Southeast Asian Journal of Economics 4(1), June 2016: 59-82

Pattern to Absorb Foreign Direct Investment's Benefits: Perspective from Vietnam

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Abstract

Many developing countries seek to attract and enlarge their FDI placements, but do not recognize that certain initial conditions must be in place to absorb FDI benefits. The paper proposes factors which argue that a recipient developing country only achieves benefits from FDI once it has sufficient human capital resources, absorptive capacity of domestic firms, financial systems, physical infrastructure, technological, and institutional development. Some policies that improve host country absorptive capacities are recommended.

Key words: FDI Absorptive Capacity, Spillovers, FDI Benefits, ASEAN, Vietnam

Introduction

Many developing countries seek to attract and enlarge their FDI placements, but do not recognize that certain initial conditions or "FDI host country critical mass" must be in place to absorb FDI benefits. Nunnenkamp (2004) argues that countries should obtain a minimum level of economic development before they are capable of benefiting from FDI. If not, they should not expect FDI investors to respond.

The first objective of this study is to address the vital role of absorptive capacity in relation to inward FDI processes; and then call host countries attention to improving their internal absorptive capacity, instead of concentrating only on attracting FDI. Furthermore, the foremost purpose of this study is to pinpoint factors that help secure absorptive capacity in host countries.

What is absorptive capacity (ABC)? What factors do host countries need to absorb FDI bene its? These questions are addressed in this study. In fact, previous studies have mentioned FDI's absorptive capacity, but prior theorization is either ad hoc, or a not a well-established, theoretical paradigm (Blomström, Globerman, & Kokko, 1999). For instance, while Borensztein, De Gregorio, and Lee (1998), and Blomström and Kokko (2003) reveal that FDI provides a positive growth-effect once host countries have a minimum threshold stock of human capital, that reflects a sufficient status for absorptive capability of advanced technologies. Hermes and Lensink (2003) point to a necessity for a well-developed *domestic inancial system* for processes of technological diffusion associated with FDI to be transacted. Fu (2008) mentions that globalization of *R&D* may provide opportunities for developing countries to catch up with technological frontiers by leapfrogging over current status quos. Recently, Kurtishi–Kastrati (2013) proves that the level of education and health, technology, openness, competition, regulatory frameworks and infrastructure either support or hold back FDI benefits. Evidently, it is necessary to develop an overall model embracing these individual aspects, if an FDI competitive advantage theory is to be advanced.

We take on this challenge by building up a FDI absorptive capacity model. We propose that to absorb FDI spillovers, host countries should have minimum absorptive capacity attainment levels for educated and skilled labor (human capital, absorptive capacity of local firms, financial systems, physical infrastructures, technological levels, and institutions.

This paper is organized as follows. Section 2 provides an overview of research literature on channels for FDI transfer and FDI absorptive capacity. Section 3 expresses arguments for building absorptive capacity methods, included some empirical reflections from a country case study; i.e., Vietnam, to illustrate our arguments. Section 4 concludes and provides policy recommendations and suggestions for further research.

2. Literature Review

2.1 The path of spillovers

2.1.1 Channels to transfer FDI benefits

Previous studies have defined benefits that FDI can bring to a host country. Similar to physical capital, advanced technology, managerial experience, and competition as well, embody potential FDI benefits. Indeed, De Mello (1997 states that FDI is often thought of as a composite bundle of capital stocks, knowhow, and technology. Along the same line, Borensztein et al., (1998 recognizes that FDI is an important vehicle for transfers of advanced technology to developing countries as well as enhancing levels of human capital in host countries. Furthermore, the Organization for Economic Co-operation and Development OEDC (2002a reports that "FDI triggers technology spillovers, assists human capital formation, contributes to international trade integration, helps create a more competitive business environment and enhances enterprise development". In this report, they also assert that "cleaner" technologies transferred by FDI might lead to improvement of environmental and social conditions in host countries.

Although, FDI benefits are often invisible yet measurable by those channels along which FDI transfers its benefit to recipient countries. Kokko (1992, Khordagui and Saleh (2013 indicate four ways that FDI might transfer technology to other firms, namely: demonstration - imitation effects, competi-

tion effects, foreign linkage effects, and training effects. More specifically, Damijan, Kell, Majcen and Rojec (2003) provide information on different channels of international technology transfer to local firms in transition countries. One channel flows from parent firms to local affiliates. The other channel flows from foreign affiliates to domestic firms. Technology is transferred through horizontal and vertical spillover effects. They also classify the vertical spillover into backward and forward linkages. The transfer has been going through four continuum dimensions of absorptive capacity: acquisition, assimilation, transformation, and exploitation (Zahra and George, 2002; Noblet, Simon, and Parent, 2011). (Zahra & George, 2002) Correspondingly, Görg and Greenaway (2004) identify a range of possible spillover channels that might boost productivity in host countries. Four channels are listed: imitation, skills acquisition, competition, and exports. In this study, they also mention empirical evidence of horizontal spillovers effects that have occurred from multinational firms to domestic firms. Nunnenkamp (2004) supports the idea that local companies might benefit by hiring workers who were previously trained by multinational corporations. Moreover, Fu (2008) finds that FDI can contribute to regional innovation. He categorizes four ways, namely: R&D and other forms of innovation; knowledge transfer through supply chains, skilled labor turnovers, demonstration effects; competition effects; and advanced practices and experiences in innovation management effects.

In summary, FDI benefits can be transferred to recipient country through two levels: macro-economic (national) and micro-economic (firms) levels. On the macro level, FDI benefits will be transferred to host countries by several channels. Technological learning can take place through competition, imitation, foreign linkages, and by doing business with local firms. The second channel is associated with training, learning by doing, and accumulating experience. On the micro level, domestic firms are seen as main channels for receiving FDI benefits involving horizontal and vertical spillovers effects, training effects, skills acquisition, knowledge transfers, and labor turnover.

2.1.2 The FDI absorptive capacity

As mentioned earlier, FDI naturally contains some benefits. However, these benefits need to go through a conversion process before becoming host

countries' spillovers. This process requires sufficient absorptive capacity at host country levels. "Absorption" in FDI context means assimilation of FDI in a given host economy. Thus, "absorptive capacity" denotes maximum amounts of FDI that host economies can assimilate or integrate into their economies in a meaningful manner (Kalotay, 2000). Specifically, there are two stages of absorbability. One is to bring FDI proposal projects into practices and the next one is to convert FDI benefits into host countries' competencies. In another sense, Cohen and Levinthal (1990) point out that organizations need prior related knowledge in order to be able to assimilate and use new knowledge. Succinctly put, in order to absorb new knowledge and optimally utilize FDI benefits, host countries need to have a certain degree of development of related knowledge and capacities. The capacity mentioned most frequently in previous studies is *technology factors at both national and domestic firm levels*, proxies for technological gaps between host and home countries' FDI (Anwar and Nguyen, 2011; Farole and Deborah, 2012). The larger the technological gap, the smaller is the impact of FDI on economic growth (De Mello, 1997). The second most often mentioned factor are labor forces described in terms of *human capital* and education, which are found to be essential for absorbing and adapting foreign technology, and to generate sustainable long-run growth (Blomström & Kokko, 2003). The third capacity is the *R&D* factor, which are firms' ability to exploit external knowledge (e.g., Cohen & Levithal, 1990; Lee, Lee, and Kim, 2011; Sánchez-Sellero, Rosell-Martínez, and García-Vázquez, 2014). These three factors work through FDI transfer channels, presented earlier. In order to fully benefit from FDI inflows host countries most likely require more factors for benefit absorption. The fourth factor is a *financial system*. A better developed financial system positively contributes to the process of technological diffusion associated with FDI (Hermes & Lensink, 2003). Finally, *institutional development* including openness to trade seems to play a role. Kalotay (2000) defines institutions as an investment-friendly policy and administrative framework, while Durham (2004) uses the regulation of business, the protection of property rights and anti-corruption measures as institutional indices. Separately, Kurtishi–Kastrati (2013), and Khordagui and Saleh (2013) argue that more open to trade, more benefit from FDI as FDI and openness are complementary for economic growth.

Generally, previous studies describe absorptive capacity of host countries on two levels: absorptive capacities of domestic firms involving R&D, technological intensity and quality of labor (e.g. Cohen & Levithal, 1990; Girma, 2005; Sancher-Sellero et al., 2014 and national absorptive capacity, including technological levels, human capacity, financial and institutional development (e.g. Borenzstein et al., 1998; Hermes & Lensink, 2003; Fu, 2008. This paper is aimed to suggest a synthesis FDI absorptive capacity theory embracing both firm and nation levels.

3. Research Methodology

This model is first established based on literature related to FDI's absorptive capacity applying a deductive approach. This manner is supported by Orton (1997 with "data-poor, theory-rich". This model is brought into practice to obtain not only opinions of practitioners regarding FDI academic findings, but also anecdotal accounts to support the model as well. On the other hand, in-depth interviews are a qualitative research technique that involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on a particular issue (Boyce & Neale, 2006; Guion, 2006. Additionally, in-depth interviews are open to debate and discussion concerning counter arguments as well as garnering policy feedback responses. For that reason, the in-depth interview method stands as a relevant research modality for this purpose.

The survey is conducted in Vietnam, since this country has been faced with a significant variance between FDI's registered capital and actual disbursed capital in recent years. While FDI's registered capital is big record, disbursed amount is very small, only 47.4% comparing to total registered capital to 2013 (MPI, 2013. The Vietnamese economy did not have sufficient internal absorptive capacity to manage all registered FDI projects at the same time. This country has faced bottle-necks of inadequate administrative services, shortages of qualified personnel, and site clearance (Bao-Minh, 2010. Vietnam needs additional capacities to absorb more previously registered projects, and time to increase such capacities necessary to process contracted FDI commitments. Government has vowed to speed up FDI disbursements to help ensure continued involvement of local FDI participants. This seems to be

a common problem for most developing countries, as they lack capacity (e.g. high level of technology, human capital, while eager to attract quality FDI (capital, (e.g. advanced technology projects.

This survey is organized to investigate our selected survey partners' points of view concerning the theoretical FDI absorptive capacity model. The survey seeks to explore interviewees' opinions on (1 awareness of relationships between a host country's capacity and its absorption of FDI benefits, (2 factors capturing absorptive capacity of a host country, (3 the role of each determinate factor in capturing a host country's absorptive capacity, and (4 future policies suggested or recommended to enhance host country's absorptive capacity. Forty-three (43 officials, who are leaders of Vietnamese institutions, holding office with central and provincial authorities, as well as professional experts, plus domestic and foreign firms' CEO in related industrial fields, are invited.

4. FDI's Absorptive Capacity Model: Perspective from Vietnam

Green plants are the only plants that produce oxygen and make food. From sunlight, green plants combine carbon dioxide and water to make sugar and oxygen. Broadly, to convert light energy into chemical energy and store it in bonds of sugar, green plants absolutely need to have leaves, stems, stalks, and roots. In a similar way, we propose that to assimilate FDI spillovers, recipient countries unquestionably need to have absorptive capacities, which are developments of (1) domestic firms' absorptive capacity, (2) human capital, (3) sound financial infrastructures, (4) physical infrastructures, (5) technology and R&D, and (6) institutions.

4.1 Absorptive capacity of domestic firms

Proposition 1: Higher host country benefits derived from FDI can be tested by initial development of local firms' absorptive capacity

As mentioned earlier, researchers have defined two levels at which host countries absorb FDI benefits. One is the micro level proxies by domestic firms and the other is concerned with the macro level indicated by human capital, financial systems, technological levels, and institutional developments. Local firms represent themselves at the micro level at the same time they are

a component of the macro level. Underwriting direct investments abroad, investors can either establish economic organizations in the form of 100% capital ownership by foreign investors, or a joint venture, legal structure, for capital organizations with domestic firms, or invest in various contractual forms, or other legal entity forms of organization. In whichever form, foreign business needs to co-operate with local businesses as either partners, sub-contractors, or suppliers. Therefore, domestic firms are not only main channels for transferring FDI benefits, but also constitute a bridge for connecting foreign investors and host countries. In cooperation with international enterprises, host country domestic firms should have at least an initial level of development in R&D, technology, qualifications of workers, and managerial skills. In such cases, domestic firms can learn and easily absorb advanced technology and business skills from foreign companies. Kalotay (2000) states sorption processes depend on the skills and capabilities of local firms and on an affiliate's commitment to their host country partner. FDI benefits can be transferred to local firms by either vertical or horizontal channels, as presented above. No matter what channel is used, domestic companies are required to have initial technological levels needed to assimilate, to copy advanced technology, or transfer new knowledge from FDI into their business. Greater technological levels that are supported by greater R&D expenditures, derives greater gain from FDI (Blalock & Gertler, 2009; Suyanto, Salim, & Bloch, 2009). Moreover, firms with a higher educated labor force are better situated for absorbing FDI's advanced technology and production development as well (Adams, 2009; Blalock & Gertler, 2009). From another aspect, to be a supplier to a foreign company, local firms' capacities need to be able to satisfy their requirements, which often relates to quality and technological issues and not stock quantities alone. Host countries' development should not only rely on foreign firms' presence, but also strongly on domestic firms' integral participation in FDI local resources as well. We argue that absorptive capacity of domestic firms is the most important factor in determining degrees of absorptive capacity of host countries. Nunnenkamp (2004) states capabilities of local firms to absorb superior technology and knowledge is a decisive determinant in successful FDI related benefits transfer. Therefore, local firms retain an important role in determining absorptive processes in our model.

Regarding the firm factor, FDI literature has stated that a host country's absorptive capacity depends on its domestic firms' absorptive capacity in terms of assimilating advanced technology, knowhow and managerial skills from FDI. Domestic firms act as a channel for receiving FDI benefits; they also produce goods for society and support fair competition. Weaknesses or shortcomings of local firms' capacity can pull national absorptive capacity down, according to the vice director of Techcovina group. For example, present and future employees are aware that the garment and textile industry is quite popular in Vietnam, because of it higher skilled labor and low operational costs. However, materials for producing cloth, such as, buttons, and zippers have to be imported into Vietnam from abroad, since local products do not meet foreign producers' quality requirements. As a result, Vietnam earns lower benefits from advanced technology, associated with this industry, and gained from FDI. The executive director of the One Connection Company confirmed that only when the private sector is more fully developed, can it leverage the country's competiveness and absorptiveness. Private companies can be either suppliers of foreign companies or their joint-venture partners. This is a salient factor in promoting FDI benefits' convertibility into national benefits. An example of a successful case is Vinamilk and Campina, a Dutch company. Worker productivity is improved by training, learning by doing and accumulating experience. Advanced technology, know-how and managerial knowledge are constantly being transferred. Again, the intensity of assimilating knowledge relies on the education of human capital and domestic firms' existing technological levels. In their projects, Vietnamese farmers have learned how to organize a bio farm, how to breed cows to produce larger quantities of milk per cow, and maintain clean and fresh milk as well. The "clean technology" in farming is a new application in Vietnam and also the world. The deputy general director of Vinamilk said that cooperation with their FDI partner is well established, because Vinamilk often upgrades its applied technology, especially in processing milk. Furthermore, Vinamilk has retained strong human resources from its top management, through to middle management, and on to its front line workers. To some extent Vinamilk is no less developed than its foreign partner; therefore, Vinamilk is able to keep pace with new knowledge and technology that is transferred from Campina back in the Netherlands. Development of domestic

firms' capacity is one of the advantages of working in cooperation with its home country partner. In other words, to increase a nation's absorptive capacity, domestic firms' absorptive capacity first must be built up.

4.2 Labor Force - Human capital

Proposition 2: Higher host country benefits derived from FDI can be tested by initial development levels of educated and skilled labor forces

As described above, one channel in which FDI transfers its benefits to host countries is through its labor force. While studying FDI determinants' absorptive capacity, several studies have also described human capital as a crucial factor in promoting local firms' absorptive capacity and nations as well. Productivity spillover depends on human capital (L Alfaro & Charlton, 2007). With a well-educated workforce, host countries are able to catalyze FDI (Kemeny, 2010). Oppositely, those with low levels of education, can obtain significant negative FDI effects (Ayanwale, 2007). This means that host countries can only receive FDI advantages, if those countries build a well-educated workforce (Lumbila, 2005). Consequently, labor remains a channel for transferring and receiving FDI benefits as long as its workforce is well educated. Certainly, one of benefit of possessing highly trained manpower is prospects of absorbing technology (Duysters, Jacob, Lemmens, & Jintian, 2009). Transfer of FDI benefits to labor takes place through training, learning by doing, and accumulating experience. Therefore, labor is a force and factor for implementing conveyed know-how. Better-educated and skilled labor implies that better know-how is obtainable, and better performance is achievable. Borensztein et al. (1998) state that FDI produces positive spillovers only in a country which has a minimum threshold stock of human capital with a sufficiently qualified labor force. In a similar vein, Van den Berg and van der Klaauw (2001) state that quality of the labor forces determines an economy's ability to create new ideas and adapt to old ones. In the disbursement stage, labor forces are indispensable for putting projects into practice. Shortages of qualified people might cause plans to be slowly implemented. Lower educated and skilled host country workers definitely impact disbursements of investment and reflect a negative image concerning host countries' ability and capacity for FDI promotion. Chen (1990) confirms that countries

investing more in human capital will gain more benefits from FDI. Only human beings have the capacity to understand, assimilate and create new knowledge; thus, human capital is a vital factor needed to absorb FDI benefits.

Most interviewees accept that the Vietnamese labor force is young, dynamic, and energetic as well as educated and endowed with well-honed skills. However, unskilled labor is abundantly available there, while highly educated and skilled labors are scarce, especially in middle management levels. From international investors' viewpoints, the shortage of skilled workers is the third most important operational constraint in Vietnam. Due to ongoing economic growth, the market demands a higher skilled and educated labor force. The Chief of the Professional Education Department realizes that the shortage of human capital has been affecting the implementation of projects and limiting economic growth for some years. Additionally, the Director of Apollo Vietnam said that the absorptive capacity of individual labor is decisive. If labor absorbs new knowledge properly, then they are able to deliver better performance. Furthermore, they can transfer their accumulated knowledge to their colleagues. As a result, the absorption of new knowledge is pervasive. Because education and training is the ground floor for building up necessary absorptive capacity; therefore, this proves that levels of educated human capital are a first condition for enhancing the absorptive process.

4.3 Financial Systems

Proposition 3: Higher host country benefits derived from FDI can be tested by initial financial systems' development

Financial systems are central to economies' functioning and modern day life. Modern financial systems embody a complex of institutions, including banks, government and international institutions. They regulate and facilitate payments and provide intermediation links connecting lenders to borrowers, and investors with assets to investment opportunities. Financial systems are therefore a key tool in FDI activities, such as disbursements of investment capital; transfers of money from overseas into recipient countries' bank accounts; payments for building materials, raw materials, labor costs; collecting money after selling, repatriation of funds to home countries, etc., and other fiduciary services. All such basic activities require a certain degree of finan-

cial development. If investment capital is not disbursed, projects 'progress might be delayed, stagnant, or even closed down. If investments cannot be implemented, attractiveness of FDI is lost; hence, host countries would receive no benefits from FDI. Lumbila (2005) concludes that host countries can only obtain benefits from FDI only with "depth and efficiency of financial system[s]". For that reason, financial development is a vital component to accelerate recipient countries' absorptive capacities and to facilitate FDI operation in host countries. Alfaro, Chandab, Kalemli-Ozcan, and Sayek (2004) and Alfaro and Charlton (2007) state that FDI is associated with accelerated growth in host countries with comparatively well-developed financial markets. Countries with smooth functioning financial systems can exploit FDI more efficiently. Hermes and Lensink (2003) point out that more locally developed financial systems positively contribute to processes of technological diffusion linked to FDI. Durham (2004) also studies financial market development as an indicator of relationships between FDI effects and equity foreign portfolio investments (EFPI). He goes on to state that financial development is contingent on absorptive capacities of host countries. Sadik and Bolbol (2003) and Krogstrup and Matar (2005) find evidence in Arabic countries that poorly developed financial systems are not able to benefit from FDI. In our model, financial system acts as an integral factor in absorbing FDI spillovers occurring in host countries.

In terms of its financial system, employees who have been working in the banking sector, as well as foreign investors, said that Vietnam's current financial system is quite well developed and therefore meets market demands. As regards, the role of the banking system involved in FDI processes, its services perform a crucial contribution to the absorption of FDI spillovers, the CEO of the Fusheng Group underlined. FDI operations could under certain circumstances become frozen due to financial systems' weaknesses. Generally, the financial system supports national absorptive capacity by transferring money and financial documents between it institutions. It is a channel where money from abroad comes to Vietnam. It is also a system that converts project capital into registered investments' actual available capital for disbursement to every sector and niche of Vietnam's economy. In addition, the CEO of PariBas Bank stressed that banks provide to domestic as well as to interna-

tional investors investment advice, by providing financial risk analysis; management and payment (including payroll) services; and offering solutions to minimize risk and maximize investment profits. In summary, based on sound development, the financial system has supported the Vietnamese economy in distributing capital from FDI investments and in absorbing primary and spillover benefits from FDI.

4.4 Physical Infrastructure

Proposition 4: Higher host country benefits derived from FDI can be tested by initial developments of physical infrastructure

According to O'Fallon (2003), physical infrastructures are described as service systems associated with energy, water supply (irrigation), transport, telecommunications, sanitation and waste facilities, as well as flood protection and drainage. In regard to transportation, infrastructures can include railways, roads, airways, and waterways, which can carry raw materials to manufacturing points and finished goods to consumers. Poor infrastructure can increase costs and waste time. Wasted time and increased costs probably return less profit to investors and host countries. In addition, outmoded or poorly maintained infrastructure systems can cause delays or even abandonment of investment projects. This means host countries cannot receive benefits from FDI, but also causes confusion in society. For instance, demand for electricity goes up as FDI increases. Once host countries' power fails to provide sufficient capacity to supply power, energy must be reserved for production first; thus, residents have to suffer shortages of electricity and living standards are decreased. Similarly, Kessides (1993) concludes that infrastructures contribute to the quality of life by creating amenities, providing consumer goods (transport and communication services) and by contributing to macroeconomic stability. Regarding soft infrastructure, most information and communication go through internet, telephone, and digital communication networks. The development of both hard and soft infrastructure systems can effect countries' absorption of FDI benefits (Adams, 2009; Kemeny, 2010; Lumbila, 2005). There is no doubt that infrastructure is seen as an important factor pushing forward smoother convertibility of FDI's benefits increasing host countries' spillovers. A study by the Organization for Economic Co-operation and Development

(OECD) (2004) reports that an inadequate infrastructure is a major impediment to entrepreneurial activity; while a well-developed information and communication technology system may lead to an upward shift in FDI activities. Physical infrastructure has been playing an imperative role in supporting FDI activities. Nunes, Oscategui, and Peschiera (2006) take infrastructure as an indicator for capturing absorptive capacities of countries towards FDI. Similar to financial systems, a sound infrastructure system might enhance absorptive capacities of host countries.

When discussing Vietnam's physical infrastructure, interviewees stressed that it is an inadequate system needing large scale improvements. This is considered to be a major obstacle for developing and expanding business investments and activities. The Chief of Central Promotion Agency of MPI, stressed that this situation is not beneficial for the continued circulation of goods and services. One problem that international investors have also complained about is the availability of cleared land. The General Director of Kum Woo Company, said that his company has been waiting for cleared land for a long period of time. He stated that this problem is heavily discouraging his further investment in Vietnam. This is becoming a serious obstacle for FDI project into practice implementation. In addition, an adequate energy supply is seriously lacking in Vietnam, because of its continuing higher demand. In fact, electricity is currently prioritized for manufacturing; therefore, the availability of consumer electricity is cut back or available on an interrupted basis, according to a representative of the Vietnam Electronic Group. Consequently, the general electricity consuming public is greatly affected, as living conditions and standards are lowered. With infrastructure in this condition, Vietnam does not benefit adequately from anticipated FDI benefits and spillover effects. However, it is fortunate that the communications, aviation and logistics industries are well and sufficiently developed to meet market growth demands. These industries obtain advanced technology and sound managerial strategy; therefore, their services have actually contributed to the absorption process. This system allows us to connect with FDI partners around the world on a real time basis, and for our businesses to communicate more smoothly, as confirmed by the CEO of Sai Gon Logistics. Evidently, this initially developed infrastructure could well support the country in taking more optimum advantages from FDI.

4.5 Technology and R&D

Proposition 5: Higher host country benefits derived from FDI can be tested by initial development levels of advanced technology and R&D

Technology is a broad concept and generally refers to knowledge and equipment which satisfies human needs or wants (Technology Guide, UNESCO). As technology can be transferred from more to less developed countries (Keller, 1996), most researchers agree that advanced technology can be one of the main benefits that host countries can expect from FDI. However, this transfer depends greatly on host countries' technological capacities. Nooteboom, Van Haverbeke, Duysters, Gilsing, and van den Oord (2007) confirm that technological knowledge is a basic of absorptive capacity. Indeed, technological gaps between home and host countries determine host countries' absorptive capacities. In developing countries, such as Vietnam, new technology and R&D are mainly developed by its internal national institutions, such as universities, state owned companies and a few private companies. Borensztein et al. (1998) find that FDI contributes to economic growth only when a sufficient absorptive capacity of advanced technologies is available in host economies. Higher FDI efficiency rates would result from a combination of advanced management skills and more advanced technology. De Mello (1997) states that the larger the technological gap between host and home countries, the smaller is expected that FDI impacts on economic growth. The aim of host countries, when calling for FDI, is to utilize advanced FDI technologies to enhance their economies. This means that host countries require initial developments in technology to assimilate these benefits.

In a similar vein, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), (1984) reports that technological absorptive capacities of host countries have major impacts on the effectiveness of technology transfers. Regarding technology at firm levels, Kokko and Blomström (1995) write that domestic firms can benefit only if technology gaps are not too wide, so that domestic firms can absorb knowledge available from multinationals. Usui (1983) finds that transfers of technology will be effective only if recipient firms already possess an adequate base to absorb acquired technologies without recourse to broad-ranged and long-term services from their foreign affiliates. As a part of innovation, levels of R&D

for host countries are considered factors of absorptive capacity. Once levels of R&D for host countries are developed, the assimilation of advanced technology of FDI is easier. Fu (2008) offers that globalization of R&D may provide an opportunity for developing countries to catch up with various technological frontiers. Cohen and Levithal (1990) find that firms' ability to exploit external knowledge is often generated as a byproduct of its R&D, and R&D not only generates new knowledge, but also contributes to firms' absorptive capacity. Technology acts like the roots of green plants and is a foundation that can boost countries' development. Advanced technological levels provide a sound basis for absorption of FDI spillovers.

When conducting these interviews, not many respondents raised technology as an issue. However, when we asked them, the interviewees confirmed that a sufficiently high level of technological knowhow is a very important factor for keeping pace with the advanced technology of FDI's home partners. "If we do not have similar experience, it is very difficult to understand new technologies from multinationals", said by the authorizer from the Ministry of Information and Communication. One of the reasons why some industries such as aviation, logistics and financial systems easily adapt or become familiar with international businesses is that much investment is spent on upgrading their technologies. In a UNCTAD (2005) survey of the world's largest R&D-spending among TNCs and in regards to the attractive prospective R&D, as many as 69% of the responding firms stated that their share of foreign R&D is set to increase, with a further shift towards specifically selected countries. Vietnam was listed with 1.5% in terms of respondents' citations. As a result, Vietnam receives more FDI through small sized projects with low or backward technological applications. This means the gap between national technological levels will affect overall national absorption.

4.6 Institutional Development

Proposition 6: Higher host country benefits derived from FDI can be tested by initial development levels of institutional policies

Some studies have also tested the importance of institutional factors for FDI's absorptive capacity and found a positive relationship. Concerning

FDI, proxies for institutional development are FDI law/ regulations and host countries' administrative systems. When doing business in a particular country, initial considerations of international investors are potential profits and the right of repatriating or using those profits elsewhere. Once property rights are protected by the law, international investors feel more secure that their investment will not be nationalized or confiscated by some arbitrary or administrative means; they might expand and develop their investments further. Therefore, this possibility may bring additional benefits to host countries. On the other hand, opaque, fluctuating regulations will lead investors into a seeming maze of bureaucratic deadens. To escape such complicated situations, investors quickly move their investment elsewhere. While testing FDI's driving forces using local markets development factors, such as, availability of complementary factors of production, and institutional development. Durham (2004) defines institutional development as investment-friendly policies and administrative frameworks characterized by regulation of businesses, protection of property rights, as well as strict corruption regulation. He finds that regulation of business and protection of property rights are positively correlated with FDI. Krogstrup and Matar (2005) also applied these indicators while investigating absorptive capacities in the Arabic world. Clearly, development of institutions will facilitate FDI businesses, and accelerate absorptive capacities of host countries. Durham (2004) and Kemeny (2010) cite those countries with higher legal standards as likely supporting FDI more efficiently. Similarly, Nunnenkamp (2004) concludes that institutional development seems first to be required before benefiting from FDI. Institutional development expresses social development and host countries' governance levels. Stronger institutional development could lubricate the increased rate of absorption into a smoother structured process. Institutional appropriateness will help host countries accrue FDI advantages (Adams, 2009). This situation resembles the roots of a plant. Healthy roots imply wealthy plants.

Recently, the Vietnamese government has strategically moved forward public administrative reforms to build up and strengthen their institutions, to renovate the process of developing and issuing normative legal documents, to ensure strict and transparent laws, and to reform administrative procedures. This performance enhances business operations through use of a "one door"

system. This process saves time and appears to be transparent to foreign investors. The Deputy Director of the Can Tho Promotion Agency asserts that this institutional issue exists everywhere and impacts all facets of economic life. Sound institutional development is a supportive force for socio-economic and political matters, such as education (human resources, R&D, business, finance, construction, and foreign investment as well. "Supportive government" is a concept that interviewees described with great emphasis. For them, at foreign locations where local governments are friendly, international investors do business with more convenience and less frustration; they, in turn, are willing to support the region by training their labor force, transferring know-how and even supporting charitable activities (e.g., Fusheng, Apollo, Kum Woo, and Bio Rat Vietnam. Perceptibly, the development of host country institutional system can influence FDI operations, either positively or negatively. In turn, positive or negative spillovers of FDI depend on host countries' institutional development. Well-developed institutions will lend support and drive along FDI; this means that host countries can absorb FDI benefits more readily and to a greater degree.

Through the interviewees' lens, the most prominent key factors are human capital, and institutional development, followed by infrastructure, technological levels, absorptive capacity of domestic firms, and financial development. Mainly, interviewees supported our proposition regarding the importance of absorptive capacity. They do recognize that host countries could not benefit from FDI with a weak absorptive capacity. They also strongly supported our FDI absorptive capacity model, which argues that host countries can only absorb FDI benefits, if they achieve an initial level of development in human capital, absorptive capacity of domestic firms, technology, institutions, infrastructure, and finance.

5. Conclusions, Policy Recommendation and Further Research

The absorptive capacity theory, which is introduced in this study, is a synthesis of the most eminent features contained in previous literature. This model contributes to existing literature as it offers an overarching model, which directly reflects the factors that a host country needs in order to convert FDI benefits into its country's own spillovers.

By combining the best features of literature and supportive responses from the survey, our research states that not all countries can benefit from FDI, although FDI per se is capable of emitting many benefits. We argue that to obtain benefits from FDI, host countries need to possess an adequate minimum level of absorptive capacity in terms of human capital, absorptive capacity of domestic firms, technological development, institutional development, infrastructure development, and financial systems development.

For further study, this paper develops a model that can guide research on absorptive capacity to normative and structural approaches as well as conduct surveys to capture a country's FDI's absorptive capacity.

The FDI absorptive capacity model reifies a significant theoretical claim, since poor countries often focus on short term goals in order to quickly cover their shortages. They pay less consideration to absorptive capacity, because this process requires time and substantial efforts before achieving performance. Thus, FDI seems to present an optimal solution for back filling a lack of capital, create jobs, and collect taxes with few obvious downsides. However, beyond these advantages, FDI offers more benefits, such as advanced technology and knowhow. Nevertheless, it should be remembered that host countries could not obtain positive FDI spillover, if its external or primary benefits have not already converted themselves into internal benefits. This is the most important central claim and message of this study. This benefit conversion process requires host countries to first identify absorptive capacity shortfalls and then target FDI projects to fill those voids. This paper emphasizes and underscores the recommendation that poor countries need to first carefully develop their minimum initial absorptive capacities, so that FDI benefits can be steadily absorbed into their economic structures before calling for massive FDI injections.

Kalotay (2000) argues that FDI absorption can only be successful, if recipient countries and domestic firms' capacities have risen to adequate levels. This means that developing countries should aim to improve their FDI reception abilities before attracting more FDI inflows. Our study invites investors and policy-makers to consider requirements for an effective strategic status analysis, before they call for FDI and develop new regulations.

First of all, host governments should introduce a promotion policy aimed at closing technological gaps between home and host countries. On the other hand, policies directed towards improvement of firm's absorptive capacity and competitiveness must be first formulated and issued. Governments should support firms in their R&D investments, in their efforts to increase their science and technology status levels (new technological process/equipment), and in training human capital. This process requires a large amount of capital and takes a long time to recoup related investments; therefore, firms fundamentally require financial support from their respective governments in further developing these fields at increased rates. Girma (2005) argues that firms need a certain level of absorptive capacity before they can benefit from technologies developed by other firms. In addition, science and technology at national level also needs to be upgraded.

Secondly, empirical evidence verifies that countries with low levels of human capital can only attract lower level technologies; vice versa, countries with high levels of human capital might be able to attract large amounts of knowledge intensive technologies. Obviously, advanced technology can contribute more to host countries' development. There is no doubt that a sound policy to improve education and human capital will enhance absorptive capacities and generate sustainable growth. Girma (2005) again states that education and training policies are the key to facilitating spillovers from FDI. Better education and training would add to the supply of qualified labor in developing host countries and improve their prospects of benefiting from technology transfers and spillovers (Görg & Greenaway, 2002).

Thirdly, host countries should aim to improve their financial and physical infrastructures as well as institutional developments to support a smooth absorption process. Normally, FDI flows come from countries that have abundant capital and have higher technological levels. Therefore, the quality and type of FDI are important for unleashing a significant innovation/promotion effects associated with FDI. As a result, if host countries want to obtain advanced technology, they should promote necessary conditions for receiving quality FDI.

These three policies should be applied in conjunction with each other to improve internal capacities of host countries. Last, but not least, host

governments should have or create a policy to support external capacity building organizations.

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