

# FOREIGN DIRECT INVESTMENT FLOWS AND ECONOMIC GROWTH

**Rădulescu Magdalena**

*Universitatea din Pitești, Facultatea de Științe Economice, Str. Hamangiu, nr.22, Pitești, Argeș, cod 110194, magdalenaradulescu@yahoo.com, tel. 0740093011*

**Dascalu Nicoleta Maria**

*Universitatea din Pitești, Facultatea de Științe Economice, Str. Hamangiu, nr.22, Pitești, Argeș, cod 110194, nicoleta\_dascalu@yahoo.com, tel. 0726037251*

*Trying to explain economic growth is one of the fundamental questions in economics and has generated a large body of research. The importance of technology for economic growth provides an important link between FDI inflows and host country economic growth. It is theoretically straightforward to argue that FDI inflows have a potential for increasing the rate of economic growth in the host country. Inflows of physical capital resulting from FDI could also increase the rate of economic growth but it is argued in this paper that the most important effect comes from spillovers of technology. MNE operations in the host country can result in technology spillovers from FDI whereby domestic firms adopt superior MNE technology which enables them to improve their productivity. Technology spillovers thereby generate a positive externality that should allow the host country to enhance its long-run growth rate.*

*Key words: foreign direct investments, technology spillovers, competitiveness, economic growth.*

## 1. Introduction

The economic development of emerging markets and developing countries depends to a large extent on the possibility to make profitable investments and accumulate capital. Having access to foreign capital and investments allows a country to exploit opportunities that otherwise could not be used. Recent experiences with opening capital accounts in emerging and developing economies, however, have proved to be a mixed blessing, as it is becoming increasingly clear that not all types of capital imports are equally desirable. Direct investments are much more resilient to crises, therefore the question is what countries can do to attract more of such capital flows.

While the economic determinants of FDI flows to developing countries have been analyzed to a considerable degree, it is rather astonishing that the importance of changes in political institutions and of other relevant policies in host countries have received relatively little attention. In the 1990s, most existing studies on the influence of policy-related variables on FDI flows consisted of international cross-country studies. Within this framework, it has been found, for example, that there is a negative link between institutional uncertainty and private investment (Brunetti and Weder, 1998), a positive relationship between FDI and intellectual property protection (Lee and Mansfield, 1996), and a negative impact of corruption on FDI flows (Wei, 2000).

The first attempt was made by Jun and Singh (1996), who regressed an aggregated indicator for political risk, based on a number of sub-components, and several control variables on the value of foreign direct investment inflows. For their data sample of 31 developing countries, the political risk index is statistically significant and the coefficient implies that countries with higher political risk attract less FDI. Likewise, Gastanaga et al. (1998) examined the link between various political variables and foreign investment inflows. They found that lower corruption and nationalization risk levels, and better contract enforcement are associated with higher FDI inflows. Yet they state that their findings do not always hold up, which may be due to the relatively small country sample of 22 developing countries.

More recently, several studies have analyzed the relationship between fundamental democratic rights and FDI: Harms and Ursprung (2002), Jensen (2003), and Busse (2004) found that multinational corporations are more likely to be attracted by countries in which democracy is respected. Li and Resnick (2003), on the other hand, argue that competing causal linkages are at work. They found that democratic rights lead, above all, to improved property rights protection, which in turn boosts foreign investment. Apart from this indirect impact on FDI, increases in democracy may reduce FDI.

In previous studies it was also shown that only few indicators for political risk and institutions are closely associated with FDI. These are government stability, law and order, and quality of the bureaucracy. In

addition to the three mentioned indicators, we find that investment profile, internal and external conflict, ethnic tensions and democratic accountability are important determinants of FDI flows.

Until now, empirical evidence on a positive relationship between FDI inflows and host country economic growth has been elusive. When a relationship between FDI and economic growth is established empirically it tends to be conditional on host country characteristics such as the level of human capital, see for example de Mello (1999) and Borensztein et al (1998). The difficulty in proving a positive effect from FDI on economic growth provides a strong incentive for further empirical studies. Neoclassical models of economic growth only allow FDI to have a level effect on growth due to diminishing returns to capital. However, the endogenous growth theory provides a framework for studying the link between FDI and economic growth that makes it possible to take the characteristics of FDI into account and should improve the chances of confirming the theoretical relationship by empirical evidence.

The paper argues that it is technology spillovers from MNEs to domestic firms that provide the most important link for a positive effect from FDI on economic growth. But are there differences in the growth-enhancing effect of FDI between different types of host countries such as developed, developing and transition economies? Furthermore, is there a threshold level of technology that host countries need to achieve in order for FDI to have a positive effect on economic growth? Are there other host country characteristics that affect the ability of FDI to enhance the rate of economic growth?

The aim of the paper is to analyze whether FDI inflows have a positive effect on host country economic growth. The paper contributes to the mixed results of earlier research by the finding that FDI inflows have a positive effect on host country economic growth in developing but not in developed economies.

## **2. FDI inflows and economic growth**

FDI inflows can affect host country economic growth in several ways. The purpose of this section is to provide a description of the potential growth enhancing effect of FDI.

### ***2.1. Firm-specific advantages, knowledge capital and externalities***

What implications does the importance of knowledge-capital and technology for MNE operations have for the growth enhancing potential of FDI inflows? As argued above, advanced technology is an important component of knowledge capital and technology in many cases forms the basis for an MNE's firm-specific advantage. Not only is technology very important as a firm specific advantage for many MNEs, it also provides a link between FDI and economic growth.

The non-rival characteristic of technology implies that MNEs try to protect their technology by using brand names and patents. Since the MNE is dependent on its firm-specific advantage (often in the form of technology) for profitable business operations as argued by Hymer (1960), the MNE has an incentive to try to prevent spillovers of technology to other firms.

Spillovers of technology are an externality that can occur through several different channels including imitation, reverse-engineering and supplier linkages. When spillovers do occur it implies that the MNE is unable to internalize all of the returns to its technology resulting in a positive externality since the social return on investment is higher than the private return. It is argued in this paper that it primarily is the positive externalities from technology spillovers that allow FDI to enhance the rate of economic growth<sup>1</sup>. The emergence of theories of endogenous growth provides a framework that shows how positive externalities can improve long run economic growth. Positive externalities provide non-diminishing returns to capital and therefore enhance growth also in the long run. Endogenous growth theories therefore support the idea that FDI could enhance economic growth. Balasubramanyam et al (1996, p. 95) argues that the 'new growth theory ... provides powerful support for the thesis that FDI could be a potent factor in promoting growth'.

### ***2.2 Physical capital and labor***

We argued above that technology spillovers provide externalities that should have a positive effect on economic growth in the host country. Besides of knowledge-capital, FDI can also generate an inflow of physical and human capital to the host country. As the size of the host country physical capital stock increases the productive capacity of the host country also increases. Unfortunately the growth enhancing effect of an ever growing stock of physical capital is not endless. Even though additional capital can have

important effects on economies with a low capital-labor ratio, diminishing returns imply that accumulation of physical capital cannot function as a permanent source of long-run growth. Since Solow type models rule out capital as a source of long-run per capita growth, in such a framework FDI can only affect growth through an inflow of capital in the short run while the economy is in transition toward steady state.

Empirical research on the role of capital accumulation for economic growth has not been conclusive. Easterly and Levine (2001) used a growth accounting framework and reached the conclusion that investment in physical capital is relatively unimportant in explaining long run economic growth since technological progress accounts for most of the cross-country variation in growth. However, Bond et al (2004) argues that this conclusion is premature since the modeling framework in Easterly and Levine is too restrictive.

An inflow of FDI is not likely to generate a large inflow of labor to the host country. Except for management, most of the MNE employees are expected to be recruited from the host country labor force. Furthermore, when investment takes the form of brown-field FDI it is not uncommon that MNEs lay off a substantial share of the incumbent labor force as usually done during privatizations. Therefore, a small effect from FDI on economic growth through effects on the host country stock of labor is expected.

Based on the discussion in this section the conclusion is reached that the primary effect from FDI inflows on host country economic growth should arise as a result of technology spillovers rather than through an increase in the stocks of capital and labor. This view is shared by other studies such as de Mello (1997).

### 2.3 Greenfield and brownfield FDI

The growth enhancing ability of FDI is affected by the chosen mode of FDI. It is argued in this paper that the effects of FDI inflows on variables such as technology spillovers and physical capital is expected to differ between greenfield and brownfield FDI. Greenfield FDI implies that the MNE constructs new facilities of production, distribution or research in the host country. The result is an increase in the host country stock of physical capital that can be substantial, especially for developing economies that tend to be capital scarce. Under brownfield investment, on the other hand, the MNE acquires already existing facilities in the host country. Brownfield FDI should therefore only result in a limited increase in the stock of physical capital since there is a change in ownership rather than an inflow of new capital.

Greenfield and brownfield FDI should affect host country growth differently since Greenfield FDI results in a larger inflow of physical capital. While brownfield FDI results in a small inflow of physical capital, Javorcik (2004) argues that brownfield FDI in the form of a merger or joint venture could maximise the potential for technology spillovers. Unfortunately, lack of appropriate data precludes an empirical analysis of this interesting research problem.

Effect on growth of:	Developed economies	Developing economies
Technology spillovers from FDI	+ High absorptive capacity implies a high potential to adopt technology leakages and realise spillovers - An already high host country level of technology reduces the potential for further improvements from spillovers	+ Low host country level of technology indicates a high potential for improvement even if spillovers are small - Low absorptive capacity implies that only a limited share of an MNE technology leakage can be turned into spillover through adoption
Physical capital inflow from FDI	+ Market structure implies existence of increasing returns to investment - Large per capita stocks of physical capital suggests decreasing returns to investment	+ Small per capita stocks of physical capital implies increasing returns to investment - Market structure studies indicate that constant returns to scale dominate in developing economies

**Table no. 1 Host country ability to enhance economic growth through FDI inflows**

The developed economies have larger per capita stocks of real capital than developing economies. Consequently these economies should be closer to experience diminishing returns to capital than developing economies when there is an inflow of physical capital. Table 1 summarises the discussion and presents an overview of the differences in the ability of developed and developing economies to realise the growth enhancing potential of FDI inflows.

What conclusions can be drawn based on the summary in Table 1? It does not seem to exist a clear indication whether developed or developing economies should experience the strongest growth effects from FDI inflows.

The discussion in this section suggests two objectives for the analysis of the paper. Firstly, can it be verified that FDI inflows indeed enhance economic growth in the host country? Secondly, how does the growth enhancing potential of FDI differ between developed and developing host countries?

The paper has argued that the two main channels through which FDI can affect host country economic growth are technology spillovers and inflows of physical capital. The paper discusses and models the effects of FDI inflows on host country economic growth. Based on this discussion the paper argues that technology spillovers provide the strongest potential for FDI to enhance economic growth. Foreign MNEs have a technology advantage over domestic firms and MNE entry in the form of FDI results in a positive externality in the form of technology spillover from the MNE to domestic firms. The domestic firms are thereby able to improve their level of technology and become more productive.

The paper investigates whether there are differences in the growth enhancing effect of FDI between developed and developing economies. The paper contributes to the mixed results of earlier empirical studies by the finding that FDI inflows have a positive effect on host country economic growth for developing but not for developed economies.

Foreign direct investments (FDI) are a factor movement which affects the international location of production, patterns of trade, and the way national firms internationalize.

In this paper we utilize firm data on manufacturing plants in four Central and Eastern European Countries (CEECs), namely Bulgaria, Hungary, Poland and Romania, between 1995 and 2004 in order to trace the location of multinational enterprises (MNEs) and estimate the determinants of their location choice.

Since the beginning of the transition process, CEECs have received a constantly increasing amount of foreign direct investments, which being made not only by financial capitals but also by fixed assets, knowledge (both codified and tacit) and technology played an active and dynamic role in enhancing the industrial restructuring process and driving the (re)integration of CEECs into the world economy. Several studies provide in-depth analyses on the contribution of MNEs to the different phases of transition processes. Despite all this interest, very little is known about the factors influencing multinational location choice.

Several reasons explain the need for mapping FDI and understanding their behaviour in location choice processes. First of all, this would help to identify which location advantages make more profitable for firms to produce abroad, provided that they possess organisational and internalisation advantages (Markusen, 1995; Dunning, 1977); secondly, it would directly show the spatial distribution of the benefits generated by FDI, though the mechanism is far from being automatic.

Central and Eastern Europe has been only marginally considered in the empirical literature on firm location choice. A number of difficulties have impeded empirical analysis on this issue in transition countries. In particular, data on foreign firm location and economic and social characteristics of narrowly defined locations have not been readily available since recent times. This explains why among the works quoted above, only two of them focus on multinational firm location choice in CEECs, though from a very limited perspective. In particular, Disdier and Mayer (2003) test how French firms choose the location (at country level) for their production plants abroad within a set of 14 Western European countries and six CEECs. They found that the East-West structure effectively influence French firms location choice in Europe, suggesting that competition for FDI attraction is stronger among CEECs than between Eastern and Western European countries. This difference, however, decreases over time, indicating that CEECs are perceived by French firms as more and more similar to EU countries.

We consider, in fact, multinational firms' location choice belonging to four CEECs. Two of them, i.e. Hungary and Poland, advanced faster on the way to EU membership than the other two, namely Bulgaria and Romania, which still are candidate countries. Moreover, we compare two small with two large countries, thus implicitly considering potential biases deriving from country size. The composition of the set of location alternatives is particularly important, since it allows a better comprehension of multinational firms' location patterns in transition countries, a world whose extremely diversified economic realities have been able to accommodate a large number of multinational firms pursuing different strategies of internationalization.

### **3. Conclusions**

The paper has argued that the two main channels through which FDI can affect host country economic growth are technology spillovers and inflows of physical capital. The paper discusses the effects of FDI inflows on host country economic growth. Based on this discussion the paper argues that technology spillovers provide the strongest potential for FDI to enhance economic growth. Foreign MNEs have a technology advantage over domestic firms and MNE entry in the form of FDI results in a positive externality in the form of technology spillover from the MNE to domestic firms. The domestic firms are thereby able to improve their level of technology and become more productive. The paper attempts to verify whether FDI inflows enhance economic growth. The paper finds that FDI inflows have a positive effect on host country economic growth for developing economies.

The discussion on host-country impact has focused on host developing economies both because they are the principal recipients of FDI from developing countries and because it is the development impact of such FDI that matters the most. The impact of FDI from developing countries on host developed economies is likely to be much less significant than that on host developing economies, because of its much smaller size relative to total FDI in host developed countries.

Although modest in size relative to global FDI flows, FDI from developing countries assumes considerable importance for host developing countries. The direct and indirect effects of the FDI package on financial resource flows and investment, transfer and diffusion of technology, export activity and employment can usefully supplement domestic efforts of host developing countries in those areas. The industrial distribution of developing-country FDI and the technological attributes of developing-country TNCs suggest that developing-country foreign affiliates may be able to interact more effectively with domestic firms in host developing countries than affiliates of TNCs from developed countries.

However, apart from the potential economic benefits of FDI from developing countries – as also in the case of FDI from developed countries – there may also be a number of risks, economic as well as non-economic, for host developing economies. The challenge for host developing economies is to minimize the risks, and benefit to the maximum extent possible from these new sources of FDI. In that context, national and international policies matter.

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