

So Hyun Yim

## **MOVING BEYOND FDI AND CLUSTERS: PLATFORM PERSPECTIVE TOWARDS MUTUAL VALUE CREATION**

### **ABSTRACT**

---

This paper integrates two independent studies of foreign direct investment and cluster through platform perspective. In order to sustain and maximize rent creation for both the investing firm and the host country, this paper suggests a shift in our perspective from exploiting advantages unilaterally to creating values mutually. Four factors, compatibility, complementarity, connectivity and commerciality, are presented to have positive impacts on sustaining value co-creation and maximizing spillover effects. The four factors, carefully chosen through rigorous studies from the platform perspective as well as other relevant studies, give meaningful implications for carrying out effective and sustainable ODA and CSR activities as well.

---

*Key Words: FDI, platform, cluster, sustainability, mutual value creation*

**So Hyun Yim**

*Seoul National University*

**Correspondence: So Hyun Yim**

Graduate School of International Studies, Seoul National University, 1 Gwanak-ro, Gwanak-gu Seoul, South Korea

E-mail: sohyunyim@gmail.com

Tel: +82-10-3300-9268

## INTRODUCTION

It has been only in the 1980s where foreign direct investment (FDI) has been regarded as an efficient firm strategy for multinational corporations (MNCs) to create values for customers and foster regional and industrial development. Beforehand, FDI was regarded as a means for the Western firms to exploit and appropriate their advantages in foreign countries (e.g., Buckley and Casson, 1976). In this regard, FDI from less developed countries was regarded as an exceptional case or a detour strategy to overcome trade disputes as their firms were not competitive enough to invest and compete in the global market (Moon, 2004).

Less developed countries were also not very favorable towards accepting foreign investments as many regarded FDI as a “neo-colonization” (Moosa, 2002). The Western firms came to largely influence industrial and living environment of the developing countries. They utilized and exploited (natural) resources in the host countries under the name of the development. Their influence was also not always positive; many MNCs were challenged with business ethical issues such as exploitation of child and woman labor (Moran, 1999). While FDI effects remain disputable, it has become crucial to sustain positive effects of FDI and convert the disadvantages to positive effects for both the firm and the host country.

Yet, FDI studies were largely developed on a basis of exploiting firms’ advantages, which have roots in Dunning’s (1998, 2001) OLI paradigm. Firms invest abroad to exploit specific ownership advantages of a firm, or new assets in the investing location as well as other rents created from engaging in FDI. Yet, Moon and Roehl (2001) challenged this paradigm, saying that the motives of FDI are not mainly to exploit firm advantages and internalize locational advantages, but also to overcome their critical shortcomings and balance out any of imbalances and obstacles that situate in the value chain activities. They called this the imbalance theory and expanded the view on FDI motivations from specific advantage seeking to balancing-out of the entire business activities.

Imbalance theory holds significance in complicated business environments, where firms and the location evolve dynamically. The competition has become increasingly dynamic that firms and the host country continually face new problems to solve throughout the evolution process (Augier and Teece, 2009). Thus more attention needs to be paid in creating mutual benefits of the investing firm and the host country. The more tangible benefits the host country creates that could possibly soothe some risks and disadvantages with the presence of the MNCs, the more it will benefit the MNCs in return, and vice versa, through spillover

and agglomeration effects. The reciprocal relationship between the host country and the investing firms will motivate both to continuously co-create favorable conditions for further development.

Yet, the spillover and agglomeration effects are known to be greater in clusters of firms than in remote firms (e.g., Saxenian, 1990; Porter, 1998). Clusters, defined as geographically close firms and institutions, stimulate productivity and efficiency, lowering transaction costs and attracting new start-up companies that can promote innovation and expand the boundary of clusters (Porter, 1998).

The concept of cluster, however, expands beyond closely located firms (Moon and Jung, 2010). Concentrated networks of firms that work together across regional and national boundaries form a (virtual) global cluster. They find fitness and complementarities among clusters' (dis)advantages. Thus, by expanding the concept of clusters, from geographically close firms to firm network portfolio, this paper connects clusters to FDI through platform perspective. The ecological platform perspective stretches our understanding in creating and sustaining mutual value for both the MNCs and the host country.

The strategic factors for self-reinforcing mechanism are chosen and presented in this paper\*. They are compatibility, complementarity, connectivity and commerciality. Compatibility is to balance out any imbalances in business operation with the host country from the evolutionary perspective. Complementarity is to find the intersection of weaknesses between the investing firm(s) and the host country for value co-creation. Connectivity is to maximize spillover effects (network externalities) to sustain benefits. Lastly, commerciality is to maximize the *ex post* value of the benefits compared to *ex ante* input value for both the investing firm and the host country. The four factors are analyzed and applied to the firm's entire business operation, and to the relationship between the investing firms and the host country.

This paper contributes by first filling the gap between the two independent studies of FDI and clusters through evolutionary and ecological perspective of the platform. The four critical factors presented in this paper are meaningful for both scholars and practitioners in strategic planning of FDI promotion as well as for cluster development. They also give further implications for non-profit organizations that engage in an official development assistance (ODA) program and also for profit organizations that engage in non-profit

---

\* The four factors were first introduced in Yim (2009). They were further developed and were applied on FDI in this paper.

activities such as corporate social responsibility (CSR), thus opening a horizon for various studies.

This paper is organized as follows. First, this paper illustrates the evolution of FDI theories and suggests to shift our perspective from exploiting advantages to balancing out (dis)advantages. The second section illustrates (extended definition of) clusters to introduce ecosystemic and evolutionary perspective of platform in FDI. This section is followed by finding the strategic fitness and building reciprocal relationship between the host country and MNCs. The last section proposes four critical factors to create, enhance and sustain values mutually between the investing firms and the host country. This paper is concluded by discussing further implications for other studies and strategic directions for both scholars and practitioners.

## **FDI AND BEYOND**

FDI studies were developed on imperfect market system (Hymer, 1976). Because imperfect market incurs high transaction costs, firms choose foreign production over domestic one (Dunning and Rugman, 2001). Yet foreign production entails communication and coordination costs among foreign subsidiaries (Rugman, 2010). In order to offset such extra costs, firms need to find critical advantages in exploiting their own resources in foreign location, or acquiring locational specific advantages.

In this sense, Dunning (1988, 1998, 2001) modelled two advantages aside from firm specific advantages (ownership advantage): resources embedded in locations (locational advantages) and incorporating process of resources (internalization advantages) to appropriate returns on certain skills and abilities. This is called the OLI paradigm in which Dunning perceived the locational and the internalization advantages as “contextual” that cannot be controlled or manipulated by the MNCs.

The OLI paradigm has become the backbone of FDI studies which have evolved from the investing firm’s perspective on exploiting advantages (Verbeke, 2009; Rugman, 2010). Yet, it is not always the advantages that motivate firms to go abroad; the fundamental motivation for firm growth lies in the imbalance of resources (Penrose, 1959). This idea was extended and applied to the field of FDI by Moon and Roehl (2001). These scholars emphasized that while firms need to exploit advantages that they already have, it is also critical that they overcome their disadvantages at the same time. When firms have no advantages to utilize, they need to seek new resources. If they cannot find them at home,

they need to go abroad to complement them. This has been prevalent in the cases of firms from the developing countries.

The imbalance theory is meaningful in ways that it looks into the entire firm activities rather than the resource/advantage *per se*. While FDI studies have roots in economic theories (i.e., transaction costs), the imbalance theory focuses on how (dis)advantages in specific value chain activities can be critical for other or entire firm operations. If one business unit has a critical advantage, it can improve the entire operation by sharing it, while the disadvantaged business unit should also be complemented to improve the entire operation. By regulating the imbalances in the entire operation, the firm can constantly generate method improvements or process innovations.

Both the OLI paradigm and the imbalance theory explain motivations of firms going abroad. Yet the imbalance theory takes a step forward in determining which has a greater impact on firms' motivation. For example, Samsung Electronics and LG Electronics, the two leading electronics firms from South Korea, invested in Silicon Valley to upgrade their technological capabilities. While OLI paradigm can only explain the fact that they both had invested abroad, the imbalance theory explains that LG had to make a larger investment than Samsung to overcome its weak market position compared to Samsung at home (Moon and Roehl, 2001).

As the business landscape expands and becomes diverse, the degree of "push" and "pull" effect is critical in planning strategic geographical portfolio of firm investments. In finding the attractive investment locations and firms, the imbalance theory is useful in two ways. First, the imbalance theory can be applied to host countries' perspective in attracting MNCs for regional and economic development. For example, developing countries attract foreign firms for economic growth through disadvantages, such as underdeveloped and inefficient market and unfair competition. These disadvantages are reduced relatively fast as FDI brings in firm resources (e.g., technology and capital), enhances domestic productivity, induces overall economic growth and develops related and supporting sectors (Moore, 1993). Instead of developing the resources by domestic firms that have no special sets of advantages, foreign firms can deliver and build resources in host countries more efficiently. This logic aligns with firms' decision to "make or buy" resources. In this sense, the imbalance theory can be extended to explaining why some locations are attractive and pull FDI through their significant disadvantages.

Second, the imbalance theory can be applied to the relationship between the firm and the location. Though Dunning's advantages were more of an "absolute advantage economics"-based, imbalance theory is more about the relative (dis)advantage economics. Locations have a pull or push effect for specific firms but not for all firms. Firms also assess locations compared to other locations. They are chosen not because of their absolute advantages but because of fitness with what the firms are seeking. Thus, as firms choose locations that can enhance their strengths and complement their weaknesses, the policies in host countries should seek firms that can enhance strengths and complement weaknesses of the location. Thus, finding any imbalances or the fitness can enhance the entire business activities as well as maximize the benefits and spillover effects in the host country. This is further explained in the following sections.

## **CLUSTERS AND BEYOND**

The benefits that FDI brings to the host country are evident. The benefits include technological externalities, the increase in local firms' total factor productivity and their propensity to export (e.g., Moosa, 2002; Fotopoulos and Louri, 2004; Blomstrom, Globerman, and Kokko, 1999; Bell, 2005). Additional competition created by foreign investment stimulates innovation (Krugman, 1991), and promotes other relevant and complementary sectors' growth (Porter, 1990, 1998). FDI also creates demands for local output, and the backward linkages strengthen supply industries, feeding forward linkages to other local firms in return (Delago, Porter, and Stern, 2012).

However, spillover effects encompassing regional and industrial development do not happen naturally. Particularly, in underdeveloped countries, it is difficult to bring spillover effects as they lack well-institutionalized infrastructure, supporting industries and institutions as well as the market that can support the local firms' development. This is why institutional and governmental roles in attracting foreign investment play a significant role. The government and regional policy makers offer preferential treatment, including income tax reductions, import duty exemptions, and subsidies for infrastructure.

Yet, locational advantages change over time. Though certain locational advantages may be attractive at some point of time to some firms, they evolve and deplete along with the economic and regional development. For example, competition in cluster can be a benefit at the initial stage of firm investment but can be unfavorable at a later stage as it creates additional congestions in doing business (Klepper, 2007).

The current economy is far more dynamic (Porter, 1990). The industry lifecycle is shortened and the lifecycle of rent creation is also shortened. Uncertainties increased as the boundary of industries blurred. As the global market expanded, the threat of substitutes also increased. Thus, for MNCs to source locational advantages throughout the firm's and the host country's evolution process, it is imperative for the locational advantages to be continuously created and evolved.

Constant upgrade of locational advantages, however, in host countries is difficult to persist. The sustainability comes from the cooperation between the MNCs and the host countries. In order to maximize rent creation and technological spillover effects, firms cluster closely in attractive locations. In many cases, the host country gives preferential treatment to attract firms in a specific region to solve problems that they currently face.

Clusters are defined as a constellation of interconnected firms and institutions (Porter, 1998). Firms experience a stronger growth and rapid innovation together than remotely (Baptista and Swann, 1998; Swann, Prevezer, and Stout, 1998). For instance, clustered networks of firms and institutions benefit from having easier access to information through creating collective knowledge (Dosi, 1988; Krugman, 1991). Firms can also benefit from keeping eyes on their competitors (Burt, 1987) and potential collaborators (Saxenian, 1994) while collaborating with other firms to attain efficient scale (Scott, 1992). They in return strengthen the domestic institutions by having the relationships with local government, universities and exchange ideas through forums and seminars which have become the asset to the region that cannot be replicated elsewhere (Porter, 1998).

Though the concept of clusters has been expanded to firm network that may be not geographically close to each other (Markusen, 1996), the core aspect in cluster holds the same: interconnected firms that seek to co-create value than individually. As different networks of firms are beneficial in different ways (i.e., Granovetter, 1973), it is important to have an optimized portfolio of firm networks that firms can flexibly utilize based on their needs and imbalances. Thus, here, we apply the conventional and extended concepts of cluster; firms located geographically close to each other and firm network portfolios (thematic networks).

Clusters entail interactions of actors. The actors are firms and institutions. They collaborate and compete, with different motivations, in different dimensions. Yet, they need to co-exist with each other to create a greater value than they can individually. In doing so, they need coordination in their business operations. Firm coordination, however, is largely

affected by the immediate business environment outside firms which has been long overlooked (Porter, 1998). Business environment is influenced by the institutional structure, competition, the government and its policies as well as locational specific assets. They altogether create favorable location-sticky assets that are hard to replicate, which benefit the investing firms and expedite firm growth (Krugman, 1991; Saxenian, 1994).

From the ecological perspective, this is similar to platform industry. A platform is defined variously; a relatively large set of product components that are physically connected (Meyer and Lehnerd, 1997), the core assets shared by a set of products (Wheelwright and Clark, 1992), or the architectural rules that enable a set of planned product offerings where the architectural rules define geometrical, mechanical, electrical and software interfaces (Bowman, 2005). The platform is composed of modules—tangible or intangible parts and components, or the input system—and architectures—tangible or intangible systems that hold these modules together. Platform provider coordinates and orchestrates the modules and architecture to increase product efficiency and product diversity.

In this respect, I adopt the platform perspective in order to find strategic guidelines in seeking synergistic impacts between the investing firm, the institutions and the government, the suppliers, infrastructure as well as skills, technologies and common inputs, which constitute the cluster. We here assume the input factors or the input providers as the “modules” of the platform, and the cluster of interconnected firms as the “architecture”. This platform perspective provides strategic factors to sustain and maximize benefits for both the investing and the host country.

## **A NEW PERSPECTIVE: PLATFORM PERSPECTIVE TOWARDS SUSTAINABILITY OF VALUE CO-CREATION**

In high velocity environments, sustainability is the critical issue. Rent creation from FDI is one issue and the sustainability of rent creation is another. The sustainability is closely related to firm adaptation to the changing environments--how firms adapt, create and reconfigure competencies to the external environment (e.g., Teece, Pisano, and Schuen, 1997). Thus, sustaining FDI benefits is also driven from how firms create and reconfigure competencies with the external environment and the host countries.

Co-creation and reconfiguration, however, require mutual relationship. Unilateral action of a firm exploiting advantages of its own and of the host country does not persist long, nor entails spatial spillover effects. If MNCs were to create benefits for their own from

FDI, the host country should also be able to exploit advantages of MNCs and benefit mutually. To bring expected outcome to both parties, there needs a balanced level of motivation to collaborate together. As explained by the imbalance theory, the needs to complement the disadvantages bring in greater motivations to both the firm and the host country than by exploiting advantages.

FDI theories based on the exploitation of advantages pose asymmetry in motivation level in firm cooperation. One benefits greater than the other, or one giving away more than the return will deter motivation of firms to transfer and absorb new knowledge in the long run. In many cases, the greater the gap there is between the MNCs and host country, the more MNCs would want to restrict spillover effects through such as technology transfer (Borensztein, De Gregorio, and Lee, 1998; Kokko, 1994). The gap in absorptive capacity also deters spillover effects in host countries. Cohen and Levinthal (1989) explained that the lower absorptive capacity the host country has, the lower the spillover effect will be created. This in turn limits the investing firm's transfer of knowledge. Thus, creating similar motivational level to co-work is the critical issue.

Balanced motivation to cooperate derives from the substantial improvement one could gain. Firms need to complement their disadvantageous positioning through investment and the same applies to the host country as well. If the investing firms and the host country could find the intersection that they could improve upon together, they can not only balance out their motivations to cooperate but they can also bring synergistic effects to generate greater spillover effects.

In the meantime, the spillover effects should not also be limited to a short period of time. MNCs evolve and host countries transform (Harrison, Kelly, and Grant, 1996; Klepper, 1997; Lorenzen, 2005). In the long run, MNCs and the host country have to find mutual ways to evolve together. This does not mean that their actual benefit level should be similar. Their expected goal and outcome may be different. They can also be changed and rearranged over time. Yet they need to create mutual value that can evolve over time.

This is why I bring in the concept of a platform. The boundary of the market is epistemological. Yet the platform studies have largely embraced the concept of ecosystem and mutual value creation of the stakeholders in the system. The stakeholders include the platform provider, the suppliers and the buyers.

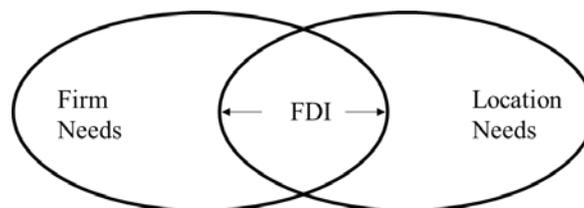
The competitiveness of the overall platform comes from the fitness of modules or actors in an ecosystem. It is not about the advanced level of advantages. The value of the

resources can vary to each firm and to each location. Firms with strong advantages at home do not always succeed in foreign countries. The host countries cannot also always enjoy benefits from attracting competitive firms.

The value is a relative term that can be only determined by the outcome. Thus, there is no absolutely “better” location for every MNC’s investment. It is the same for the location. There is no absolutely a “better” firm that can bring the benefit to the host country. It is not about the resources a firm has, but how firm fits with the host country’s purposes and needs. Firms need to look for location that can give the resources they need, but also how they can fit with the location in the long run. This is because firm activity is also like an organism that requires adaptation to have smooth operations across regions.

Thus, firms and the host country should seek common needs that they can collaborate to maximize and sustain mutual benefits (see Figure 1). The strategy is to look for fitness and tradeoffs they need to make from the evolutionary perspective. As Porter (1996) explains, fitness of the actors’ strengths and weaknesses and the self-reinforcing mechanism will bring competitiveness. Though the platform studies or other studies have not presented critical factors that lead to self-reinforcing mechanism of creating mutual benefits, platform studies give critical implications in finding them.

**Figure 1: The FDI and clustering target**



#### **FOUR CRITICAL FACTORS TO CREATING MUTUAL VALUE OF THE FIRM AND THE HOST COUNTRY**

Platform studies encapsulate wisdom from earlier works of modularity, standardization, dominant design and network externalities. They examine how firm can co-exist and maintain cooperation with each other to maximize the entire value of the platform. The greater the value the seller brings in, the greater value it brings to the customers and thus benefits the entire platform. This will attract more customers which in return attract more

suppliers and create spiral effect of network externalities. This applies the other way around as well. This effect shows evolutionary path of building sustainable competitiveness.

Platform has a profound basis on ecological perspective. When the system of platform changes, it affects the sellers and the buyers at the same time. The sellers also affect the platform and the buyers. Buyers also have an active role in influencing the sellers and platform providers' offerings. Yet their interactions are based on competition. Thus, despite differences in demands and characteristics among the stakeholders, they need to be compatible and complementary with each other, otherwise, they will fall behind or lose competitiveness in the system. Yet as we view FDI and cluster development from ecological perspective encompassing all stakeholders, connectivity with the suppliers as well as bringing higher value to customers are critical. These four aspects are key to finding the fitness which are elaborated below.

### **Compatibility**

In ecological perspective, firms and institutions evolve at different speed. Yet fast development may not be always beneficial in ecosystem. Rather, compatibility with other firms allows firms to maintain their customer base and at the same time cooperate with other firms and products. Thus, I here define compatibility as a balancing-out activity despite variances in the level of development and purposes.

This logic is applicable to the compatibility with the host countries. When firms make investments in host countries, they need to look into compatibility among the variances in the level of development and business operations (value chain activities). Considering the clustered and interconnected firms as the boundary of the platform, the bigger they can create compatible relationship with each other, the more the investing and the local firms there will be to cooperate. This also has effects on creating the local demand. Compatibility allows firms to increase the variety for the local demand which as a result increases the overall value created (Matutes and Regibeau, 1988). In other words, compatibility with the host country can attract more firms and create spiral effects in the region.

### **Complementarity**

Complementarity in platforms are like two sided coins (e.g., Gawer and Cusumano, 2012). They reinforce each other's utility and value in the industry. They sometimes build up entry barriers in the industry (Gawer and Henderson, 2007). Complementarity is also largely

studied in cooptation of firms (e.g., Collis and Montgomery 1995). Firms need to have complementary resources to promote cooperation with the competitors (and deter intensive competition) while also to outperform the competitors (Dagnino and Padula, 2002). Constant innovation and growth is driven by complementing its own disadvantages and also providing complements that competitors critically lack in. It is important to attain similar resources to compete with each other, but the addition of complementary attributes will enhance the value and differentiate the product (Milgrom, Qian, and Roberts, 1991).

Complementarity of foreign investment is also critical. The investment need to either support or enhance the system. An investment in independent or different sectors (that has less connection with the entire business) can increase risks in managing the entire system. Though the subsidiaries may be an independent asset, intra-firm knowledge and resource sharing complement each other's problems.

Moon and Roehl (2001) also added complementarity as one of the main factors to FDI motivations. The imbalance theory, as explained earlier, has roots in complementing the disadvantages and weaknesses for rapid firm growth (latecomer's catchup). This logic applies similarly to cluster development, where host countries seek inward FDI to complement their weaknesses. The complementarity of MNCs (i.e., through building a front or back linkage to MNCs' core activities) to host country will foster cooperation with local firms and induce knowledge sharing among the two. Complementarity should be understood both in vertical horizontal relationships. Thus, while complementarity brings in synergistic effects to the investing firm and the host country, it also allows firms and the host country to create mutual benefits.

### **Connectivity**

Novice information comes from combining and reconfiguring knowledge (e.g., Cohen and Levinthal, 1990; Kogut and Zander, 1992; Teece, Pisano and Schuen, 1997). As firm networks evolve and change over time, exchanges with diverse networks constantly give firms to have better access to new knowledge (e.g., Rogers, 1995). Firms need to be aware of which network position they would want to take in accordance as their business develops. If competitiveness is a matter of positioning in the industry, sustainability is a matter of how firms position themselves within the firm network structure. Thus, the ability to create network portfolio that can serve as the "knowledge hub" translates to building competitive assets.

In business platforms, however, channeling information is critical not only with the suppliers but also with customers. Network boundary needs to be expanded to encompass knowledge coming from customers. The ability to coopt knowledge providers (both sellers and buyers) and manage portfolio of networks through time is what I call connectivity. Thus, having a greater ability to source and transfer knowledge through creating and managing network portfolios can increase firm performance and sustain knowledge creation.

This applies similarly with the relationship with the host countries. There are many barriers and unexpected difficulties in foreign investments. An easy access to local information is a critical problem to MNCs. In order to overcome such difficulties, firms need to manage diverse firm networks to predict and tackle problems that lay ahead of them. Connectivity with the local country also adds diversity to both firm operation and the host countries' development which expedites learning (March, 1991) and increases the absorptive capacity (Cohen and Levinthal, 1990).

### **Commerciality**

The role of the market is not included in the studies of sustainable competitive advantages. Nevertheless, the competitiveness is determined by the market, either in final or product markets. For example, a breakthrough improvement in technology does not necessarily translate to similar breakthrough value to consumers. The technology can be either too advanced to be user-friendly, or too expensive to consume. On the other hand, a minor technological improvement can bring different experiences to consumers and create a higher perceived value. Here, I insist that *ex post* value of the resource in factor market should be smaller or similar to the *ex post* value delivered in product markets.

This is critical in hyper-competition where firms cannot sustain through constant resource upgrade. They need to deliver higher value to customers that can sustain customer loyalty and trust to prolong the lifecycle of switch in consumer choices (higher switching cost) (Yang and Peterson, 2004). While extending the platform studies on consumer aspects (commerciality), this paper stresses that when firms invest abroad for factor production, the actual value needs to be compared with how much it brings to the firm and to the local community. Some resources that may be attained from one area may add more value to another location(s) or firms. Blomstrom, Globerman, and Kokko (1999) also stated that the cost of adoption of MNCs technology should be small relative to the value of the underlying

technology for the maximization of the spillover effects, otherwise the host country will not be willing to participate in technology adoption.

Constant alignment of internal resources with the external demand is critical for firm evolution as local firms, institution and markets evolve and deteriorate in host country and their needs and demands change accordingly. Thus transferring the knowledge to where it can create the largest value is critical in firm's operation to maximize the output *vis-a-vis* resources. By finding the fitness, the investing firm and the host country will create business opportunities and future demand.

## DISCUSSION

The purpose of this paper is to explore the factors that can sustain rent creation and benefits that FDI brings to the host country through time. Both firms and host countries evolve. Mismatch in the evolution incurs high internal costs to overcome the problems that can prevent subsequent investments and in the worst scenario, bring hollowing effect.

My work suggests changing the perspective of FDI from exploiting advantages to creating mutual value between the investing firms and host country from the evolutionary perspective. By examining the intersection in the needs of the MNCs and the host country, we can find the fitness where they can gain valuable resources and generate spillover effects. This perspective allows the positive impacts of FDI to override or diminish potential negative impacts brought by MNCs to the host country.

This study is meaningful not only because it brings a shift in perspectives and expands our understanding on FDI, but it can be applied to other areas of studies. First, the study can be extended to official development assistance (ODA) studies. There have not been much systematic and comprehensive research in finding sustainable factors for ODA impacts. They largely remain in examining the benefits of the ODA (mainly financial aid), which have not been very successful in reality.

Recently, the ODA strategies have largely been shifting to transferring technological know-how and entrepreneurship to build self-sustainable and application capabilities. The government aids have been largely transferred in association with private companies. They seek efficient and effective outcomes for both short and long term goals. For example, the Korean firms have collaborated with the governmental organizations to deliver strategic and rapid development of the recipient country (OECD, 2012). Thus, this study can provide

meaningful implications for both the firms, the governments and institutions in allocating resources and implementing ODA strategies.

Second, this study can be extended and applied to CSR. Porter and Kramer (2011) introduced the concept of creating shared value (CSV), emphasizing that CSR activities also require strategies to minimize costs and maximize output. CSV derives from finding the needs in the value chain of the firm and in that of the receiving party. By bringing in the concept of the platform, this can further be applied to giving strategic implications to the studies of CSR.

The concept of platform and four criteria also suggest that CSV activities of firms should entail platform thinking; providing a portfolio of values to recipients. Particularly, underdeveloped regions have multiple critical weaknesses that need to be addressed at the same time. Firms that can best solve each of the problems should come together to build a portfolio of social activities.

Moreover, this study provides meaningful implications, particularly for cluster development planning. As Moon and Jung (2010) and Saxenian and Hsu (2001) stated, the concept of clusters entail cluster connections across regions, national borders and continents. IT clusters of Silicon Valley in the US and Bangalore in India are good examples. The clusters should also seek balancing out imbalances and fitness which can co-create mutual value in cluster networks.

## **CONCLUSION**

This paper explores factors that can sustain the competitiveness of the investing firm and the host country from the evolutionary and ecosystemic perspective. This paper contributes by bridging the gap between the FDI and cluster studies through an independent study - the platform perspective. This paper focuses on how firms can find ecological way to evolve and solve any imbalances that occur between the firm and the host country. Thus this paper suggests a shift in our perspective in various ways: from unilateral advantage of exploitation to mutual value creation; from specific-period to evolutionary perspective; and from one firm to platform perspective.

Moreover, the four factors presented in this paper—compatibility, complementarity, connectivity, commerciality—are carefully chosen from the platform studies in finding the fitness and balance over time. Compatibility allows firms to co-exist despite variances in the level of development between the investing firms and the host country. Complementarity

improves critical disadvantages of firms and the host country. Connectivity is to continuously manage the optimal level of network portfolio to source and generate new knowledge over time. Commerciality is to generate a greater *ex post* value to stakeholders. This paper gives implications for firms and institutions that these four factors will generate spiral effects to sustain the motivation to co-create mutual benefit. Moreover, the four criteria are applicable not only to the investing MNCs, but also to its relationships with other investing firms and institutions in the host country.

This study is meaningful in ways that this study was done based on an extensive field of studies thus at the same time gives meaningful implications to various fields such as CSV, ODA and cluster development. The study also gives operational strategic guidelines to both the practitioners, government officials and managers that seek creating sustainable and competitive values in foreign locations and with foreign firms.

## REFERENCES

- Augier, M. and D. J. Teece. 2009. Dynamic capabilities and the role of managers in business strategy and economic performance. *Organization Science* 20(2): 410-421.
- Baptista, R. and P. Swann. 1998. Do firms in clusters innovate more?. *Research Policy* 27: 525-540.
- Bell, G.G. 2005. Clusters, networks, and firm innovativeness. *Strategic Management Journal* 26: 287-295.
- Blomstrom, M., S. Globerman and A. Kokko. 1999. The determinants of host country spillovers from foreign direct investment: Review and synthesis of the literature. *The European Institute of Japanese Studies*. Working Paper No. 79.
- Borensztein, E., J. De Gregorio and J. W. Lee. 1998. How does foreign direct investment affect economic growth?. *Journal of International Economics* 45: 115-135.
- Bowman, D. 2005. Platforming trends in industry. *2005 Innovations in Product Development Conference, Product Families and Platforms: From Strategic Innovation to Implementation*. Cambridge, MA.
- Buckley, P and M. Casson. 1976. *The future of multinational enterprise*. London: Macmillan.
- Burt, R.S. 1987. Social contagion and innovation: Cohesion versus structural equivalence. *American Journal of Sociology* 92: 79-141.
- Cohen, W. M. and D. A. Levinthal. 1989. Innovation and learning: The two faces of R&D. *Economic Journal* 99(397): 569-596.

- Cohen, W. M. and D. A. Levinthal. 1990. Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly* 35: 128-152.
- Collis, D. J. and C. A. Montgomery. 1998. Creating corporate advantage. *Harvard Business Review* 76(3): 70-83.
- Dagnino, G. B. and G. Padula. 2002. Coopetitive strategy: A new kind of interfirm dynamics for value creation. Presented at *the European Academy of Management Second Annual Conference on Innovative Research in Management*. Stockholm, 9-11 May 2002.
- Delago, M., M. E. Porter and S. Stern. 2012. Clusters, convergence, and economic performance. *The National Bureau of Economic Research (NBER)*. Working Paper No. 18250.
- Dosi, G. 1988. Sources, procedures, and microeconomic effects of innovation. *Journal of Economic Literature* 26: 1120-1171.
- Dunning, J. H. 1988. The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies* 19(1): 1-32.
- Dunning, J. H. 1998. Location and the multinational enterprise: A neglected factor. *Journal of International Business Studies* 29(1): 45-66.
- Dunning, J. H. 2001. The eclectic (OLI) paradigm of international production: Past, present and future. *International Journal of the Economics of Business* 8(2): 173-190.
- Dunning, J. H. and A. M. Rugman. 2001. In honor of Stephan H. Hymer: The first quarter century of the theory of foreign direct investment. *American Economic Review: Papers and Proceedings* 75(2): 228-232.
- Fotopoulos, G. and H. Louri. 2004. Firm growth and FDI: Are multinationals stimulating local industrial development?. *Journal of Industry, Competition and Trade* 4(3): 163-189.
- Gawer, A. and M. Cusumano. 2012. Industry platforms and ecosystem innovation, *DRUID Society 2012*, Copenhagen, 19-21 June 2012.
- Gawer, A. and R. Henderson. 2007. Platform owner entry and innovation in complementary markets: Evidence from Intel. *Journal of Economics and Management Strategy* 16(1): 1-34.
- Granovetter, M. S. 1973. The strength of weak ties. *American Journal of Sociology* 78(6): 1360-1380.
- Harrison, B., M. R. Kelley and J. Grant. 1996. Innovative firm behavior and local milieu: Exploring the intersection of agglomeration, firm effects, and technological change. *Economic Geography* 72(3): 2323-258.

- Hymer, S. H. 1976. *The international operations of national firms: A study of direct foreign investment*. Cambridge: MIT Press.
- Klepper, S. 1997. Industry life cycles. *Industrial and Corporate Change* 6: 145-181.
- Klepper, S. 2007. The evolution of geographic structures in new industries. In K. Frenken, editor, *Applied evolutionary economics and economic geography*. Cheltenham: Edward Elgar.
- Kokko, A. 1994. Technology, market characteristics and spillovers. *Journal of Development Economics* 43: 279-293.
- Kogut, B. and U. Zander. 1992. Knowledge of the firm, combinative capabilities, the replication of technology. *Organization Science* 3: 383-397.
- Krugman, P. 1991. Increasing returns and economic geography. *Journal of Political Economy* 99(3): 483-499.
- Lorenzen, M. 2005. Why do clusters change?. *European Urban and Regional Studies* 12: 203-208.
- March, J. G. 1991. Exploration and exploitation in organizational learning. *Organization Science* 2(1): 71-87.
- Matutes, C. and P. Regibeau. 1988. Mix and match: Product compatibility without network externalities. *The RAND Journal of Economics* 19(2): 221-234.
- Markusen, A. 1996. Sticky places and slippery space: A typology of industrial districts. *Economic Geography* 72(3): 293-313.
- Meyer, M. H. and A. P. Lehnerd. 1997. *The power of product platforms: Building value and cost leadership*. New York: The Free Press.
- Milgrom, P., Y. Qian, and J. Roberts. 1991. Complementarities, momentum, and the evolution of modern manufacturing. *American Economic Review* 81(2): 84-88.
- Moon, H. C. 2004. The evolution of theories of foreign direct investment. *Korean Journal of Business Historians* 19(1): 105-126.
- Moon, H. C. and T. Roehl. 2001. Unconventional foreign direct investment and the imbalance theory. *International Business Review* 10(2): 197-215.
- Moon, H. C. and J. S. Jung. 2010. Northeast Asian cluster through business and cultural cooperation. *Journal of Korea Trade* 14(2): 29-53.
- Moosa, I. A. 2002. *Foreign Direct Investment: Theory, evidence and practice*. New York: Palgrave Macmillan.
- Moran, T. H. 1999. *Foreign direct investment and development*. Washington D.C.: Institute for International Economics.

- Organizational for Economic Co-operation and Development (OECD). 2012. Korea. Development Assistance Committee (DAC) peer review 2012.
- Penrose, E. T. 1959. *The theory of the growth of the firm*. New York: John Wiley.
- Porter, M. E. 1990. *The competitive advantage of nations*. New York: Free Press.
- Porter, M. E. 1996. What is strategy?. *Harvard Business Review* 74(6): 61-78.
- Porter, M. E. 1998. Clusters and the new economics of competition. *Harvard Business Review* 76(6): 77-90.
- Porter, M. E. and M. Kramer. 2011. The big idea: Creating shared value. *Harvard Business Review* 89(1/2): 62-77.
- Rogers, E. M. 1995. *Diffusion of innovation* (4<sup>th</sup> Edition). New York: Free Press.
- Rugman, A. M. 2010. Reconciling internationalization theory and the eclectic paradigm. *Multinational Business Review* 18(1): 1-12.
- Saxenian, A. 1990. Regional networks and the resurgence of Silicon Valley. *California Management Review* 33: 89-112.
- Saxenian, A. 1994. *Regional advantage, culture and competition in Silicon Valle and Route 128*. Cambridge: Harvard University Press.
- Saxenian A. and J. Y. Hsu. 2001. The Silicon Valley-Hsinchu connection: Technical communities and industrial upgrading. *Industrial and Corporate Change* 10: 893-920.
- Scott, A. J. 1992. The role of large producers in industrial districts: A case study of high technology systems houses in Southern California. *Regional Studies* 26(3): 265-275.
- Swann, G. P., M. J. Prevezer and D. Stout. 1998. *The dynamics of industrial clustering: International comparisons in computing and biotechnology*. Oxford: Oxford University Press.
- Teece, D. J., G. Pisano and A. Schuen. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal* 18(7): 509-533.
- Verbeke, A. 2009. *International business strategy*. Cambridge: Cambridge University Press.
- Wheelwright, S. C. and K. B. Clark. 1992. *Revolutionizing product development—Quantum leaps in speed, efficiency and quality*. New York: The Free Press.
- Yang, Z. and R. T. Peterson. 2004. Customer perceived value, satisfaction, and loyalty: The role of switching costs. *Psychology and Marketing* 21(10): 799-822.
- Yim, S.H. 2009. Gaining competitiveness through platform strategy: Four critical success factors. *Unpublished Master's thesis, Seoul National University*.  
<http://library.snu.ac.kr/search/DetailView.ax?sid=6&cid=3751368>.