

# Foreign Direct Investment and Development of Local Firms: Highlighting the Need to Build Absorptive Capacity

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*Many developing countries are investing a lot to attract FDI. As a consequence of the linkages between FDI and the local firms and the resultant technological spillovers, local firms are expected to experience growth. However, there is evidence to suggest that FDI does not necessarily lead to the growth of local firms. Rather, local firms may be competed out of business. It is therefore imperative that local firms build absorptive capacity to benefit from FDI. A minimum threshold of absorptive capacity is necessary for FDI to contribute to the growth of local firms. In this context absorptive capacity is the technological gap between the domestic and foreign firm. Evidence suggests that the wide technological gap between local and foreign firms is impediment to the technological transfer between them.*

**Key words:** FDI, Absorptive capacity, Private sector development

## Introduction

Foreign Direct Investment (FDI) is largely thought to lead to a host country's development through the enhancement of the productivity of local firms and industries. As such many developing countries are investing a lot to attract FDI. Policy makers in developing countries are competing fiercely for FDI. They hope that FDI will provide a major impetus for economic development through the better performance of indigenous firms (Paus and Gallagher, 2006). Most developing country governments have removed restrictions on FDI inflows (Lall & Narula 2004). International donors and development agencies focus more on promoting private rather than public capital flows as catalysts of long-term development.

FDI is widely thought to bring with it, into the host country, a bundle of productive assets, including long-term foreign capital, entrepreneurship, technology, skills, innovative capacity, and managerial, organizational and export marketing know-how. FDI spurs long-run growth through such variables as research and development (R&D) and human capital. MNCs can speed up the development of new intermediate product varieties, raise product quality, facilitate international collaboration on R&D, and introduce new forms of human capital (Ikiara, 2003). Multinationals are seen as agents that increase competition in the host economy, transfer modern technology, and help achieve a more efficient allocation of resources. The greatest

contribution of FDI to economic growth occurs through technology transfer (which includes managerial skill, know-how, production techniques, machinery, information, and other intangible forms of capital). Developing countries, lack the capacity to undertake research and development activities and to generate technological innovations; therefore they rely on foreign source of technological innovations in their growth process (Mucchielli & Jabbour, 2004).

There is emerging evidence however that the flow of FDI doesn't necessarily lead to the development of local firms. Calagni (2003) maintains that empirical evidence from the developed and developing world demonstrates that the positive spillover effects from FDI do not necessarily occur in practice. Moran et al (2005), maintain that studies of the linkage between Foreign Direct Investment and development have produced confusing and sometimes contradictory results. Some have shown that FDI spurs economic growth in the host countries; others show no such effect. Smallbone (2007) argues that whilst there are 'a priori' arguments to support the potential role of FDI-SME linkages between enterprises as a development strategy in transition and developing countries, and some positive case examples, empirical evidence suggests that the potential benefits do not always materialize.

This brings into question the wisdom in giving the too many concessions by developing countries to attract FDI. Smallbone (2007) says that financial incentives to FDI, whether in the form of grants or tax concessions, can represent a considerable burden to developing countries and are unlikely to represent a sustainable strategy for longer-term development. Ikiara (2003) holds that it is not clear whether FDI coming to Africa generates the expected benefits. The dilemma facing the continent therefore is whether to use the scarce resources available for poverty reduction as meagre as they are, or to use them for attracting FDI, whose contribution to poverty reduction is not certain.

Among other things, there is need to develop absorptive capacity to enable local firms to have linkages and spillover effects with multination firms. In 1989 Cohen and Levinthal defined the absorptive capacity of a firm as its ability to recognize the value of new, external information, assimilate it and apply it for commercial ends. The seminal works of Cohen and Levinthal (1990) offered the highly influential definition of absorptive capacity, as a firm's ability to: 'identify, assimilate and exploit knowledge from the environment'. Mowery and Oxley (1995) define absorptive capacity as a broad set of skills needed to deal with the tacit component of transferred knowledge and the need to modify this imported knowledge. Lall and Narula (2004), hold that absorptive capacity is significant for development because it allows

domestic actors to capture knowledge that exists elsewhere. Where absorptive capacity is lacking in domestic firms, they may, instead of reaping technological benefits from FDI, be 'crowded out'. Borensztein et al (1998) hold that at country level, a minimum threshold of absorptive capacity is necessary for FDI to contribute to higher productivity growth.

### **Linkages and Spillovers between MNCS and Indigenous Firms**

#### **Backward Linkages**

FDI spillovers may result from MNCs having backward linkages with local firms. The backward linkage is the relation between domestic and foreign firms when the domestic firm operates as the input supplier of the sector that multinational operates in (Sayek and Koymen, 2009). Backward linkages with suppliers are the extent to which components, materials and services are sourced from within the host economy, since this can create new market opportunities for local firms (Dunning, 1992). The evidence of positive spillovers is strongest and most consistent in the case of backward linkages, with local suppliers in developing countries (Smallbone 2007).

MNEs can benefit the host economy through relations with local suppliers of intermediate inputs in their production process. As a result, MNE affiliates may transfer technologies to local firms in their value chain; i.e. either to those firms who supply them with intermediate goods or to local buyers in the host country (Narula and Portelli 2004). The most important vertical spillovers happen through the supply chain linkage. Potential indigenous input suppliers for TNCs become actual input suppliers, as they learn to meet international quality standards, and on-time delivery and technological efficiencies that allow for competitive pricing (Paus and Gallagher, 2006). Backward linkages from FDI are beneficial to local suppliers in forms of increased output and employment, improved production efficiency, technological, managerial capabilities and market diversification (Liu and Lin, 2004).

Backward linkages create technology spillovers through several mechanisms (Hoi Le and Pomfret 2008). First, MNEs may transfer technology directly to their local suppliers by training or technical assistance in order to increase the quality of supplier products. Because multinationals demand higher-quality inputs, they will try to improve the efficiency of their intermediate input suppliers by direct knowledge transfer (Sayek and Koymen, 2009). They may help indigenous producers to upgrade their technological capabilities, directly through assistance with technology acquisition and sharing of relevant production knowledge (Paus and Gallagher, 2006)

Secondly, higher requirements for product quality and on-time delivery set by MNEs may provide incentives to local suppliers to improve their production process or technology. As multinationals demand higher-quality inputs to be able to sell their products to foreign affiliates, local suppliers will have an incentive to improve their production techniques. Entrance of multinationals into the final goods sector may create benefits of scale for domestic suppliers (Sayek and Koymen, 2009). Paus and Gallagher, (2006) maintain that TNC affiliates may help indigenous producers to upgrade their technological capabilities, indirectly through the expectation of high quality standards and feedback on technical specifications of suppliers' output. In the best-case scenario, the newly acquired competitiveness will form the basis for supplier-oriented upgrade

#### **Forward Linkages and Spillovers**

The spillover benefits may be realized through forward linkages when a multinational operates at the upstream sector of the domestic firm; in other words, the multinational operates as the input supplier of the domestic firm (Sayek and Koymen, 2009). Forward Linkages with customers include marketing outlets, which may be outsourced. Examples include petrol stations and restaurant chains; and linkages with industrial buyers, through, for example, value-added after-sales services (Dunning, 1992). Domestic firms who gain access to higher-quality intermediate inputs and to the complementary services provided for these inputs may present higher levels of productivity (Sayek and Koymen, 2009).

Forward Linkages may induce technology spillovers through various channels. First, domestic firms may benefit from supplies of intermediate goods and machinery from MNEs that provide better quality products and lower costs. Secondly, as marketing outlets for MNEs, domestic firms may receive support in the form of training in sales techniques and supply of sales equipment, therefore generating more technology externalities. Thirdly, FDI in infrastructure and business services directly improves the productivity of its customers if these services are introduced or improved (Hoi Le and Pomfret, 2008).

#### **Horizontal Linkages and Spillovers**

Horizontal spillovers take place when domestic firms benefit from foreign affiliates which are operating within the domestic firm's sector (Sayek and Koymen 2009). Horizontal spillovers refer to the technology leakage from multinationals to local firms in the same industry (Liu and Lin, 2004). There are three types of spillover effects, which can

potentially work at the horizontal level: the human capital effect, the demonstration effect and the competition effect. The human capital effect occurs when TNCs train workers and provide them with new knowledge and skills, which workers take with them if they work for an indigenous company or establish their own business. Labour turnover may disseminate technology from MNEs to other firms as workers trained or employed by MNEs move to domestic firms or start their own businesses. Workers employed by a MNE affiliate are most likely to receive and acquire knowledge of superior technology and management practices. Through the switching of employers or even the start up of new business enterprises by of MNE trained personnel, the knowledge embodied in human capital can spill over to other host country-based firms ((Paus and Gallagher, 2006; Narula and Portelli , 2004; Hoi Le and Pomfret, 2008).

The demonstration effect occurs when local firms learn from foreign ones simply by observing and imitating product innovations or novel forms of organization adapted to local conditions (Hoi Le and Pomfret, 2008). The horizontal spillovers may be realized through imitating the foreign technologies, techniques and managerial skills (Sayek and Koymen 2009).

The competition effect occurs as a result of competition generated by the presence of MNEs. Existence of a foreign affiliate in the sector may create a competition effect and domestic firms may try to catch up with multinationals through research and development activities and reallocation of resources (Sayek and Koymen 2009; Blomstrom and Kokko, 1998). If MNEs have advantages over domestic firms in technology, then greater competitive pressure may induce domestic firms to introduce new products or new technology to defend their market share, and to adopt new management method to increase productivity (Hoi Le and Pomfret, 2008).

### **Need to Build Absorptive Capacity**

As already indicated, FDI doesn't necessarily lead to the development of local firms. In other words the inward flow of FDI doesn't necessary lead to spillover effects between MNCs and local firms. The occurrence of spillover effects between MNCs and local firms is based on the assumption that foreign firms are more technologically advanced than local ones. In fact, the theory of multinational firms supposes that multinationals rely on intangible assets such as technological advantages to be able to compete with local firms who are more familiar with the host country environment. The hypothesis of the technological

superiority of multinationals is the basis that drives the analysis of the technology transfer through FDI (Mucchielli & Jabbour 2004; Markusen and Venables 1999; Rodriguez-Clare 1995; and Saggi 2002).

However the entry of foreign firms will increase the competition faced by local firms and forces some of them to exit the market or to cut back on their output. Thus the net effect of the entry of multinationals on the host economy depends on the technological gap (absorptive capacity) between the multinationals and the local firms. Absorptive capacity refers to the ability of an organization or region to identify, assimilate and exploit knowledge from the environment (Fu 2007, Cohen and Levinthal, 1989). Absorptive capacity is usually proxied by the technology gap between the foreign and the domestic firms (Fu, 2007). Lall and Narula (2004), hold that absorptive capacity is significant for development because it allows domestic actors to capture knowledge that exists elsewhere. Where absorptive capacity is lacking in domestic firms, they may, instead of reaping technological benefits from FDI, be 'crowded out'. They quote Borensztein et al (1998) who show that, at country level, a minimum threshold of absorptive capacity is necessary for FDI to contribute to higher productivity growth.

In the presence of a large technological gap, the competition effect of the entry of foreign firms will be very important and the linkage effect will be too small to compensate the exit of local firms (the intermediate requirement of the foreign firms is too small relatively to that of the local firms) (Mucchielli & Jabbour, 2004). Studies which consider technology gap between domestic and foreign firms as an absorptive capacity, propose that in the case of large technology gaps an increase in foreign presence may hurt domestic firms through the competition effect (Sayek and Koymen 2009). Glass and Saggi (1998) hold that the larger the gap, the less likely are host country firms to have the human capital and technological know-how to benefit from the technology transferred by the multinationals and, hence, the lower is the potential for spillover benefits.

Kokko et al. (1996) hypothesize that domestic firms can only benefit if the technology gap between the multinational and the domestic firm is not too wide so that domestic firms can absorb the knowledge available from the multinational. Thus domestic firms using very backward production technology and low skilled workers may be unable to learn from multinationals. Indigenous input producers may not be in a position to respond to latent demand from MNCs, because the technology gap may be too big for them to meet TNC demand in terms of cost, product quality, or on-time delivery (Paus and Gallagher, 2006) Kokko et al. (2001) highlight the importance of past experience in

industrialization as a precondition for international transfer of technology and the absence of this experience is concomitant to lack of absorptive capacity by the local sector. Thus the building of absorptive capacity is a necessary prerequisite for local firms to benefit from FDI.

At a country or regional level, to build the absorptive capacity of local firms, the host country needs to develop policies that will help to build local capabilities in order to benefit from FDI spillovers. FDI cannot drive industrial growth without local capabilities (Lall & Narula 2004). Policy needs of capability building exist to provide 'space' for enterprises in the infant industry to master new technologies without incurring enormous and unpredictable losses, and to ensure that skill, capital, technology and infrastructure markets meet their needs. There is also a need to coordinate learning across enterprises and activities (Lall & Narula 2004). Policy makers should work with inward investing enterprises, donor organizations and other appropriate intermediaries to develop capacity building programmes for local firms, in order to facilitate the development of backward linkages and other positive spillover effects. Such programmes will need to pay attention to quality management, training and management development programmes. It is important to recognize that a number of governments have adopted special policies and programmes to promote buyer-supplier relationships between MNEs and domestic SMEs, not all of which have been successful. Such linkages cannot be artificially created, since they must be based on a business case and will not develop on a sustainable basis unless the inward investor judges local sourcing to be a viable strategy. The role of government, in this regard, is to facilitate the actions of other actors, namely FDI enterprises, local SMEs, business support intermediaries and the various providers of technology, education, training and financial services (Smallborn 2007).

Human resource practices and organizational routines can play an important role in enhancing absorptive capacity at firm level. Giuliani and Bell (2005) claim that at least when absorptive capacity is analyzed at the firm level, there is a convergence in the literature on the importance of human capital for the purpose of a firm's capability to access external sources of knowledge. Overall, in the literature, absorptive capacity is often described in terms of the knowledge base of the firm. This is usually identified in terms of human resources (skills, training, experience, etc.) Minbaeva et al, maintain that to enhance absorptive capacity at firm level, there is need to invest in human resource management practices, such as employee training or performance-bound incentives, that support the ability and motivation of the employees to absorb knowledge, and by creating an environment

that enhances frequent communication and knowledge sharing (Minbaeva et al, 2003; Minbaeva, 2005). Rothwell and Dodgson (1991) found that (small) firms need well-educated technicians, engineers and technological specialists to access knowledge from outside their boundaries. For Kamoche and Mueller, (1998) managing human resources to achieve better knowledge-related outcomes means “retaining personnel, building their expertise into the organizational routines through learning processes, and establishing mechanisms for the distribution of benefits arising from the utilization of this expertise”.

Organizational Routines can be seen as essential elements in inter-organizational knowledge sharing and learning. Routines entail standard procedures, rules, and patterns of behaviour which facilitate more effective organizational decision-making processes (Parmigiani and Howard-Grenville, 2011). Firms’ ability to learn will depend on the internal characteristics of the company and on its organizational learning capabilities (Teece et al., 1997; Zahra and George, 2002). Absorptive capacity can be looked at as a set of organizational routines and processes, by which firms acquire, assimilate, transform, and exploit knowledge (Zahra and George, 2002). Nelson and Winter (1982) argued that routines are the aggregation of the individual behaviour of the employees or collective behaviour of the organization. Organizational routines are suggested to be basic components of organizational behaviour and repositories of organizational capabilities. Williamson (1967) argues that information gets lost or at least distorted if it is transferred through different layers of hierarchy. Thus, direct contact among employees from different departments, units and the like should lead to a more efficient transfer of knowledge and a subsequently higher absorptive capacity. As the absorptive capacity of an organization or organizational unit consists of the absorptive capacities of its individual members, the absorptive capacity can be developed by enhancing the absorptive capacities of each individual employee.

Eisenhardt and Martin (2000) argued cross-functional R&D teams, new product development routines, quality control routines, and technology and knowledge transfer routines, and certain performance measurement systems as micro foundation of firms’ dynamic capabilities to deal with technological change and market dynamism. Similarly, Peng et al. (2008) suggested that firm’s innovative performance is dependent on routines involving the search for new technology, process and equipment development, and cross-functional product development.



For local firms to benefit from foreign direct investment there is need to have linkages with multinational companies. Spillover effects from multinational companies to local firms will occur through these linkages local firms need to have absorptive capacity. Local firms must introduce Human Resource Practices and Organizational Routines that would enhance absorptive capacity.

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