The effects of foreign direct investment on the host country economic growth - theory and empirical evidence

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Abstract:

Foreign direct investment (FDI) influences the host country economic growth through the transfer of new technologies and know-how, formation of the human resources, integration in global markets, increase of the competition, and firms’ development and reorganization. A variety of studies considers that FDI generate economic growth in the host country. However, there is evidence that FDI is also a source of negative effects for the host country. Existing literature also emphasises the ambiguity of the results, and mentions that this ambiguity can be explained by the existence of a gap in the research concerning the ways through which FDI influences the host country economic growth.

Given the lack of consensus regarding the effects of FDI in the host country economic growth, it may be useful to make a survey of the existing studies on this relationship. Thus, this work focuses on the study of the positive and negative impacts of FDI on the host country economic growth, stressing the explanations to these impacts. Through reviewing the existing theoretical and empirical literature on the subject, and taking advantage the vastness of knowledge and the dispersion of analysis we intend to shed light on the main explanations for the divergence of results in different studies. The conclusions might assist the host countries authorities in the definition of FDI policies that allow to leverage the positive effects or to reduce the negative effects of FDI on the host country economic growth.

Key-words: Foreign Direct Investment; Economic Growth; Literature Survey

JEL codes: F21; O40

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1. Introduction
Foreign direct investment (FDI) is generally considered by many international institutions, politicians and economists, as a factor which enhances economic growth, as well as the solution to the economic problems of developing countries (Mencinger, 2003). The economic theories suggest that foreign capital flows, when efficiently allocated, generate economic growth (Mencinger, 2003). For some authors, it is even considered the most effective way to achieve economic growth (Lee and Tcha, 2004). In 2002, OECD reports that countries with weaker economies consider FDI as the only source of growth and economy modernization. For this reason, many governments, particularly in developing countries, give special treatment to foreign capital (Carkovic and Levine, 2002). It is common that countries have public agencies whose aim is to attract foreign investments using public funds, which shows that governments are willing to bear some costs to attract such investments (Ford et al., 2008). The most common examples of special treatment given to foreign investments are tax holidays, exemptions from import duties, the provision of land for facilities, and the offer of direct subsidies (Hanson, 2001).

Despite the impact of FDI on economic growth have been widely studied, there are still questions concerning the real effects of FDI, and also concerning the necessary conditions and the channels through which FDI leads to economic growth (Balasubramanyam et al., 1996). In fact, although many studies have confirmed the positive effects of FDI on the host country economic growth, some authors stress that there is still no consensus on the degree of these effects [Blomström and Kokko (1998); Lim (2001)]. Also Pessoa (2007) reports that the main conclusion to be drawn from several studies is that results are ambiguous. One explanation advanced for the ambiguity of results is that although the number of studies is high, the number of countries that were analyzed is small (Pessoa, 2007). The diversity of results may be originated by differences in each country that produce different impacts on growth (Pessoa, 2007). Mohnen (2001) also indicates that the presentation of contradictory results in different studies may be caused by lack of analysis of the host country domestic conditions. For example, among the studies that have concluded that FDI does not cause economic growth are those of Haddad and Harrison (1993), Grilli and Milesi-Ferretti (1995) and Javorcik (2004). Others share the widespread view that FDI generates economic growth, especially Blomström

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2 Usually FDI is defined as an investment (involving the transfer of a vast set of assets, including financial capital, technology and know-how, management practices, etc.) carried out by an entity (a firm or an individual) in foreign firms, involving an important equity stake in, or effective management control.

3 Vissak and Roolaht (2005) pointed out that the number of studies that show the positive effects of FDI is much higher than those who focus on the negative effects.
(1986), De Gregorio (1992), Mody and Wang (1997), Nair-Reichert and Weinhold (2001), and Lensink and Morrissey (2006)’ studies. Given the lack of consensus regarding the effects of FDI in the host country, we consider relevant to make a detailed analysis of the existing studies on this relationship. The aim is to assess the effects of FDI on the host country economic growth. This analysis may be important in order to obtain more information concerning the channels through which the host country economic growth is affected by FDI inflows. With this information, authorities of these countries will be able to design more appropriate FDI policies, in order to leverage the positive effects and mitigate the negative effects of FDI. Through the review of existing theoretical and empirical literature on the subject, we seek to contribute to the clarification of the effects of FDI on the host countries economic growth. On the one hand, the theoretical literature will be useful to explain the mechanisms through which FDI affects economic growth. On the other hand, an analysis of existing empirical studies will help to explain the diversity/ambiguity of results. We intend that this survey is the widest possible, with studies on a larger number of countries, since as we have already mentioned, may be an explanation for the divergence of results, and in this way we also get a broader picture. Thus, we expect to shed light on the explanations for the impacts of FDI on economic growth, particularly to identify if they are dependent on or related to the host country characteristics, either with their level of development, or with its political system, integration into the global market, etc. This analysis, time extended, also helps with the analysis of local conditions, because at different periods the structure and positioning of the country will be different. Using theory already developed is also useful, since it has already been pointed out explanations for the conclusions reached. In the studies under consideration, we expect that these findings suggest a way to explain the impacts of FDI.

This paper is organized as follows. In Section 2 we present a review of theoretical literature focusing on the channels through which FDI affects the host country economic growth. In Section 3 we set out some of the empirical studies on these effects, showing some of the explanations for the diversity of the results observed. Finally, in Section 4, we report the main conclusions.
2. The impact of FDI on economic growth: theoretical considerations

2.1. Initial considerations

According to OECD (2002), there are several mechanisms / channels through which FDI can affect the host country economic growth. The effects of FDI can be positive and / or negative, i.e., beyond the benefits, FDI can also bring costs to the host country economy (Mencinger, 2003). The mechanisms by which FDI can cause positive effects on economic growth can be divided into five major groups: the transfer of new technologies and know-how, formation of the human resources, integration into the global economy, increased competition in the host country, and firms development and restructuring (OECD, 2002). However, some of the mechanisms identified, namely the first four, also can act in a negative way on economic growth. Additionally, FDI can cause difficulties in implementing economic policies. Table 1 presents a summary of these mechanisms, highlighting the impact that is expected (positive or negative).

Table 1: Factors explaining the impact of FDI on the host country economic growth

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<td>2. Formation of the human resources</td>
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<td>3. Integration into the global economy</td>
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<td>4. Increased competition</td>
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<td>5. Firms development and restructuring</td>
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<td>6. Difficulty of implementation economic policies</td>
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By observing Table 1, it is evident that the effects of FDI on the host country economic growth are, a priori, ambiguous. In fact, there are mechanisms through which it is expected that FDI positively affects growth but these mechanisms could also trigger a negative effect. So, in the following subsections we explore these mechanisms, focusing our attention on factors that may favor the occurrence of benefits to economic growth.
2.2. FDI and the transfer of new technologies and know-how

As shown in Table 1, FDI can affect economic growth through the transfer of technology and know-how, and this impact can be positive and / or negative.

Multinational firms are often regarded as the more technologically developed firms. According to Borensztein et al. (1998) multinational firms are responsible for almost all the world spending on research and development (R&D). Also Ford et al. (2008) consider multinationals as a major source of technology dispersion, due to its presence in various parts of the world.

The growth rate of a country can be explained by the state of technology it uses. In developing countries economic growth depends on the implementation of more advanced technology brought by multinationals (Borensztein et al., 1998). Lim (2001) suggests that one of the most important contributions of FDI is its role in the transfer of technology from developed to developing countries. Loungani and Razin (2001) argue that this transfer could achieve gains that could not be achieved through financial investments or the purchase of goods and services. According to Frindlay (1978), FDI is a way to improve a country economic performance through the transmission effect of more advanced technologies introduced by multinationals. FDI is considered by Saggi (2002) and Hermes and Lensink (2003) as a predominant way of increasing economic growth, since the transfer of technology and knowledge of multinationals contribute to the increase local firms productivity. According to Varamini and Vu (2007), the result of the technology transfers is to improve the host firms’ performance, which contributes to the growth of Gross Domestic Product (GDP).

The existence of new technologies introduced by multinationals leads to a reduction on R&D costs of firms that receive these technologies. This will provide these firms to become more competitive by reducing costs (Berthélemy and Démurger, 2000).

The technology transfers are made to the local suppliers of multinational firms on a voluntary basis, to improve the products they deliver to them (Rodriguez-Clare, 1996). These new technologies are transferred in the form of training, technical assistance and other information provided in order to improve production quality and quantity of products that the multinational purchases (OECD, 2002). The same study states that multinationals usually also provide support to their local suppliers in purchasing raw materials and intermediate products,

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4 Firms engaging in FDI are usually defined as multinationals firms (because they own or control assets in different countries).
and even in the improvement of its facilities. However, in sectors of activity with rapid changes in technologies, the main benefits brought by multinationals are the new products and new production processes (Blomström and Kokko, 1998). Kottaridi (2005) still reports the link that multinationals establish with local research entities, such as public institutes and universities, as a strong source of technology transfer.

The transfer of technology, however, can also bring negative effects. According to Vissak and Roolaht (2005), the host country can become dependent on technologies introduced by multinationals and other developed countries. This study indicates that in this way, there is a decline in local firms’ interest in the production of new technologies. Sen (1998) adds that multinationals may have an adverse reaction to host country research in order to continue to hold a technological advantage compared to local firms. This author also notes that with the same aim multinationals only transfer inappropriate technologies. In these circumstances, the host country dependence from multinationals technology will be perpetuated.

2.3 FDI and the formation of the human resources

A second channel through which FDI can affect the host country economic growth is the formation of the human resources or labor force. This channel may facilitate the occurrence of positive effects but also negative effects.

According Ozturk (2007), FDI fosters economic development in the host country by increasing the productive capacity due to the improvement of the labor force through training obtained. Zhang (2001a) states that FDI is a source of economic growth because it carries with know-how in production and management methods, and also highly skilled workers. According to De Mello (1999), it is expected that FDI improves the knowledge of the labor force by providing training through the introduction of new methods, and production and management practices.

One way of improving the human capital of the host country is through learning that workers receive during the observation of new operations developed in multinationals (Loungani and Razin, 2001 and Alfaro et al., 2004). As mentioned, FDI is a vehicle for the adoption of new technologies in the host country and because of this, it is necessary that the labor force is able to use them. What happens often is the lack of this capacity, which leads the multinationals to

\[5 \text{ As a consequence, Sen (1998) points out the increase on payments of royalties that will lead to a negative impact on the balance of payments, as we report in section 2.4.} \]
provide the necessary training and thus increase capacities in the host country (Borensztein et al. 1998). According to OECD (2002), multinationals are a larger source of training than local firms. This is explained by the use of new technologies, practices and methods that local workers can not dominate and that may limit its use (Borensztein et al., 1998). The training provided by multinationals has repercussions to the economy of the entire country. Hanson (2001) states that local firms will then hire these workers that received training provided by multinationals transmitting it to those firms. Lim (2001) adds that many employees use new knowledge to create their own firms and then they will transmit their knowledge to the workers of this new firm. The OECD (2002) states that the multinationals are also responsible for improving the training of the host countries, because demonstrate to local authorities the need to have a labor force capable and qualified.

As regards the labor force, there also exist negative consequences from FDI inflows. The use of high technology by multinational, leads to predict the need for less workers than that used by local firms, and the possibility of replacement of these firms by others that use a smaller number of workers, leading to the consequent increase in unemployment (OECD, 2002). Another situation in which local firms will feel the fall in the local authorities’ support is that reported by Ford et al. (2008). These authors point out the cases where local authorities, verifying that multinationals are a source of training and thereby increase the levels of education in the country, reduce public spending in this area which mitigate the effect of training of the labor force provided by FDI. Another consequence reported is that workers with high education may leave the country, since there are no R&D activities that they can engage in the host country (Vissak and Roolaht, 2005).

2.4. FDI and integration into global economy

It is given as certain the fact that FDI contributes to the integration of the host country into the global economy, particularly through the financial flows received from abroad (OECD, 2002). This relationship is also demonstrated by Mencinger (2003), who evidences a clear link between the increase of FDI and the rapid integration into global trade. The integration in the international market caused by FDI generates economic growth which is increased as the country is open (Barry, 2000). Blomström and Kokko (1998) explain that the integration in the global market of local firms is also made by copying and attainment of knowledge held by the multinationals. It is clear that multinationals have higher knowledge about
internationalization because they have already gone through this process. Among the main competitive advantages held by the multinationals are the expertise in marketing, establishment of networks, and creation and development of international lobbies. The contact with multinationals networks is a very important factor, according to Zhang (2001a), since there is a possibility that local firms learn with the operation of these networks or to integrate them.

The way how knowledge is transmitted to local firms can be done by several ways. Blomström and Kokko (1998) suggest that some local firms become multinationals suppliers or subcontractors, which leads local firms to export, even if it is often not through their own brand, but with the multinational brand. The contact with the multinational brand is also useful in order to use the same channels of this brand already established in the international market (Zhang, 2001a). This will be the first experience in international markets which then serve to export products they developed, with its own brand, to independent customers achieved by them (Moran, 1999).

Another form of integration in the international market of local firms caused by FDI is through their inclusion on the multinationals strategy. This may lead local firms to follow the multinationals to other markets, thus evolved to an international scope, or even replace other suppliers in multinationals subsidiaries in other countries (OECD, 2002). Ford et al. (2008) assert that multinationals tend to include their suppliers in international networks to which they belong, so that local firms are involved in global trade by establishing relations with other international entities. The OECD (2002)’s study refers to the trade associations that multinationals are generally prominent members, as important sources to pass knowledge about the world market, because they are a center for exchange of relevant experiences. It also says that in response to requests from multinationals, local authorities can create infrastructures (particularly transportation infrastructures) that will benefit international trade and local firms that also will use them successfully in their internationalization. This fact is evidenced by Gunaydin and Tatoglu (2005) which indicate that these consequences of FDI facilitate the distribution of raw materials that exist in the host country. The type of FDI is also a factor of integration into the global market. When the investment is only made in assembly lines it is clear the increase in imports of components, as well as the increase in exports of final products (Zhang, 2001b). Makki and Somwaru (2004) report that the increase on exports resulting from FDI leads local firms to improve their productivity by better use of their capacity and access to economies of scale.
The further integration into the global economy provided by FDI, however, can have negative effects on the host country. Vissak and Roolaht (2005) note that FDI is the easiest source of spread economic problems occurred in the world, particularly those occurred in the multinationals countries of origin. This problem stems from the integration into the global market. Host countries become more open economies and more subject to changes in the global economy. Mecinger (2003) suggests that FDI has a far greater impact for imports than for exports, which also influences the balance of payments. The strong impact that FDI has on imports is due to the fact that multinationals have great need of goods and raw materials, and most of the time, are not available, either in quantity or in quality, in the host country, due to the high demands they place on their purchases (OECD, 2002). Another explanation is that the investment made may have as main objective to supply the local market and thus do not encourage exports (Ram and Zhang, 2002).

But the negative aspects do not stop there. In fact, there are also negative consequences for the balance of payments resulting from FDI. The purpose of improving the balance of payments is not always achieved in the long run. These effects can be mitigated or contradicted (in stages of low FDI inflows) through the usual repatriation of multinationals subsidiaries profits to their countries of origin (OECD, 2002; Hansen and Rand, 2006; Ozturk, 2007), or through the payment of licenses and royalties due to the use of technology held by the headquarter (Sen, 1998), which in the limit may reverse the sign of balance of payments. Ram and Zhang (2002) and Duttaray et. al (2008) show that in the long run the repatriation of profits is higher than the positive impact of the initial investment. The emptying of capital in the host country due to the repatriation of profits is also raised by Sahoo and Mathiyazhagan (2003). The negative impacts caused by these outflows of capital, can be extended if these funds are obtained through credits obtained in the host country (Loungani and Razin, 2001). Sohinger and Harrison (2004) state that the price of FDI corresponds to the difference between FDI inflows and the subsequent capital repatriated.

2.5. FDI and increased competition

According to Lee and Tcha (2004), FDI plays an important role in improving the factors of production and accumulation of capital in the host country, due to the competition it creates. The entry of multinationals increases the supply in the market of the host country, so local
firms, in order to maintain their market shares are induced to reply to this competition (Pessoa, 2007). However, the increased competition can also have negative effects.

The competition created causes an increase in R&D expenditures by local firms, and in some cases local firms take advantage of the improvements made to gain more market share and also become multinationals suppliers (Blomström and Kokko, 1998). Existing firms are forced to improve their technology and methods to face competition imposed by multinationals (Driffield, 2000; Varamini and Vu, 2007). Thus, local firms tend to make investments in equipment and in its employees (De Mello, 1997). FDI is usually seen as a way to strengthen internal competition of a country. This causes an increase in productivity, lower prices and a more efficient allocation of resources (Pessoa, 2007). Also the OECD (2002)’s study states that FDI has the potential to increase competitive pressures in the host country and that this increase is increased as the market is closed. These effects are directly related to the existing competition in the market and the response capacity of local firms.

But the increased competition caused by FDI does not rend only positive effects on the host country. In fact, in a situation of a highly protected market, multinationals already present will use its influence with authorities in order to this situation does not change. In this way, multinationals keep their market position, not experiencing increases in host country capacity and therefore in supply. This will maintain the use of existing resources and does not promote development through increased competition (Loungani and Razin, 2001). Zhang (2001b) and Ram and Zhang (2002) argue that increased competition caused by FDI leads inevitably to the closure of some local firms that can not follow the multinationals due to the advantages multinationals have. These closures lead to increased concentration in the sector, which in turn will lead to decreased competition. In order to face the strong competition from multinationals, concentration can also occur between local firms to achieve gains in economies of scale, and in this way competition will decrease (Loungani and Razin, 2001).

Other factors related to FDI could result in the disappearance of local firms. Hanson (2001) and Zhang (2001b) report that the increase in income in the national economy is not equal for all players in the economy: multinationals have increased income which justify the increases at the national level, but local firms are suffering a decline in income which, in the limit, may lead to its disappearance. Sahoo and Mathiyazhagan (2003) refer to the possibility of the emergence of a situation of multinational oligopoly which lead to the disappearance of local firms. Competition between multinationals and local firms will also feel in attainment of human resources. According to Sylwester (2005), multinationals attract more easily the more
skilled workers, either through its economic power either through better career possibilities, are able to offer, removing them from local firms or hindering them to capture these workers. Local firms may also suffer from the increase in FDI due to its reduced structure compared to the multinationals. Vissak and Roolaht (2005) argue that to attract FDI local authorities bear additional costs. As a result, it is necessary to make cuts in public expenditures. These will have greater impact on local firms due to their smaller size and, therefore, are more dependent on the government, including in some cases of government subsidies that will be reduced or even canceled.

Finally, another effect that is recorded by several studies is that caused by the competition created in access to credit, which will bring negative consequences to host country economy. In fact, multinationals tend to be partly financed by the financial markets, particularly in host countries. This increase in financing needs in the country will have effects in that market, so it is predicted that the costs of credit increase and that the access to credit changes (Lim, 2001; Carkovic and Levine, 2002; Sylwester, 2005). Multinationals financed in destination countries, will reduce their ability to grant loans, making it difficult to local firms obtain loans. What also happens sometimes is FDI to cause a loss of domestic savings which further make worse the availability to grant loans (Chakraborty and Basu, 2002). The most usual is that these problems are mainly experienced by local firms. These firms have a smaller structure, then find it difficult to support the increased costs of credit, plus the weak bargaining power with financial institutions (compared to multinationals), which difficult the access and counter-entry in obtaining credit. This competition for funding could withdraw some local firms from necessary investments for its development or even for its maintenance, which may ultimately lead to its disappearance.

2.6. FDI and firms’ development and reorganization

According to Hansen and Rand (2006), FDI is probably a key element in the process of creating better economic environment, with consequent positive effects on economic growth. FDI is a source of changes in host countries firms. Two situations are identified in which local firms feel particularly those changes. Because of its superior capabilities, multinationals are able to enter into sectors with high entry barriers, in terms of local firms. This entry will reduce or eliminates existing monopolies in these sectors, which will change the structure of national economy (Blomström and Kokko, 1998).
Another situation that alters the structure in the host country is given by OECD (2002), in the case of FDI being achieved by takeover or by a process of privatization. Multinationals force the adoption of their policies and procedures in the firms they acquire, and these measures are usually complemented with the incorporation of workers from other subsidiaries of the multinational headquarter. The changes are especially important if the practices used by multinationals are more efficient than existing ones, which will generate efficiency gains. The structuring of local firms suffers also changes by copying the structures used by multinationals considered more efficient (Hansen and Rand, 2006).

Zhang (2001b) mentions several changes experienced in businesses in China due to FDI. Firms, before public, were turned into private firms or public-private partnerships, many of them due to joint ventures with foreign investors. Another phenomenon observed by Zhang (2001b) was the acceleration of policy changes through changes in laws and operating rules of the market, for an approximation to an open market economy.

2.7. FDI and the difficulty of implementation economic policies

The host country economy may be affected by the difficulty of implementation of economic policies, resulting from FDI inflows.

In fact, FDI inflows are sources of instability by the difficulty or even impossibility, of predicting these flows (Vissak and Roolaht, 2005). This may destabilize the country's economic development and difficult the implementation of economic policies desired by local authorities (Sen, 1998; Vissak and Roolaht, 2005). Another harmful event to the host country economy occurs if there is a sudden and high capital inflow because it is likely to increase inflation in the proportion of that inflow (Sen, 1998).

Another negative consequence of FDI in the host country is a decline in the local authorities’ autonomy (Duttaray et al., 2008). Large multinationals get control over assets and employment, which enables them to influence the political and economic decisions of the host country authorities (Zhang 2001b). It can also be observed pressures exerted by multinationals on local authorities to achieve gains in their operations, which may result in policies that are not favorable to host country economic growth (Zhang, 2001b). Due to the multinationals size and their impacts on local economies, their strategic decisions can cause significant changes in the host country, independent of the local authorities’ strategies, and could even be contrary to the desired national policies (OECD, 2002). In this way,
multinationals cause distortions in the host country policies to benefit foreign investors (Rand and Zhang, 2002). Also according to Zhang (2001b), FDI can be seen a way to developed countries gain control the on developing countries. Loungani and Razin (2001) also report that multinationals encourage the permanence of the existing economic situation.

2.8. Positive or negative impact? Explanatory factors

As we have emphasized in previous subsections, theoretically it is clear the existence of benefits and costs for the host country economic growth caused by FDI. The explanation of how these effects occur or what it hinders them to occur is also subject to discussion and / or explanation.

In general, it is agreed that the positive impact of FDI on host countries economic growth depends on certain factors that exist or not in those countries, such as human capital, the trading system, the degree of openness of its economy (Chowdhury and Mavrotas, 2003), the economic and technological conditions (Hansen and Rand, 2006), legislation and political stability (Asheghian, 2004).

An effect that has provided much discussion is the analysis of the impacts of technology transfers. In this discussion we stress the argument based on the technological gap due to the total asymmetry of results. Among several studies there are divergent views on the effects of FDI due to the technological gap between developed countries (from which generally multinationals are originate) and the host countries. OECD (2002) suggests that the technological gap should not be very strong. This position is justified by the doubt about the capabilities of local firms to absorb and / or copy the new technologies used by multinationals, when the technological gap between them is very sharp. Borensztein et al. (1998) refer that the gap need not be very sharp, otherwise the host countries can not absorb the new knowledge. Several studies (e.g. Berthélemy and Démurger, 2000; Zhang, 2001, Hermes and Lensink, 2003; Makki and Somwaru, 2004; Khawar, 2005) show that technology transfers from multinationals to the host country economy have a positive impact only when there is human capital development capable of absorbing and using these new technologies and methods. Barrios et al. (2004) highlight that the impact FDI has on the host country economy is subject to a direct relationship with the existing skills of the labor force, because if these skills are low the host country can not assimilate and replicate the knowledge transmitted by multinationals. Lim (2001) and Ford et al. (2008) argue that economic growth
derived from FDI is more noticeable on countries with high skills. De Mello (1997) indicates that there is a direct proportionality between earnings from technology and knowledge transfers and the level of education of the host country labor force.

In this way, according to the argument mentioned above, developed countries benefit more from FDI than the underdeveloped and developing countries because their human capital is higher (Li and Liu, 2005). However, Bende-Nabende et al. (2001) found a particular case that contradicts this idea. In a study that included four Asian countries, the impact of FDI is positive and significant in Philippines and Thailand; however it is negative in Taiwan and Japan, more developed countries and with a higher level of education. This study leads to the same conclusion of Sjöholm (1999): major technological gaps lead to major transfers. Romer (1993) defends the ease transfer of technology for host country firms where the technology gap is pronounced. Due to its absence, any new technology brought into this country will be quickly implemented. This theory is also shared by Pessoa (2007) which states that the effect of technology transfer is more noticed the greater the gap in the use of technology between multinationals and local firms.

Ozturk (2007) adds that, in addition to developing countries needs to obtain a certain level of education to gain from the transfers provided by FDI, the country also needs to have a minimum level of infrastructures. This need is also suggested as an explanation for the lack of gains by Sen (1998), as well as the lack of raw materials or the wrong location of the host country.

The failure to take advantage of the transfer of knowledge to local firms can also be explained by other factors. This failure can be attributed to little or no recruitment of local workers for high positions, and low mobility of workers from multinationals to local firms (Aitken and Harrison, 1999). However, these authors also refer other reasons for the reported failure: reduced subcontracting, lack of R&D in subsidiaries and few incentives to multinationals to transmit the technology they hold. De Mello (1997) also points out other factors, such as the need for easily contacts between local firms and multinationals and the impacts will be much higher as more contacts exist between them.

However, it is important to stress that the impact of technology transfers is only really noticed in the host country economy if this technology is relevant to several firms / economic sectors and not for only one firm / sector or just for the multinational engaging in FDI (OECD 2002). The unsuitableness of the technological investment regarding the existing local firms may not
have positive impacts for economic growth (Berthélemy and Démurger, 2000) or even be harmful to the host country economy (Ram and Zhang, 2002). Different types of FDI affect growth in different ways because the nature of the investment defines how it affects the local economy (Beugelsdijk et. al, 2008). Factors such as the size of the multinational advantage, the extent of R&D that entails, and the growth potential of the sector in the host country are relevant to the impacts it causes (Driffield, 2000). Sen (1998) suggests that skills of specific use in multinationals, do not contribute to economic growth. The positive effect of FDI is only noticed if there are complementarities between FDI and investments made or encouraged in the host country (De Mello, 1997). It is also considered as an obstacle to the positive effects on country economic growth if the technology include high costs, the products in which it is applied are inappropriate for the local economy and the intensity of factors used may not be available in the economy (Duttaray et al., 2008).

One could assume that the impacts from these transfers would only be achieved in developing or underdeveloped countries. However, Roy and Van den Berg (2006) report that in a country leader in technology such as the United States (U.S.), technology transfer from FDI should not be very important. However, according to them, the majority of developed economies depends these flows of foreign technology to much of their technological progress. Hermes and Lensink (2003) argue that the process of technology transfer reaches greater relevance in countries where there is protection for intellectual property rights. If this does not happen, multinationals do not use a high technological level, which reduces the opportunities for innovative technology transfers. The same authors suggest the correct functioning of markets for the efficient transfer of technologies.

Omran and Bolbol (2003) report that FDI will only lead to increases in productivity when in the host country there is competition between multinationals and local firms and also a strong commitment to R&D. Moran (1999) suggests that FDI is harmful to the host countries growth when the investor is protected from competition in the domestic market, with requirements of joint ventures and transfers of technology. Several developing countries imposed technology sharing rules with local firms in an attempt to offset the lack of internal conditions that encourage such a transfer (Nunnenkamp, 2004). Sohinger and Harrison (2004) pointed out that in countries with requirements to investors, as a minimum of exports from production, technology transfer and joint ventures, affect negatively the impact that FDI causes economic growth.
De Mello (1997) stresses that the FDI impact on host country economy is expected to be larger, the higher the value-added in production caused by the knowledge transferred by the multinationals. Driffield (2000) highlights that investments that carry R&D, produce higher added value, as opposed to other projects that do not carry and therefore the effect on growth will be smaller (it is the case of projects that are restricted to assembly).

A policy, followed by the host country, with emphasis on promoting exports combined with a free and competitive market, fosters an ideal climate for exploiting the potential of FDI in promoting economic growth (Balasubramanyam et al. 1996). The export promotion policy as opposed to an import substitution policy, through FDI, followed by the host country, is suggested as one explanation for the success or failure of the impact of FDI on economic growth (Li and Liu, 2005). The economic developments resulting from the integration of host country into the global economy has greater impact in countries with export promoting policies (Mencinger, 2003). According to Balasubramanyam et al. (1996) the trade openness is also a crucial factor for the acquisition of growth potential.

In terms of financial markets, it is considered that economic growth is only achieved through FDI when the host country has a sufficiently developed financial market (Alfaro et al., 2004 and Hansen and Rand, 2006). Countries with better financial systems and better regulation of financial markets can exploit FDI more efficiently and thus achieve higher growth rates (Ozturk, 2007). A "healthy" financial market allows entrepreneurs to easily obtain credit to start new projects and / or expand existing ones (Ozturk, 2007).

3. Impact of FDI on economic growth: empirical evidence

There are a variety of empirical studies that focuses on the influence of FDI on the host country economic growth. These studies include many countries with different levels of development, and temporal analysis more or less long. Despite the alleged benefits of FDI on the host country economic growth, the empirical literature has not succeeded in establishing a definitive positive impact (Campos and Kinoshita, 2002). OECD (2002) reports that 11 in each 14 studies concluded that FDI contributes positively to economic growth. UNCTAD (1999) analyzed 183 studies about 30 countries since 1980 and concluded that in the majority (55% to 75%) large positive effects were found on the host country economy due to FDI but in other studies analyzed the effect found was clearly negative.
According to UNCTAD (1999), empirical studies show positive or negative effects depending on the variables they use. The explanation may be that FDI affect growth through several channels, as evidenced in Section 2, and which are not always correctly measurable (Sohinger and Harrison, 2004). Li and Liu (2005) suggest as a cause for the contradictory results of empirical studies the samples used. Asheghian (2004) argues that problems in the analysis of the effects are due to the assumption that all nations share common features. According to the author, this presumption is not valid. In accordance with the author there are differences between the host countries, not only in economic structures, policies and institutional, but also in how they react to external "shocks". However, according to Li and Liu (2005) the more recent studies are beginning to involve the specific characteristics of the host countries under consideration in the choice of samples and variables. In the analysis of some empirical studies carried out we conclude what we have mentioned above. Most of these studies have been able to prove a positive effect on the host country economic growth due to FDI. This is true even for countries with differences in terms of geographical, political, economic development, etc.. It is also shown in this sample that studies are conducted based on different variables and many of them depend on the countries characteristics. Consequently the results obtained are different.

Table 6 presents a summary of several studies, which are ordered chronologically. This summary focuses on the period of the sample, the countries involved, and an indication of the main results.

6 This table is adapted from Ozturk (2007).
Table 2: FDI and host country economic growth - the results of several empirical studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Period</th>
<th>Countries</th>
<th>FDI impact on growth</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balasubramanyam et al., 1996</td>
<td>1970 - 1985</td>
<td>46 developing countries</td>
<td>+</td>
<td>Impact with more significance in countries with export promotion policies</td>
</tr>
<tr>
<td>Bende - Nabende and Ford, 1998</td>
<td>1959 - 1995</td>
<td>Taiwan</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Borensztein et al., 1998</td>
<td>1970 - 1989</td>
<td>69 developing countries</td>
<td>+</td>
<td>Impact magnitude depends on the existing capital stock</td>
</tr>
<tr>
<td>De Mello, 1999</td>
<td>1970 - 1990</td>
<td>16 countries from OECD and 17 non-OECD countries (Africa and America)</td>
<td>+ / -</td>
<td>Positive within OECD countries but negative in other countries</td>
</tr>
<tr>
<td>Bende - Nabende, 2001</td>
<td>1970 - 1996</td>
<td>ASEAN countries</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Zhang, 2001</td>
<td>1984 - 1998</td>
<td>China</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Zhang, 2001</td>
<td>1980 - 1997</td>
<td>Argentina, Brazil, Colombia, South Korea, Hong Kong, Taiwan, Indonesia, Malaysia, Mexico, Singapore and Thailand</td>
<td>+</td>
<td>Only in Hong Kong, Indonesia, Taiwan, Mexico and Singapore</td>
</tr>
<tr>
<td>Carkovic and Levine, 2002</td>
<td>1960 - 1995</td>
<td>72 countries</td>
<td></td>
<td>FDI has no strong positive impact</td>
</tr>
<tr>
<td>Chakraborty and Basu, 2002</td>
<td>1974 - 1996</td>
<td>India</td>
<td>+</td>
<td>In the long term</td>
</tr>
<tr>
<td>Basu et al., 2003</td>
<td>1978 - 1996</td>
<td>23 developing countries</td>
<td>+</td>
<td>Impact positive and enduring</td>
</tr>
<tr>
<td>Bengoa and Sanchez-Robles, 2003</td>
<td>1970 - 1999</td>
<td>18 countries of Latin America</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Choe, 2003</td>
<td>1971 - 1995</td>
<td>80 countries</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Chowdhury and Mavrotas, 2003</td>
<td>1969 - 2000</td>
<td>Chile, Malaysia and Thailand</td>
<td>+</td>
<td>FDI has no impact on economic growth in Chile</td>
</tr>
<tr>
<td>Hansen e Rand, 2006</td>
<td>1970 - 2000</td>
<td>31 developing countries: 10 from Africa; 11 from Latin America Latina; 10 from Asia</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Mencinger, 2003</td>
<td>1994 - 2001</td>
<td>Slovakia, Slovenia, Estonia, Hungary, Latvia, Lithuania, Poland and Czech Republic</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Omran and Bolbol, 2003</td>
<td>1990 - 2001</td>
<td>Arab countries</td>
<td>+</td>
<td>Positive impact after economic reforms</td>
</tr>
<tr>
<td>Akinlo, 2004</td>
<td>1970 - 2001</td>
<td>Nigeria</td>
<td>+</td>
<td>Only after a long period</td>
</tr>
<tr>
<td>Janicki and Wunnava, 2004</td>
<td>1997</td>
<td>Bulgaria, Czech Republic, Estonia, Hungary, Poland, Slovakia, Slovenia, Romania; Ukraine</td>
<td>+</td>
<td>Gains are not easily achieved</td>
</tr>
<tr>
<td>Chang, 2005</td>
<td>1981 - 2003</td>
<td>Taiwan</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Gunaydin and Tatoglu, 2005</td>
<td>1968 - 2002</td>
<td>Turkey</td>
<td>+</td>
<td>Authors can not prove the causality of the relationship: FDI enhance economic growth or the opposite?</td>
</tr>
<tr>
<td>Li and Liu, 2005</td>
<td>1970 - 1999</td>
<td>84 countries</td>
<td>+</td>
<td>Positive effects only from the 80's</td>
</tr>
</tbody>
</table>
Among the studies reviewed there were some that for similar periods and for the same countries the results obtained were divergent. It is important to stress that in these studies we can find countries with different levels of development, different sizes, opposing political structures, dispersed locations. Due to these factors we will detail the differences in the studies that focus on the following countries: Chile, China, U.S., Malaysia and Thailand.

In the first place, it should be noted that the studies cover similar periods and more than 20 years. The same does not happen with the variables used. This phenomenon may explain the different results because, since as we have noted, the different variables used is frequently reported as one of the explanations for the differences in empirical results.

Zhang (2001b) and Xu and Wang (2007) analyzed the effects of FDI on China economic growth and concluded that they are positive. Furthermore, Kasibhatla et al. (2008) conducted an analysis on several countries and have not found positive impact in China. Additionally, Kasibhatla et al. (2008)’ study, focusing on the effects of FDI on U.S. economic growth, also found results opposed to those obtained by Ashegian (2004) and Roy and Van der Berg (2006) that demonstrated positive effects. These differences can also be found on analysis focusing other countries, such as Malaysia, Thailand and Chile. Zhang (2001a) found no positive impacts for economic growth in Malaysia or Thailand, while Kohpaiboon (2003)

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7 It should be noted, however, that this study covers a longer period, which includes the 70's, when the FDI inflows to China was still very low.
found positive effects for Thailand. Bende-Nabende (2001), analysing the ASEAN countries, found positive impact for these two ASEAN members. The same result was found by Baharumshah and Almasaied (2009) for Malaysia. Chowdhury and Mavrotas (2003) also found positive impacts for the two Asian countries mentioned. This same study included Chile, for which the authors did not find positive effects of FDI on economic growth. A contrary conclusion was found by Bengoa and Sanchez-Robles (2003)’ study: authors shown that FDI caused positive effects on Chile economic growth.

Regarding the studies focusing on the effects of FDI on U.S. economic growth, Kasibhatla et al. (2008) did not find positive effects. The author only used for its study the analysis of FDI and Gross Domestic Product (GDP). Furthermore, the studies that concluded that positive effects exist have used more variables. Ashegian (2004), in addition to GDP, also used for its analysis the existing stock of FDI and the employment. Roy and Van der Berg (2006) included in addition to the variables GDP and FDI, the domestic investment, exports, imports and existing human capital in the U.S..

The contrary results for Malaysia and Thailand may also be explained by the large difference in the variables used. Zhang (2001a) used only the stock of FDI and GDP, and did not reach positive effects for any of the two countries. Kohpaiboon (2003) made use of GDP, employment, capital stock, total factor productivity and stock of human capital of Thailand. Bende-Nabende (2001) used as variables, human capital, labor force, technology transfer, international trade and learning by doing and Chowdhury and Mavrotas (2003) used only the FDI and GDP, and found positive effects of FDI on economic growth in Malaysia and Thailand. In Malaysia also Baharumshah and Almasaied (2009) found positive effects of FDI by the use of human capital, FDI, domestic investment and the initial situation of the country.

Concerning the studies about Chile, the gap in the variables used may also explain the contradiction in results. In fact, Chowdhury and Mavrotas (2003) failed to find positive impacts, while Bengoa and Sanchez-Robles (2003) found positive impacts through including an index that measures the economy operation freedom.

China is another country where the results obtained are contradictory and where we also find differences in the variables used. As we have already mentioned, Kasibhatla et al. (2008) limited their self to verifying the relationship between FDI and GDP and concluded that FDI does not cause a positive effect on growth. Authors that find positive effects still use the

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8 ASEAN – Association of Southeast Asian Nations.
employment, stock of domestic capital and total factor productivity (Zhang, 2001a) and domestic investment, imports and exports (Xu and Wang, 2007).

To sum up, we realize that in the studies that obtain opposite results, variables used were different and / or used more variables. Some studies include more variables with the aim of introduce in the analysis the particularly domestic conditions of the country. These results may also indicate that studies who have not found positive effects have neglected channels through which FDI can affect economic growth.

It is also important to emphasize that the generality of these empirical studies give particular attention to the skills of the labor force. These capabilities are, however, measured through the use of variables measured in different ways. Additionally, studies also give a high focus to integration into the global market, often measured by exports and imports as variables. These findings are in agreement to what theory suggests as channels through which FDI causes positive and negative effects on host economic growth.

4. Conclusion

As we have already mentioned, existing literature on the impacts of FDI on the host countries economic growth is quite divergent. This difference in results is also subject to contrary explanations.

There are explanations that point to the fact that analyses are short in time. However we realize that it was not valid, since tests with the same periods show different results. Additionally, the argument that FDI effects are only noticed in the long run was also found not to be accepted by all studies. Furthermore, some studies stress that most analysis focuses only on whether FDI causes economic growth and do not examine whether the host country economic growth increases FDI. In these cases results are also ambiguous. There are studies that analyzed the duality of relations obtaining contradictory results.

We cannot consider that the effects of FDI on economic growth are dependent on the host country level of development or its location. Studies in developed countries obtained different results, as well as studies carried out in developing and underdeveloped countries with many locations. The same happens with samples including a heterogeneous group of countries. Almost all of the works suggest that the effects of FDI depend on the most varied conditions existing in each country, when FDI occurred or provided subsequently, whether they can be economic, political, social, cultural or other. The reasons most frequently mentioned derived
from the way the country can benefit from the presence of multinationals and the advantages they carry and that can be used to improve the host country economy performance. Among these, the most mentioned is that how the host country can gain by using more advanced technologies and knowledge.

Although the vast majority of empirical studies point out to the positive effects that FDI causes on economic growth, there are, however, those who cannot prove these effects. This may be justified by differences in the variables used, as we have noted. However, in the above examples the variables that were added to the models are always related to host countries characteristics. Thus we can conclude that even in the empirical studies, results are influenced by domestic characteristics of the host country.

Answering to the question that led us to carry out this analysis, we conclude that there isn’t a single reply: FDI creates positive or negative effects in the host country depending on the conditions of the country and also of the investment. The aim of this study was to use the response obtained in order to take advantage of FDI inflows to the economy. As we can see, effects are dependent on the host country conditions. In this way, local authorities have a leading role in order to achieve the desired effects. These authorities can make decisions so that the country has the necessary conditions to leverage the positive effects and mitigate the negative. Another possibility is to select the foreign investment projects that best meet the country needs.

Referências


