# IMPACT OF FDI ON ECONOMIC GROWTH: AN OVERVIEW OF THE MAIN THEORIES OF FDI AND EMPIRICAL RESEARCH

***Selma Kurtishi-Kastrati, PhD***

Faculty of Business and Economy, South East European University, Macedonia

**Abstract**

After the Second World War the Foreign Direct Investment (FDI) has gained a significant role in the international economy. The paper explains the theoretical and empirical literature on FDI, it further identifies the main trends in FDI theory and highlight how these theories were developed, the motivations that led to the requirement for new approaches to enrich economic theory of FDI. Furthermore, it provides a list of theoretical determinants of FDI as well the impact of FDI on economic growth and international trade. Moreover, the theoretical studies on FDI have led to a better understanding of the economic mechanism and the behavior of economic agents, both at micro and macro level allowing the opening of new areas of study in economic theory. In addition using the Eclectic Paradigm we identify factors that motivate foreign companies to invest abroad relatively than export or outsource production to national firms. Finally we cannot say that there is one commonly accepted theory, nevertheless every new one attaches some new basics and disapproval to the previous ones.

**Keywords:** FDI, Economic Growth, internalization theory, OLI paradigm

## Introduction

The different aspects related to FDI have been explored and evaluated long time ago. Nevertheless, in the past the determinants and impacts related to FDI were explained theoretically without giving empirical evidence. As time passed econometric models equations and indices were used to find out the empirical results. The review given below covers both the theoretical and empirical studies on the subject following different approaches. It provides a list of theoretical determinants of FDI as well the impact of FDI on international trade and economic growth.

**Theories of FDI**

The early concept of foreign direct investments can be regarded as the development of classical theories of international trade and is originally rooted in economics. The first attempt to explain the FDI was considered a Ricardo's theory of comparative advantage. Heckscher-Ohlin (1933) theory is on the pillars for the development of the concept of international movements of capital for international trade due to the variety of resource endowments between the counties. It builds on David Ricardo's theory of comparative advantage by predicting patterns of commerce and production based on the factor endowments of a trading region. The model essentially says that countries will export products that utilize their abundant and cheap factor(s) of production and import products that utilize the countries' scarce factor(s). However, FDI cannot be explained by Ricardo's theory, since it is based on two countries, two products and a perfect mobility of factors at local level. Such model could not even allow FDI.

The microeconomic theory of international production in 1960 was introduced by Stephen Herbert Hymer (1960 published in 1976). His work is considered to be a landmark in the study of FDI. According to Hymer the reasons for internationalization of companies are of two kinds: variables associated to the company's dimension and ownership of specific assets and variables resulting from the existence of market failures. Hymer demonstrated that FDI only takes place when the benefits of exploiting firm-specific advantages (FSAs) across borders allow overcoming the additional costs of doing business overseas. According to Hymer's ideas, it has been argued that MNEs have firm specific advantages allowing them to operate profitably in foreign countries. However, four disagreements noted by Heledd Straker (Understanding the Global Firm) were also distinguished by Hymer:

1. According to the older theory it was suggested that flow of capital was one directional, from developed toward underdeveloped countries, however in reality after the war period, FDI was two-way among developed countries;
2. A country was supposed to engage either in outward FDI or receive inward FDI only. Hymer noticed that MNEs moved in either direction across national boundaries in industrialized countries, that means countries received inward and engaged in outward FDI;
3. The level of outward FDI was found to vary between industries, meaning that if capital availability was the driver of FDI, then there should be no variation, as all industries would be equally able and motivated to invest abroad;

4. As foreign subsidiaries were financed locally, it did not fit that capital moved from one country to another.

Furthermore, according to Hymer (1960) and as quoted by Aliber (1969) there are two reasons for companies becoming MNEs:

I. Market imperfections[13]; companies became MNEs since they possess competitive advantages, and they use this competitive advantage in different countries in order to maximize their productivity

II. Some industries due to their competitive structure would persuade companies to internationalize more than those in other industries.

Nevertheless, these advantages must not be available to host country companies on the same prices and terms as to the source-country companies. Caves (1971) consider the diversification of products as the main influencing factor. According to Caves FDI can be classified as vertical, horizontal and conglomerate. The vertical type can be further subdivided into forward and backward.

Vertical FDI involves a geographical decentralization of the firm's production chain, where foreign affiliates in poorer countries typically produce labor-intensive intermediates that are shipped back to high-wage countries, often to the parent company itself. Vertical FDI is sometime referred to as "efficiency seeking" FDI, since the main motive for the investment is to improve the cost of effectiveness of the firm's production. Furthermore, vertical FDI can take two forms. There is backward vertical FDI into an industry abroad that provides inputs for a firm's domestic production process. Historically most backward vertical FDI has been in extractive industries (e.g. oil extraction). A second form of vertical FDI is forward vertical FDI in which an industry abroad sells the outputs of a firm's domestic production process.

Horizontal FDI produce the same product in multiple plants, and service local markets through affiliate production rather than through exports from the home country of the MNE. This kind of FDI is sometimes referred to as "market seeking" FDI. The FDI inflows to developed countries are usually horizontal investments driven by market seeking strategies and they tend to increase the labor intensity of the home country domestic production (Mariotti, S; Mutinelli, M; Piscitello, L., 2003). Horizontal investments replicate the complete production process of the home country in a foreign country. The horizontal FDI

[13] Market imperfection can be defined as anything that interferes with trade. According to Hymer, market imperfections are structural, arising from structural deviations from perfect competition in the final product market due to exclusive and permanent control of proprietary technology, privileged access to inputs, scale economies, control of distribution systems, and product differentiation, but in their absence markets are perfectly efficient.

seeks to take advantages of a new large market, which is considered as traditional motive for the FDI (Botric,V; Skulic. L, 2005).

Multinationals involved in extraction or use of natural resources are yet another case of FDI where there is no alternative to the local presence of the firm. Endowments of oil, gas, minerals, forests and waterfalls may be the most important attraction for international investment in a number of poor countries.

Buckley and Casson (1976) conceptualized the internalization theory. In the international business literature, the market imperfections approach to FDI is typically referred to as internalization theory. Market imperfections created the opportunity to internalize transactions within a firm. Instead of conducting business externally between two firms- in separate countries, it made sense to instead maximize profits by doing business internally across national boundaries. Two things are essential at this point, firstly firms would choose the least cost location and secondly firms would internalize until the cost outweighed the benefits.

Nonetheless, in reality, cost is not the only crucial factor of success since companies must also consider other factors such as cultural, regulatory and other environmental factors (Jigme, 2006). A weakness with the Internalization Theory lies in its choice of industry-specific factors as the primary emphasis with respect to the internalization decision. The theory does not inevitably clarify the decision by entrepreneurs to set up enterprises in locations as a function of personal preference for a particular environment. Sometimes, certain locations are more suitable for religious, linguistic or cultural reasons.

Another existing theoretical development analyzing the origin and form of internationalization is based on the product life cycle (Vernon, 1966). This theory was initially proposed by Raymond Vernon in the mid 1960s. Vernon argued that often the same firms that pioneer a product in their home markets undertake FDI to produce a product for consumption in foreign markets. The PLC Theory suggests that firms go through different stages in the development of their output. Products pass through an introductory phase, followed by growth, maturity and then decline phases. The length of time, during which a product remains in certain stages, is a function of a variety of factors. Vernon's view is that companies undertake foreign direct investment at particular stages in the life cycle of a product they have pioneered. Many companies launch old products in new markets. They invest in other advanced countries when local demand in those countries grows large enough to support local production. As a result in the early stage FDI is local market oriented. They subsequently shift production to developing countries when product standardization and

market saturation give rise to price competition and cost pressures. Investment in developing countries, where labor costs are lower is seen as the best way to reduce costs. Thus, FDI in the latter phase of the product cycle will be export oriented, motivated predominantly by cheap labor considerations. In the decline stage of PLC, the product innovating country becomes the net importer of the products. However, PLC theory fails to explain why it is profitable for a firm to undertake FDI at such times, rather than continuing to export from its home base and rather than licensing a foreign company to produce its product. Vernon's theory is applicable for some products but it is not applicable for the vertically integrated MNEs. Some critics say that sometimes entrepreneurs purchase foreign assets prior to actually launching the products (Jigme, 2006).

Knickerbocker (1973) introduced "oligopolistic reaction" to explain why firms follow rivals into foreign markets. According to the theory FDI flows are a reflection of strategic rivalry between firms in the global marketplace. In oligopolistic industries there is an interdependence of the major players, i.e. what one firms have had an immediate impact on the major competitors. Similarly, in FDI there is an imitative behavior, i.e. if an oligopolistic firm expands to a certain market, most likely its competitors will knock out their export business to the same competitive asset.

According to the famous OLI paradigm put forward by the British economist John Dunning (1993), investors choose FDI because of its three determinants: **O - ownership, L - location, and I - internalization advantages.**

- ***Ownership specific advantages (OSA)***

OSA refers to certain types of knowledge and privileges, which a firm possesses but which are not available to its competitors. The ownership advantage occurs when superior technology and management knowledge allow the firm to compete on a foreign market in spite of the transaction costs.

- ***Location specific advantages (LSA)***

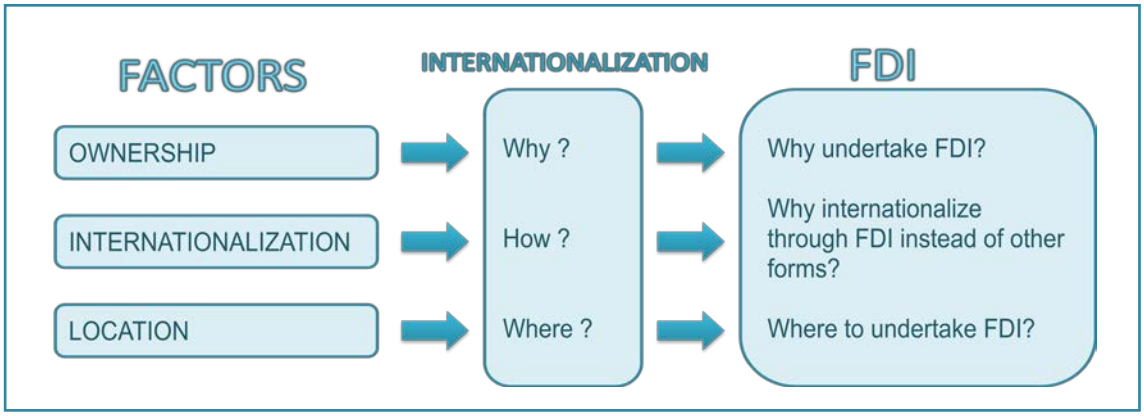
LSA refers to certain advantages, which the firm has because it locates its production activities in a particular area. Location advantages will accrue if the host economy can provide large markets or the possibility of creating them through trade liberalization, low cost inputs or good infrastructure.

- ***Internalization specific advantages (ISA)***

These occur when international market imperfections make market solutions too costly. Thus, whenever transactions can be organized and carried out more cheaply within the firm than through the market, they will be internalized and undertaken by the firm itself.

FDI will take place when three advantages come together. MNEs are guided by OLI regarding investment, 'why',' where' and 'how'. The ownership advantage mostly determines the "why" decision, internalization advantages mostly determine the "how" decision and the location advantage mostly determine the "where" decision. Dunning's model for key factors determinants internalization process is shown in the figure below:

**Figure 1.** Model of determinant factors in the key decision in the internationalization process




In this sense, and according to the reasoning of Hennart and Park (1994) and Buckley and Casson (1998), all the advantages are interrelated and affect in particular the likewise consistent decisions of **"why"**, **"how"**, and **"where"** to internationalize.

Meyer (1995) introduced structural change FDI as another development approach to FDI. Companies in business that are endangered by a loss of competitiveness are faced with the need to restructure due to the cost pressure. Moving into production facilities overseas is one potential way of restructuring. This way, companies continue to develop their existing industry specific assets, but switch the expensive home country's labor force with the cheaper one in the host country (Meyer, Klaus E., 1995). Structural change FDI is centered on factor cost differentials i.e. around export-oriented FDI as stated earlier.

**Traditional Explanation of FDI**

FDI can also be categorized based on the motive behind the investment from the perspective of the investment firm:

- Resource seeking or supply oriented - Investments which seek to acquire factors of production that are more efficient than those obtainable in the home economy of the firm. In some cases, these resources may not be available in the home economy at all (e.g. cheap labor and natural resources). This typifies FDI into developing countries, for example seeking natural resources in the Middle East and Africa, or cheap labor in Southeast Asia and Eastern Europe.

- Market seeking or demand oriented - Investments which aim at either penetrating new markets or maintaining existing ones. FDI of this kind may also be employed as defensive strategy [14] it is argued that businesses are more likely to be pushed towards this type of investment out of fear of losing a market rather than discovering a new one (Dunning, 1993).
- Efficiency seeking or rationalized - Investments which firms hope will increase their efficiency by exploiting the benefits of economies of scale and scope, and also those of common ownership. It is suggested that this type of FDI comes after either resource or market seeking investments have been realized, with the expectation that it further increases the profitability of the firm (Dunning, 1993).
- Strategic asset seeking – FDI designed to protect or expand the existing specific advantages of the investing firms and/or to reduce those of their competitors

**Motives behind FDI**

At micro-level, a simple respond why companies go global is profit motive mainly maintained by lower labor cost. However this is not always accurate. Every company is seeking to maximize the profit by using the overseas recourses, by exploiting the ownership specific advantages through internalization. Nevertheless, the opportunities they seek in a foreign country may be determined by the nature of the MNEs. A case study regarding Bulgaria disclosed that foreign investors in Bulgaria were mostly market hunter followed by factor hunters and location hunters (Bitzenis, 2004).

Another study done by Shatz and Venables (2000) emphasize that companies would like to better serve the local market and get lower-cost inputs hence they are the main motives why they want to become global corporations. According to them they say that the reason for going global is due to “horizontal” or “market seeking” and “vertical” or “product cost minimizing” reasons.

It is very important to recognize that a significant determinant of FDI in developing countries may not be relevant for developing countries or under developing countries. Some authors are concerned about generalizing the findings of FDI studies related to developing countries as relevant for developing countries too.

[14] Knickerbocker identified this phenomenon in his ‘follow-my-leader’ hypothesis in: Knickerbocker, F. T. (1973). Oligopolistic reaction and multinational enterprise. Boston(Mass.), Division of Research Graduate School of Business Administration Harvard University

The literature related to FDI identifies three most common motivations: resource seeking; market seeking and efficiency seeking (Dunning, 1993). Resource-seeking activities are promoted by the availability of natural resources, cheap unqualified or semi-skilled labor, creative assets and physical infrastructure. In the past, the availability of natural resources, such as minerals, raw materials and agricultural products have been the most important host country determinant of FDI. Even at that time the presences of natural resources by itself were not satisfactory for FDI to take place.

Comparative advantage in natural resources usually gave rise to trade rather than to FDI. Investment took place when resource-abundant countries either lacked the large amounts of capital typically required for resource-extraction or did not have the technical skills needed to extract or sell raw materials to the rest of the world. In addition, infrastructure facilities for getting the raw materials out of the host country and to its final destination had to be in place or needed to be created (UNCTAD, 1998).

Labor-seeking investment is usually undertaken by manufacturing and service MNEs from countries with high real labor costs, which set up or acquire subsidiaries in countries with lower real labor costs to 4 supply labor intensive intermediate or final products. Frequently, to attract such production, host countries have set up free trade or export processing zones (Dunning, 1993).

Market-seeking investment is attracted by factors like host country market size, per capita income and market growth. For firms, new markets provides a chance to stay competitive and grow within the industry as well as achieve scale and scope economies. Traditionally, market size and growth as FDI determinants related to national markets for manufacturing products sheltered from international competition by high tariffs or quotas that triggered "tariff-jumping" FDI (UNCTAD, 1998, 107). Apart from market size and trade restrictions, MNEs might be prompted to engage in market-seeking investment, when their main suppliers or customers have set up foreign producing facilities and in order to retain their business they need to follow them overseas (Dunning, 1993, 58).

The motivation of efficiency seeking FDI is to rationalize the structure of established resource based or market-seeking investment in such a way that the investing company can gain from the common governance of geographically dispersed activities. The intention of the efficiency seeking MNE is to take advantage of different factor endowments, cultures, institutional arrangements, economic systems and policies, and market structures by concentrating production in a limited number of locations to supply multiple markets (Dunning, 1993, 59). In order for efficiency seeking foreign production to take place, cross-

border markets must be both well developed and open, therefore it often flourishes in regionally integrated markets (Dunning, 1993, 59).

It is worth note that many of the larger MNEs are pursuing pluralistic objectives and most engage in FDI that combines the characteristics of each of the above categories. The motives for foreign production may also change as, for example, when a firm becomes an established and experienced foreign investor (Dunning, 1993, 56)

However, identification of determining factors of FDI is a complex problem, which depends upon several uniqueness specifics for each country, sector and company. According to the research done by Valerija Botrić and Lorena Škuflić, (2005)[15] all those factors could be clustered in three broad categories:

- *Economic policy of host country*
- *Economic performance and*
- *Attractiveness of national economy*

On unified level FDI depends on size and potential growth of national economy, natural resources endowments and quality of workforce, openness to international trade and access to international markets, quality of physical, financial and technological infrastructure.

In general, the investor motivation for FDI is to acquire:

- *Better access to markets – nationally, regionally and globally;*
- *Competitive labor costs and productivity as well as skills availability;*
- *Access to raw materials at competitive cost;*
- *Acceptable risk, linked to a supportive policy environment and with essential infrastructure (utilities, telecommunications and transport).*

Another justification why companies expand globally is explained by proactive and reactive motivational factors. In business activities, varieties of stimuli push and pull firms along the international path:

- ***Proactive motivations*** represent stimuli to attempt strategic change.
- ***Reactive motivations*** influence firms that respond to environmental shifts by changing their activities over time.

[15]Valerija Botrić & Lorena Škuflić *"Main determinants of Foreign Direct Investment in the South East European Countries"* - Paper prepared for the 2nd Euroframe Conference on Economic Policy Issues in the European Union "Trade, FDI and Relocation: Challenges for Employment and Growth in the European Union?", June 3rd, 2005, Vienna, Austria

Proactive motivational factors include profit advantages, economies of scale, unique products, technological advantage, restricted information and tax benefits. Whereas reactive factors are forced by overproduction, overcapacity, competitive pressure, decline domestic sale, closeness to customers and ports, and saturated domestic markets (Czinkota, M.R and Ronkainen, I.A, 2007).

**Location Choice of FDI**

The theory of FDI needs to examine what is the mechanism that foreign companies use when they decide to invest abroad. Until now, no theory can explain the rule of international investment's location choice.

According to Gilomre, O's Donnel, Carson and Cummins (2003) there are eight factors that are influencing the choice of host market. They are as follows:

- Knowledge and experience of foreign market
- Size and growth of the foreign market
- Government emphasis on FDI and financial incentives
- Economic Policy
- Transportation material and labor cost
- Availability of resources
- Technology
- Political Stability

Foreign companies who want to minimize total cost might chose the appropriate countries that can bring minimized cost, such as the investment on labor-hunter will choose the country having enough labor force and cheap labor cost; investment on technology-hunter will choose the country having higher technical level; investment on resource-seeker will choose the country having abundant natural resource; investment on lower information and transportation-cost hunter will choose the close and familiar country having convenient communication; investment on avoiding or policy-seeker will choose the country having preferential tax revenue policy or relative policies; and investment on maximizing the price of product and service will choose the country having higher salary level, enough purchasing power and large market capacity.

**Table 2.** Most Important Objectives when Investing outside Home Country

Exhibit 1: Foreign Direct Investment Survey by MIGA and Deloitte & Touche LLP

Most Important Objectives when Investing outside Home Country (percentage)

| | | | |
|---|---|---|---|
| Improved market access | 55 | Reduce operating costs | 17 |
| Other factors | 8 | Source raw materials | 6 |
| Consolidate operations | 4 | Develop new product lines | 4 |
| Improved productivity | 2 | Develop new technologies | 2 |
| Improved labor force access | 1 | Reduce risk | 1 |

Source: *Foreign Direct Investment Survey*, a study conducted by the Multilateral Investment Guarantee Agency (MIGA) with the assistance of Deloitte & Touche LLP, January 2002

According to the literature (Buckey, J.P; Devinney, M.T and Louviere, .J.J, 2007) the location and control decision of multinational enterprise are at the core of managerial decision-making and academic theorizing in international business. For each activity the company undertakes, it has two critical decisions: firstly they need to decide where should the activity be located? And secondly, how should it be controlled? (Buckley, 2004). According to Aharoni (1966) in his book "*The Foreign Direct Investment Decision Process"*, it is underlined that FDI is not a point of time "go/no-go" decision but a rather an important process to be considered well in advance.

The research done by Bertrand *et al* (2004) during the period of 1990-1999 among OECD countries underlined the determinants of cross-border M&A location choice. According to them it was found that the geographic distribution of M&A is not determined only by the availability of domestic assets. The market size, the labor cost, the market access and financial openness matters as well. Barkema *et al* (1996), emphasize that cultural distance is a prominent factor in entry, especially where another company is involved, in a joint venture for instance. Hinisz (2000) in his research finds that host country institutions are important, and that joint ventures are preferred when vulnerabilities in the host country are greatest. Another research done by Chung (2001) finds technology factors to be important; both transfer and accession of technology show up as determinants in different context. Moreover Chung and Alcacer (2002) observe location within the USA, and find that, in addition to traditional location factors, knowledge seeking motivations may operate through laboratories and manufacturing facilities. Another study done by Mitra and Golder (2002)

underline that cultural distance from the home market is not a significant factor, but knowledge about nearby market can have a significant effect.

**Impact of FDI on Economic Development: Literature Review**

Economic development is an all-inclusive concept; its main focus is on economic and social progress, in addition involves many different aspects that are not easily calculated, such as political freedom, social justice, and environmental reliability[16].Without a hesitation, all these matters bond together to contribute to an overall high standard of living. However, empirical evidence has sufficiently demonstrated that all these varied elements of economic development associate with economic growth. That is, as a general rule, countries with faster economic growth have more rapid improvement in health and education outcomes, progressively freer political system, increasingly more equitable distribution of wealth, and enhanced capacity for environmental management. Therefore, while economic growth does not bring about automatically other aspects of social, institutional and environmental improvements, without economic growth, there is a limited prospect for such achievements.

The literature on FDI and economic growth in general points to a positive relationship between the two variables and recommends few explanations for it. In theory, economic growth may encourage FDI inflow when FDI is seeking consumer markets, or when growth leads to greater economies of scale and therefore increased cost efficiency. On the other hand FDI may affect economic growth through its impact on capital stock, technology transfer, skill acquisition or market competition. There are many empirical studies in studying the impact of FDI. Most of them show that FDI can stimulate economic growth through different channels. As a starting point we have taken the traditional neo-classical growth model followed by recent theories and empirical contributions. According to Solow (1956) he argued that from increase in the amount of capital that each worker is set to operate results the productivity growth. On the other hand, the marginal productivity of capital declines as capital per worker increases. Eventually, the capital labor ratio approaches a constant and productivity growth ceases. In this long run equilibrium GDP, the capital and labor force all grew at the same exogenously determined rate. At this point the technological progress came into play. If technology growth is present than the long run rate growth of GDP per worker is equal to the rate of technology growth. To the degree that capital is internationally mobile and moves to the countries where the prospects for profit are highest, this trend should be significantly reinforced. Consequently, counties no matter how poor or rich are, the gaps in income levels between them should be expected to narrow and eventually disappear.

[16] The United Nation Charter of 1944

Countries where capital is scarce compared to labor or where capital labor ratio is low should be expected to have a higher rate of profit on capital, a higher rate of capital accumulation and higher per capita growth, as it was concluded by Solow.

Cost and benefits related to foreign direct investment for the host economies were analyzed by MacDougall (1960). He used marginal productivity theory to examine income effects and assessed the balance of costs and benefits accruing to the different sectors of the host economy. Basically, MacDougall's work was an income distribution analysis based upon the assumption of perfect competition. According to MacDougall, while the capitalist sector in the host country suffers a loss of income because of decreasing marginal productivity of capital as the capital stock in the host country increases thanks to foreign investment, the labor sector in the host country benefits from higher wages because higher marginal returns to labor there. Since the gain to the labor sector exceeds the loss to the capitalist sector, it follows that FDI yields net positive income effects to the host country. One limitation in MacDougall's analysis is that it is based on the assumption that FDI takes place in the traditional sectors such as production of primary commodities or basic industrial manufacturing. Since FDI activities have started to venture into new sectors that are technology or knowledge-based or into more modern capital-intensive manufacturing, hence this assumption can lose its significance.

Moreover, Kemp (1961) examined FDI and the advantages that the national economy receives from this type of external financing. According to Diamond (1965) the prospect of people in the countries which import capital is bright, and *vice verse* for people in the countries which export capital, their prospect is depressing. He placed special emphasis on the productivity of foreign investment. If not, the countries receiving it might not get real benefits. From these analyses or in other words from the early literature of the 1960s it is revealed that in the short run the effect of foreign investment on economic growth are positive, but in the long run the benefits are not sustainable.

As mentioned previously, the world economy is changing very rapidly. Many countries in 60s and 70s were hostile toward foreign investment; however their attitude toward FDI has changed since they perceive this kind of investment as making a positive contribution to their development. Stoneman (1975) analyzed the power of FDI on the economic growth of the developing countries and found that foreign investments increases the productivity levels due to higher capital stock and at the same time improves the balance of payment position. The effects of FDI regarding economic growth are examined for different regions. According to the date gained only Africa has improved its economic growth

via FDI. However, the evaluations for other regions to confirm a positive relationship were not significant.

Findlay (1978) verifies the influence of foreign investments on host country's technological progress rate, which takes place through a contagion effect involving factors employed by foreign firms such as more advanced technology and management practices.

The impact of FDI with special reference to international trade was analyzed by Bhagwati (1978). According to him, countries actively pursuing an export led growth strategy can reap enormous benefits from foreign investment. Export led policy is one which connects average effective exchange rate on exports to the average effective exchange rate on imports. Whereas, import substitution policies are worked out in such a way that the two exchange rates are not equal. The previous policy favors free trade and emphasizes the need to boost export, while the latter underlines self-sufficiency through import substitution.

The impact of FDI on the economy along with the determinants for the first time was analyzed by Santiago (1987). The study explains various determinants of FDI in the field of exports for Puerto Rice for the year 1979. According to the study it was found that low cost labor[17] is not a major determinant of FDI. It is also revealed that the larger the size of the firm, the bigger the volume of foreign investments in that industry. Other than that, the course of foreign investments in the host country is strongly influenced by macro-economic performance of the country. Moreover, another important finding of this study is that it is tremendously vital to explain the pattern of variations of FDI in Puerto Rico is industry specifics and location specific determinants.

The work done by Srinivasan was expended by Gonzales (1988); he made an analysis of the welfare effect of foreign investments. According to Gonzales, FDI enhances the social uplift of the people, if there are no distortions. Import substitution policies are strongly favored in the study in view of the fact that such a strategy provides greater job opportunity of the people and as a result their standard of living is improved. However, the study uncovers that the welfare effects of FDI do not explain the pattern of trade in the economy. As a consequence, both Srinivasan (1983) and Gonzalez (1988) concluded that FDI results in social uplift of the people without distortions of the labor market. In addition Gonzalez (1988) holds that FDI affects national incomes via the benefits accruing to the people of urban and rural sector. Therefore, at least in the Harris – Tadoro (1970)[18] economy national

[17] At least for Puerto Rice

[18] The Harris–Todaro model, named after John R. Harris and Michael Todaro, is an economic model used in development economics and welfare economics to explain some of the issues concerning rural-urban migration.

income is improved by inflows of foreign capital and in turn the standard of living of the people separately of the pattern of international trade. At the end Gonzalez concluded that if the tariff is low and the absolute value of the elasticity of rural wage is high, there is a larger probability that foreign investment leads to higher national income.

The impact of MNEs behavior through FDI on international trade and vise verse was revised by Zhang et al. The Granger causality co integration approach was used to examine the direction of FDI and trade linkage of Chinese economy in 1980-2003. According to them, it was found that more import lead higher level of FDI, additional FDI leads to more exports and more exports leads to more FDI.

Balasubramanyam et al. (1996) used cross-section data and OLS regressions for 46 developing countries over the period 1970 to 1985, in order to estimate how FDI affects economic growth. According to them it was found that FDI has positive spillover[19] effects on economic growth, but that its effects are limited to host countries that adopt export-promoting policies. On the other hand, for import substituting economics positive effects were weaker.

In the same way, Borensztein *et al* (1998) used cross-section data for 69 developing countries during the period 1970 to 1989, though they used seemingly unrelated regression methods for their estimations. Mainly they found that FDI has a positive effect on economic growth, but the magnitude of the relationship depends on the quality of the human capital of the host country. They observed that a major reason for the positive effects seems to be technology diffusion.

Another research made by Olofsodotter (1998) applied the standard OLS method to cross-section data for 50 developing and developed countries over 1980 to1990. Based on her work it was found that the FDI stock has a positive effect on the economic growth rate, due to technology spillovers. In addition, the effect is stronger for host countries with a higher level of institutional capability as measured by the degree of property rights protection and bureaucratic efficiency in the host country.

In addition, De Mello (1999) in his research used both time series and panel data fixed-effects estimations for a sample of 32 developed and developing nations. He estimates

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The main assumption of the model is that the migration decision is based on expected income differentials between rural and urban areas rather than just wage differentials. This implies that rural-urban migration in a context of high urban unemployment can be economically rational if expected urban income exceeds expected rural income.

[19] FDI spillovers are defined as an increase in the productivity of domestic firms as a consequence of the presence of foreign firms in the domestic economy. Spillovers can come in many forms, such as technologies, working methods, and management skills, but they have one thing in common – they boost productivity.

the impact of FDI on capital accumulation and output growth in the recipient economy. In contrast to previous studies, he found that FDI can lead to better technology and enhanced management in the host country; on the other hand, the evidence was relatively weak on whether FDI essentially creates economic growth.

Carkovic and Levine (2002) used a panel dataset covering 72 developed and developing countries in order to analyze the relationship between FDI inflows and economic growth. The study performed both a cross-sectional OLS analysis as well as a dynamic panel data analysis using GMM. They found that there is no strong link running from inward FDI to host country economic growth.

Bengoa and Sanchez-Robles (2003) using panel data for Latin America, examined the relationship between FDI, economic freedom and economic growth. Comparing fixed and random effects estimations, they conclude that FDI has a significant positive effect on host country economic growth but similar to Borensztein *et al* (1998) the magnitude depends on host country conditions.

Choe (2003) analyzed 80 countries by using the traditional panel data causality testing method developed by Holtz-Eakin et al. (1988). His results points toward bi-directional causality between FDI and growth, even though he found the causal impact of FDI on growth to be weak.

Basu, Chakraborty and Reagle (2003) using a panel of 23 countries from Asia, Africa, Europe and Latin America, found a co-integrated relationship between FDI and GDP growth. Trade openness was emphasized as a crucial determinant of the impact of FDI on growth. They found two-way causality between FDI and GDP growth in open economies, both in the short and the long run, whereas the long run causality is unidirectional from GDP growth to FDI in relatively closed economies.

Trevino and Upadhyaya (2003) find a similar result, based on their study of five developing countries in Asia, that the positive impact of FDI on economic growth is greater in more open economies.

Johnson (2006) assumed that FDI should have a positive effect on economic growth as a result of technology spillovers and physical capital inflows. To test his assumption he used a panel of 90 countries and by performing both panel and cross-section analysis, he found that FDI inflows improve economic growth in developing economies, but not in developed economies. In addition, he also provides an outstanding review of the existing empirical literature on FDI and economic growth that summon macroeconomic data.

Moreover, Chowdhury and Mavrotas (2006) took a different route by testing for Granger Causality using the Toda and Yamamoto (1995) specification, thereby overcoming possible pre-testing problems in relation to tests for co-integration between series. Using data from 1969-2000, according to their findings, FDI did not "Granger-cause" GDP in Chile, whereas there is a bi-directional causality between GDP and FDI in Malaysia and Thailand.

Hansen and Rand (2006) found strong causal link from FDI to GDP for a group 31 developing countries during 1970-2000. Bloomstrom, Lipsey and Zejan (1994) found evidence that FDI Granger caused economic growth. However, FDI's positive contribution is conditional. According to the authors, FDI is growth enhancing if the country has sufficiently reached measured in term of high per capita income.

Hsiao and Hsiao (2006) has examined the Granger causality relations between GDP, exports, and FDI among eight rapidly developing East and Southeast Asian economies using panel data from 1986 to 2004. For the individual country time series causality tests, they did not find systematic causality among GDP, exports, and FDI variables. However, the panel data causality results reveal that FDI has unidirectional effects on GDP directly and indirectly through exports, and there also exists bidirectional causality between export and GDP for the group.

Jyun-Yi, Wu and Hsu Chin-Chiang (2008) they analyzed whether the FDI promote the economic growth by using threshold regression analysis. According to their analysis it shows that FDI alone play uncertain role in contributing to economic growth based on a sample of 62 countries during the period observed from 1975 to 2000 and find that initially GDP and human capital are important factor in explaining FDI. Further, FDI is found to have a positive and significant impact on growth when host countries have a better level of initial GDP and human capital.

Nuzhat Falki (2009) examined the impact of FDI on economic growth of Pakistan, using data from 1980 to 2006 with variables of domestic capital, foreign owned capital and labor force. She concluded that FDI has negative statically insignificant relationship between GDP and FDI inflows in Pakistan by employing the endogenous growth theory and applying the regression analysis.

In general, the effect of FDI apart from the size of the market will depend on a variety of other characteristics of the host economy. These include the general wage level, level of education, institutional environment, tax laws, and overall macroeconomic and political environment. The impact of host country wage level or education level on FDI depends on the skill intensity of the particular production process in question and, hence, may vary from

case to case. The impact of institutional quality, physical infrastructure, import tariffs, macroeconomic stability, and political stability on FDI inflow is usually positive (see (Wei, 1997); (Mallampally, P. and Sauvant, K.P., 1999); (Trevino, Len. J.; Daniels, J.D.; Arbelaez, H. and Upadhyaya, K.P, 2002); (Biswas, 2002), whereas that of corporate taxes tends to be negative (see (Wei, 1997); (Gastanaga, V.M.; Nugent, J.B. and Pashamova, B., 1998); (Hsiao, 2001). Turning to economic growth, the standard determinants include the rate of capital accumulation and variables that raise total factor productivity, such as education level, institutional quality, macroeconomic stability, political environment, and, potentially, trade openness. In studying the direct, causal relationship between FDI and economic growth in this research, we examine the importance of some of these economic variables just stated above.

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