, 2005).

- ***Market-seeking FDI*** is mainly situated in the manufacturing sector and services sector (telecommunication and electricity) in developing countries. It became an important alternative for exporting goods in the 1960s and 1970s, when many developing countries introduced import substitution policies. Besides trade barriers, also high transportation costs or country-specific consumer preferences or market structures can be a reason for market-seeking investment.

- ***Efficiency-seeking FDI*** occurs when part of the value chain is located abroad in order to improve the profitability. Traditionally these investments take advantage of lower labor costs in developing countries by allocating the labor-intensive parts of the production processes there. Efficiency-seeking investment is situated in the manufacturing and service sector.

- ***Strategic-asset-seeking FDI*** usually takes place at a more advanced stage of globalization and concerns investment in research-and-development capabilities, mainly in the more advanced developing countries (e.g. software development in India).

(*Foreign Direct Investment as an Engine for Economic Growth and Human Development: A Review of the Arguments and Empirical Evidence*, pg. 6)

4.1 Theoretical works

The positive link that is mostly found between FDI inflows and economic growth is very likely to be highly endogenous. Theoretically the causality can run in both directions: FDI can cause growth

through various effects, but on the other hand a growing economy is likely to attract more FDI since it provides new market and profit opportunities. It has been argued that several of the empirical studies on FDI and economic growth do not account for this endogeneity and therefore fail to identify causality between FDI and economic growth (e.g. Carkovic and Levine, 2002). Also country-specific effects and convergence effects are often not accounted for (Carkovic and Levine, 2002). More recent studies try to control for these biases using causality tests or simultaneous equation systems, and use panel data to account for country-specific effects. **(*Foreign Direct Investment as an Engine for Economic Growth and Human Development: A Review of the Arguments and Empirical Evidence*, pg. 14)**

Indeed, it Granger-causes GDP, which means that the development of inter-national trade of a country has an impact on its economic activity. When the dependent variable is the FDI ratio, it can be observed that it is Granger-caused by real GDP per capita in almost all the equations but curiously, the sign of the coefficients is negative. This would mean that the higher the GDP per capita of a country, the lower it is attractive for FDI. It can be supposed that when a country reaches a certain level of GDP, it presents less economic development potential (because it already reached a certain level) and thus, the FDI inflows decrease. Openness to trade, gross fixed capital formation, domestic credit provided by banking sector and infant mortality rate have a significant impact on FDI ratio. This indicates in which fields the government should take measures and be more active in order to attract FDI. Thus, for a country to increase FDI inflows, it must trade at the international level and increase its domestic investment. These results also show that FDI inflows is in competition with domestic credit. **(*Impact of Foreign Direct Investment on Economic Growth: Do Host Country Social and Economic Conditions Matter.* pg. 16)**

Cantwell (1989) offers a dynamic theory of foreign direct investment. According to his view, the technological capability of an enterprise is a specific advantage that provides a precondition for the internationalisation process. However, the strength of the technological capability is not only dependent on the home but also the host country conditions. The internationalized firm transfers innovation and technology through internal networks and achieves internal economies of scale. In addition, the internationalized firm could benefit from the presence of other firms via external effects. Thus, Cantwell assumes a cumulative process between investment decisions of international companies and technological spillovers. Cantwell (1992, 1993) has argued that firms with research facilities in foreign locations may be able to transcend limitations in the technological specialisations of their home country and take advantage of different specializations abroad. This claim has been bolstered with evidence that industrialised countries are becoming more technologically specialised and differentiated from each other over time (Archibugi and Pianta, 1992), leading to the emergence of „pockets" of expertise and advanced technology in regions around the world (Cantwell 1993; Porter 1990, Storper, 1992, Cantwell and Iammarino 2003). Notwithstanding the intuitive appeal of this argument, evidence that multinationals actually utilize this technological diversity to generate innovations is contradictory (Cantwell 1992, Dunning and Narula 1995, Zander 1994). **(*How does FDI interact with domestic innovation systems – evidence from East Germany.* pg. 3)**

From the organisational perspectives the locus of technological innovation resides not only within the boundaries of the innovating organisation, but also outside it, at the interfaces between firms, universities, research laboratories, suppliers, and customers (Powell et al. 1996). Thus, many innovations intrinsically require collective efforts, involving different stakeholders to act cooperatively to generate new knowledge and ideas (Chesbrough 2003). These ideas are also reflected in the evolutionary assumptions of cumulativeness of innovation present in the literature on regional innovation systems. They are defined as networks of regionally interacting actors and institutions from the private and public sector that generate, modify, and diffuse new technologies (Cooke et al. 1997). The capacity of a region to adapt and apply external knowledge determines its attractiveness as investment location as well as its potential for technological spillovers (Fagerberg et al. 1994). Thus external resources constitute an important element in the regional knowledge accumulation (Cantwell and Iammarino 2003). **(*Op.cit.* pg. 4)**

The changes taking place in Central and Eastern Europe can be explained by means of a theory propounded by Michael E. Porter and Terutomo Ozawa which demonstrated the dynamic relationship between level of economic development, competitiveness and structural change and the influence on these of inward investment.4 In it Ozawa built on Porter's idea that, notwithstanding differences in the size of economies, the stage of a country's economic growth can be identified by examining its model

of comparative advantage and the changes therein. Porter distinguished four basic stages of economic development:

1) manufacturing-led;
2) investment-led;
3) innovation-led;
4) prosperity.

Building on Porter's theory Ozawa postulated that economic growth and an economy's transition to internationalization are linked to changes in the comparative advantage model and extended Porter's theory to include an additional factor: FDI. The directions of inward and outward investment change in lockstep with the stages in an economy's structural makeover.
(Influence of FDI on Internationalization of the Polish Economy,* pg. 3*)

The development path conceptualized by Porter/Ozawa shows the connection between the kind of inward and outward investment and a country's economic development. Between these variables there is a feedback mechanism. The kind of FDI flowing into and out of a country depends on its level of economic development, while the comparative advantage that defines the latter is determined by the nature of inward and outward investment. The same correlation is to be found in the motivation of FDI. At the first level of development it is investment seeking access to factors of production (resources), especially natural resources and cheap labour, which predominates, since there are few other location advantages that a developing country can offer. Markets-seeking FDI appears in the second part of the first stage, and productivity- and strategic assets-seeking FDI in the second, investment-led stage, though it is in the third stage that the last kind predominates. ***(Op.cit,* pg. 6*)***

Several theoretical models describing this kind of processes have appeared in recent years. For instance, Markusen and Venables (1999) present a partial equilibrium model where linkages between foreign MNCs and local suppliers of intermediate inputs reduce costs in local firms, and where the entry of foreign MNCS may in fact work as a catalyst for industrial development. While they refrain from concluding that these externalities motivate FDI subsidies, Haaland and Wooton (1999) develop a similar model in a general equilibrium framework, and focus on the policy conclusions. The entry of a foreign MNC raises the demand for domestically produced intermediates in the host country, which leads to the entry of new firms (and product varieties) in the imperfectly competitive intermediate sector, and a reduction in the cost of production. The increase in competitiveness may attract further foreign investors into the country, raising national income and welfare. This motivates the host country to subsidize FDI, in competition with other host countries that see the same potential gains. In fact, in equilibrium, the subsidies may be large enough to exhaust all the gains to the host country that manages to attract the foreign investors, effectively transferring all benefits to the MNCs. ***(The Economics of Foreign Direct Investment Incentives,* pg. 9*)***

The fundamental hypothesis presented here is that the externalities generated from FDI will differ depending on the motivation for FDI. In order to test for the motivational influence on spillovers, the vector of externalities is split between technology sourcing and technology exploiting FDI. Following the literature reviewed above, the motivation for FDI is inferred by sectoral R&D intensity differentials between the host and home countries. Thus for observations where UK sectoral R&D intensity (R&D/Q) is less than that of the home (i.e. investing) country, technology exploitation (the traditional ownership advantage hypothesis) is assumed to be the motivation for FDI, and where the reverse is true, technology sourcing is assumed to be the dominant motivating factor. We therefore define our vector of externalities in terms of FDI, but split into TSFDI and TEFDI. In contrast to other work on spillovers or technology effects from FDI, or the more general work on the contribution of externalities to growth, this provides a very tightly defined measure of externalities. Ignoring the distinction between technology sourcing and exploiting motivations, and simply including 'FDI' as a homogeneous externality leads to the possibility of biased or contradictory results, and provides a potential explanation of why there exists so much contradiction in results reported in the literature. While care must still be taken to address the general concerns expressed by Oulton (1996) that testing for externalities may produce biased results, this specification is unlikely to be beset by the now well-understood problems encountered by Cabellero and Lyons (1992) ***(Does the Motivation for FDI Affect Productivity Spillovers to the Domestic Sector,* pg. 8*)***

An inflow of FDI is not likely to generate a large inflow of labour to the host country2. Except for management, most of the MNE employees are expected to be recruited from the host country labour force. Furthermore, when investment takes the form of brownfield FDI it is not uncommon that MNEs lay off a substantial share of the incumbent labour force as usually done during privatisations. Therefore, a small effects from FDI on economic growth through effects on the host country stock of labour is expected. ***(The Effects of FDI Inflows on Host Country Economic Growth,* pg. 7*)***

4.2 Case studies

An important special case relates to foreign participation in the privatisation of government-owned enterprises. Experiences, many of them from the transition economies in East and Central Europe, have been largely positive; participation by MNEs in privatisations has consistently improved the efficiency of the acquired enterprises. Some political controversies have, however, occurred because the efficiency gains were often associated with sizeable near term job losses. Moreover, the value of FDI in connection with privatisation in transition economies could partly reflect the fact that few domestic strategic investors have access to sufficient finance. In those few cases where domestic private investors were brought into previously publicly owned enterprises, important efficiency gains resulted. ***(Foreign Direct Investment for Development: Maximising Benefits, Minimising Costs.* pg. 18)**

Importantly, the host country's export trade volumes vis-à-vis the investments geographic origin has grown in direct correlation. This had practical implications for the European integration of Bulgaria, too. With the advent of the EU accession of Bulgaria (and Romania) in 2007, the region of South-East Europe has generated renewed interest amongst foreign investors as a potential growth market with low political risk and significant economic stabilisation, indicating a generally positive impact of the process of European integration and FDI inflows on transition countries. **(*When Foreign Direct Investment is Good for Development: Bulgaria's accession, industrial restructuring and regional FDI*, pg. 35)**

Based on the changes in world trade described earlier it can be said that the second half of the 1990s saw the appearance in Poland of trends typical of the dynamic of world trade and reflected in the relationship between the level of technological sophistication of exports and their growth-rate. Like other developing countries Poland couples a highest growth rate of hard-to-copy technology-intensive exports with a highest share of labour-intensive exports in the structure of foreign trade. The high share of labour-intensive and capital-intensive exports in Poland's export structure indicates that Poland is now in the second stage of investment-led development. The fact that hard-to-copy technology-intensive exports occupy second place after labour-intensive exports is due to an FDI-driven reallocation of labour-intensive processes to high-tech production. ***(Influence of FDI on Internationalization of the Polish Economy,* pg. 12*)***

The studies undertaken confirmed that in the case of Poland the opening-out of the economy stimulated an inflow of FDI, which then increased the intensiveness of foreign trade. The operation of these mechanisms has had the effect of propelling the country down the path of economic development.
Statistical analysis of the influence of FDI on internationalization of the economy shows that there is a strong positive correlation between FDI and imports/exports. This means that growth of inward investment contributes to growth of import and export flows in Poland, which increases the degree of internationalization of the Polish economy. ***(Op.cit,* pg. 15*)***

For Mexico, FDI was the prize of the NAFTA integration process. The hope was that FDI inflows would greatly increase, stimulating economic growth and bringing social and environmental benefits by absorbing rural migrants—displaced from by agricultural liberalisation--into new, higher paying urban-based jobs, and by transferring cleaner technologies and better environmental management practices.

In the event, the results have been mixed. US FDI into Mexico has increased by a factor of ten since 1985, reaching $24 billion in 2001, contributing to a massive influx of internal migrants to urban areas. Between 1980 and 2000, population more than doubled in FDI-laden areas, while the population of Mexico as a whole grew by less than forty percent.
(Searching for the Holy Grail Making FDI work for Sustainable Development,* pg. 14*)

Unfortunately, these sustainable development success stories are an exception rather than the rule. Between 1985 and 1999, rural soil erosion grew by 89 percent, municipal solid waste by 108 percent, and urban air pollution by 97 percent. The Mexican government estimates that the economic costs of environmental degradation have amounted to a staggering 10 percent of annual GDP, or $36 billion per year. These costs dwarf economic growth, which amounted to only 2.6 percent on an annual basis.

Unless economic integration is coupled with strong environmental regulation and enforcement, pollution is likely to worsen. Since NAFTA took effect, however, real spending on the environment and has declined 45 percent, and plant-level environmental inspections have shown a similar drop.
(Op.cit,* pg. 15*)

The company applies "Lafarge Standards," among the most stringent in the world, to all new plants and project upgrades. According to its Sustainability Report, Lafarge cut its CO2 emissions per ton of cement by 13 percent from 1990 to 2000, and has made a public commitment to reduce its total emissions in industrialised countries by 15 percent by 2010. The company's environmental policy also calls for product innovation, systematic audits, training, and the "sparing use of natural resources". As a WWF "Conservation Partner", Lafarge supports the restoration of forests and quarries. ***(Op.cit,* pg. 19*)***

BWC sources nearly all its inputs from China—except for the design components—and invested heavily in training its Chinese workforce. BWC is eager to promote manufacturing capacity in developing countries, and believes that "local manufacturing, under license or through a joint venture, is necessary if widespread utilisation is to be pursued."
On the other hand, BWC is a private sector company. Its core business competency--what it has to sell--is the proprietary design technology that it has developed and keeps improving. While he recognises the tension, Mike Bergey feels that a "nexus" can be found which accommodates the interests of both the developing country government seeking to acquire proprietary technology and private companies who wish to protect it. BWC continually invests in research and development to improve existing products and develop new ones.
(Op.cit,* pg. 20*)

In the first part of this stage materials-intensive exports predominate and labour-intensive exports rise. Inflows of FDI are chiefly of a kind seeking access to factors of production. In this instance foreign investors are attracted by the availability of cheap sources of raw materials and low labour costs deriving mainly from a plentiful supply of cheap manpower. The opportunity cost of unskilled labour deriving from the presence of unemployment is very low in developing countries. These factors generate an inflow of FDI into labour-intensive industries which drives up exports of labour-intensive goods. Workers are motivated by the prospect of higher earnings in foreign-funded companies. A precondition of attracting more FDI is holding down wages at a relatively low level and a steady supply of labour, particularly given the low level of labour productivity on the first rung of a country's development. Because of steadily mounting wage demands this is hard to achieve. ***(Influence of FDI on Internationalization of the Polish Economy, pg. 4)***

4.3 Trends, statistics

During the past decades, foreign direct investment (FDI) has increased exponentially: the yearly global flows of FDI increased from 55 billion US $ in 1980 to 1 306 billion US $ in 2006 (figure 1 and table 1). FDI inflows increased continuously during the 1980s and 90s – with the sharpest growth in late 1990s – to reach a peak in 2000. Between 2001 and 2003 the developed economies experienced a sharp decline in FDI flows, associated with a general global economic recession. Developing countries were affected only to a small extent. FDI flows started to recover in 2004 and were back at their 2000-level in 2006 (UNCTAD, 2007).
(*Foreign Direct Investment as an Engine for Economic Growth and Human Development: A Review of the Arguments and Empirical Evidence*, pg. 6)

FDI flows are not evenly distributed among the developing regions. First, Asia and the Pacific have become quite successful in attracting FDI in the past decades and now receive two thirds of total developing countries' FDI inflows, while in the early 1980s Latin America was the developing region receiving most FDI (table 1). Second, Africa receives the smallest share of global FDI flows – around

3% in recent years. Nevertheless, Africa's share in global FDI has doubled since the early 1990s. Third, since the 1980s almost half of developing countries' FDI inflows are concentrated in only three countries: China, Brazil and Mexico (UNCTAD, 2007).
(*Op.cit*, pg. 7)

Increasing FDI inflows contributed to a large and continuous increase in the total stock of FDI worldwide, reaching 11 999 billion $ in 2006 (table 2). The distribution of the global stocks of FDI between the developed and developing economies did not change drastically and the developed world still gets about three quarters of the total FDI stocks. Nevertheless, in absolute terms the stocks of FDI increased enormously everywhere: over the past three decades all regions experienced at least a 10-fold increase of the stock of inward FDI. **(*Ibid.*)**

Apart from FDI, also portfolio investment, official bank loans and official development assistance (ODA) add to international capital flows. Until the early 1990s ODA was the most important source of external capital for developing countries, but since 1994 FDI took over (table 3). In 2006 FDI accounted for 50% of total developing countries' capital inflows while the contribution of ODA was less than 10%. Also portfolio investment and official bank loans have increased in the past couple of years but FDI has remained the largest component of international capital flows into developing countries (UNCTAD 2007). **(*Op.cit*, pg. 10)**

The sectoral distribution is characterized by a large geographical variation. Especially the share of primary sector-investment is extremely variable. In Africa, 55 percent of investment is located in the primary sector, reaching up to 80% in some years. This is due to the fact that TNCs are still largely attracted by the abundance of natural resources rather than the market or host-country investment climate. This also explains the uneven distribution of FDI in Africa: all top 10 recipients of FDI in 2003 have large mineral and petroleum reserves (UNCTAD, 2005). The increase in FDI in the services sector was especially high in the Latin American and Caribbean region, while Asia exhibits a large and stable share of FDI in the manufacturing sector (UNCTAD, 2007). **(*Op.cit,* pg. 12)**

It is estimated that 50 million people globally are directly employed by foreign affiliates of multinationals, accounting for only 1 to 2 percent of the global workforce (UNCTAD, 1999). However, when taking into account also indirect effects, the overall figures may be much higher. For example, Nike directly employs 20,000 people but indirectly employs 500,000 through subcontracting and homeworking (Watkins and Fowler, 2002). UNCTAD (1994) estimates that in developing countries for each worker employed by the local affiliate of a foreign-base firm, at least 1 or 2 jobs are created indirectly. Spiezia (2004) finds no significant effect of FDI on employment in low-income countries but finds a positive impact for middle-income countries. **(*Op.cit*. pg. 31)**

According to the World Bank (2007), global FDI flows reached a record of 1.1$ trillion in 2006 and there has been a continuing rise in FDI inflows to developing countries. In recent years, FDI outflows from large developing countries is also on the rise. For example, since 2004 FDI flows from India into the United Kingdom have exceeded flows from the United Kingdom to India. **(*Impact of Foreign Direct Investment on Economic Growth: Do Host Country Social and Economic Conditions Matter.* pg. 3)**

Global foreign direct investment inflows soared to unprecedented levels during the late 1990s. From 1970 to 1990, average annual global FDI inflows amounted to $58 billion, or less than one half of one percent of global GDP. In 2000, global FDI inflows reached a total of $1.5 trillion, or 4 percent of global GDP (Figure 1).
In the 1990s, annual global flows of multi-lateral and bilateral development aid (ODA) remained stagnant at $54 billion. Many analysts began to hope that FDI would "dwarf" or replace ODA as the primary source of development capital. However, only a small part of global FDI inflows—about 30 percent on average between 1990 and 2001--went to developing countries. Indeed, the developing country share fell off sharply between 1997 and 2000, falling from 39 to 16 percent. ***(Searching for the Holy Grail Making FDI work for Sustainable Development,* pg. 6*)***

FDI inflows are highly concentrated in ten, mostly large developing countries, led by China, Brazil, and Mexico. Between 1990 and 2000, the "top ten" garnered 76 percent of the total FDI flowing into developing countries. The trend towards concentration seems to be intensifying: in 2001, the top ten share rose to 81 percent (Table 1). ***(Op.cit,* pg. *7)***

Even though they are a small part of the world's total, FDI inflows to developing countries may comprise a large part of total national investment and/or GDP in a particular country. Between 1996 and 1999, for example, FDI comprised about 10 percent of GDP in Bolivia, 26 percent in Lesotho, and 26 percent in Thailand. ***(Ibid.)***

Wei´s estimation shows that an OECD country´s trade with itself was about 10 times as high as its trade with a foreign country during that period. Although this estimation could be surprisingly high only represents half of the size estimated by McCallum (1995) and Helliwell (1996) for Canada and the US. Wei´s estimation focused on the EU, found that a country´s imports from itself are about 1.7 larger than imports from a foreign country. These figures show that the European Union was more economically integrated than the OECD and that the area formed between Canada and the US. Preference for home made goods is much lower in Europe. In other words, countries in the European Union exported a larger proportion of their production than OECD countries. ***(Integration Effects and Trade Barriers, does European Economic Integration affect FDI,* pg. 3*)***

In the case of estimating the home bias in the EU, we have developed a measure of European economic integration from a panel sectoral gravity model with year-specific border effects. We have defined the measure variable to be the changes in the border effects over time. The data analyzed in this paper suggest that border effects have declined over time from 1995 to 2006. At the end of the period considered, difference between intra-national trade and international trade caused by national borders is only about 50 to 45 per cent as it used to be in 1995. ***(Op.cit,* pg. 16*)***

Reduction in trade barriers caused by European economic integration might have promoted bilateral FDI through reducing the distribution costs of products within the European Union. However, the reduction in the trade barriers of the host countries also stimulated the horizontal multinational enterprises to substitute international trade for FDI. These two opposite effects offset each other and make the bilateral FDI flows independent of the European economic integration process. ***(Op.cit,* pg. 17*)***