Competing for High-Quality FDI: Implications for Investment Promotion Agencies

José Guimón[1], Sergey Filippov[2]
1 Universidad Autónoma de Madrid, Madrid, Spain
2 Delft University of Technology, Delft, Netherlands
(E-mail: jose.guimon@uam.es, s.filippov@tudelft.nl)

Abstract Most investment promotion agencies around the world are now placing a higher emphasis on attracting high quality FDI, including R&D centers and headquarters functions as well as high technology sectors. The authors argue that it requires a different approach than policies focused on the quantity of FDI inflows, leading to changes in the policy mix and in the approach to performance measurement. Targeting quality entails a shift from a mindset that prioritizes attraction of greenfield investments towards one where the focus is on subsidiary development. The authors focus on the management challenges that investment promotion agencies face when targeting quality.
Key words FDI; Investment promotion; Subsidiary development; Intellectual capital

1 Introduction

Beyond its benefits for host countries as a source of external finance or in terms of direct employment generation, foreign direct investment (FDI) is increasingly recognized for its contribution to national and regional competitiveness (Cantwell and Piscitello, 2000; Hausmann and Fernández-Arias, 2000; Narula and Zanfei, 2004). The argument is that FDI enables host countries to better access foreign knowledge and markets, as well as to integrate more advantageously in the growing international division of labor resulting from the expansion and fragmentation of corporate value chains. Along these lines, FDI-assisted development is characterized by Narula and Bellak (2009) as "the most efficient option", underscoring the importance of international linkages for upgrading in global value chains.

Multinational enterprises (MNEs) are progressively fragmenting across regions and countries not only their production and sales functions but also their R&D and innovative activities (Jaruzelski and Dehoff, 2008). International restructuring in corporate networks has accelerated and broadened in scope through rapid technological change, internationalization of corporate R&D, shortening of product life cycles, intra-corporate competition, increasing knowledge flows within multinational companies, decentralization, and other shifts in international business strategies.

These international business trends call for a more proactive role of policies in linking regions to globalization processes. As argued by Lall (2004), despite the neoliberal claim for a passive type of policy intervention (focussing on liberalization, privatization and deregulation), the case for a more proactive kind of industrial policies has actually become stronger given the fast pace of globalization and technological change. According to Velde (2001) pro-active and strategic FDI policy interventions affecting the dynamic pattern of the countries comparative advantages are required in order to avoid the risk of in a low-skill, low-income trap. The policy aim would be to sustain or transform host countries into specialized nodes within global innovation and production networks, in areas that are convergent with the country's development aspirations.

It is along these lines that we argue that the focus of FDI policies is shifting from quantity to quality. The promotion of high quality FDI is consistent with the growing interest in innovation policy among developed and developing countries alike, which in turn reflects the wider recognition of innovation as the main driver of business productivity, regional competitiveness and long term economic growth (Verspagen, 2005; Fagerberg, 1994). Indeed, FDI is often seen as an engine for 'upgrading through innovation' (Ernst, 2008; Mytelka and Barclay, 2004; Santangelo, 2005).

But attracting high quality FDI is not an easy task. Competition for high quality FDI is increasing as a growing number of countries have adopted liberal policies towards FDI and embraced development strategies based on the accumulation of scientific and technological knowledge. This also applies to developing countries: although traditionally they have been responsible for the lowest added-value activities in global value chains, some have recently demonstrated they can also compete in knowledge-intensive activities such as software development, biotechnology or industrial R&D (Bruche, 2009; Chaminade and Vang, 2008; Ernst, 2008). However, many peripheral economies face more

difficulties as they lack the absorptive capacity, large market size and specialized clusters that MNEs are looking for when deciding where to locate their higher value adding activities.

We focus on investment promotion agencies (IPA) and, in particular, on the shifts in their strategies and in the portfolio of policy instruments and services that they deploy. Establishing an IPA has become the most popular approach in the strategic investment promotion policies of nations and regions worldwide, after a substantial growth during the 1990s (OECD, 2006). Indeed, the World Association of Investment Promotion Agencies (WAIPA) had almost 200 members in 2009, compared to only a handful three decades ago. The general purpose of these government agencies is to increase the international visibility of the country (or region) through marketing campaigns and to facilitate the investment process by offering tailored services to foreign corporations, both before and after the initial investment. Institutionally, IPAs are usually positioned within the ministries of trade, economy or industry, and often have offices abroad and strong links with ministries of foreign affairs to facilitate investment promotion overseas. Several international organizations have published guidelines to assist IPAs in designing successful FDI promotion policies based on international best practices, including the OECD Policy Framework for Investment, the Investment Promotion Toolkit of the World Bank/MIGA, or the Guidelines for Investment Promotion Agencies of UNIDO. Typical activities of IPAs include image building, investment generation, expanding linkages between foreign investors and domestic suppliers, information dissemination and investment facilitation (Wells and Wint, 2000). But the mandates of IPAs and their mix of policy instruments vary widely across countries. The positive impact of an IPA can also be indirect, through its policy advocacy role. Indeed, IPAs are often the main government interlocutor with foreign investors, and therefore they are in a capacity to guide policy reform programs towards the dynamic needs of MNEs.

In this paper we hypothesize that competing for high quality FDI entails readjustments of existing national policies and, in particular, of the strategies of IPAs and the scope of their mandates. In Section 2 we develop a conceptual model to analyze FDI policies based on the differentiation between quantity and quality, on the one hand, and between FDI attraction and subsidiary development, on the other hand. In Section 3 we suggest the need for a coordinated approach to FDI policies focused on subsidiary development and linkage facilitation in order to efficiently compete for high quality FDI. Against this background, from a strategic management perspective, in Section 4 we explore how the intellectual capital of IPAs should evolve in order to be efficient in the transition from targeting quantity to quality. This study is based on a review of the literature and on an analysis of a set of selected examples that help illustrate different policies. It also builds upon the authors' recent research on FDI and innovation policies, including interviews with the managers of IPAs from different countries (Filippov, 2008; Guimón, 2009).

2 A Conceptual Framework to Characterize FDI Policies

Competition for FDI has become a universal phenomenon (Harding and Javorcikr, 2007). Previously closed economies open up and vie for foreign investments; and advanced market economies intensify their promotion campaigns. The former skeptical attitude towards FDI, prevalent in most countries up until the 1980s and manifested in investment restrictions and conditionalities, has shifted towards a more investment-friendly view, leading to intensified territorial competition for mobile investment at national and sub-national levels. Since the 1980s, UNCTAD (2001) distinguishes three generations of FDI promotion policies. The first refers to the situation where countries liberalize their FDI regimes and adopt market-friendly, open-doors policies. The second policy generation implies active promotion of FDI: governments become engaged in a race for inward FDI, employing a variety of instruments including advertisement, tax incentives, direct subsidies, etc. The third generation of FDI promotion policy is based on a different approach. Its aim is to target the most desirable FDI to meet specific development objectives (Enderwick, 2005). This implies a shift in the mandate of IPAs from quantity (more FDI) to quality (more knowledge-intensive activities). In the rest of this section we elaborate further on the evolution of FDI promotion policies from a quantitative approach that focuses on greenfield FDI attraction towards a qualitative approach that emphasizes subsidiary development. We argue that this shift brings along a new policy mix for FDI promotion and transforms the scope of performance measurement and evaluation.

The quantitative approach stems from a traditional view of maximization of inward investment flows. It places an emphasis on capital accumulation and new jobs creation. Neoclassical economics viewed the benefits of FDI primarily as a stable source of foreign financing within the balance of

payments. FDI Policy prescriptions under the Washington Consensus, which encapsulates the conventional wisdom of the Bretton Woods institutions, focused on deregulation, liberalization of capital flows and privatization of state-owned enterprises (Williamson, 2005). This was a key component of development policies in Asia and Latin America (Evans, 1979; Amsden, 2001; Lall, 1992, 1995) as well as in the transition of Central and Eastern Europe during the 1990s (Radosevic and Sadowski, 2004). Presently, this strategy is widely used to combat unemployment. For example, Free Economic Zones are established in Poland in backward regions with high unemployment, mostly as a result of closure of large-scale state-owned factories that failed to operate under the market economy. Foreign companies locating in these free economic zones receive full tax exemption and special investment incentives are provided if they create new jobs. Under this approach to FDI policies, success is a measure of the amount of FDI inflows and job generation. This model is still valid in many developing countries facing macroeconomic constraints and high unemployment levels, and has become increasingly relevant also in developed countries within the context of the global economic recession that started in 2007.

Yet a new approach, already prevalent in most developed economies, focuses on the quality rather than the quantity of international investment. The qualitative approach to FDI policy targets higher value-adding operations, including R&D, business process outsourcing, regional headquarters and FDI in high-growth and innovative sectors such as ICT, biotechnology, nanotechnology or creative industries. Although they may be not capital- and/or labor-intensive, it is assumed they are more knowledge-intensive.

Simultaneously, and partly as a result of the shift from quantity to quality, FDI promotion policies are evolving from a focus on attracting greenfield FDI towards increasing efforts to support the development of already existing foreign subsidiaries. This reflects that the evolution of MNE subsidiaries needs to be interpreted not as a discrete, single-period flow, but as a multi-period building up of FDI stock through deepening and spreading of value-adding activities, not all of which occur as a consequence of new flows of foreign capital (Narula and Dunning 2010). This reflects widespread criticism to the Washington Consensus on the grounds of insufficient attention to the evolutionary nature of economic progress and institutional reform.

Table 1 The FDI Policy Matrix

	Quantitative Approach	Qualitative Approach
FDI attraction	Increase of FDI inflows as a response to short-term shortage of capital (balance of payments) and/or jobs (unemployment). Reliance on foreign investment in the process of transition, restructuring and industrialisation.	Attraction of FDI which can result in technological upgrading and knowledge spillovers. Selective targeting of specific business functions (BPO, R&D, etc.) and industrial sectors (nanotech, biotech, etc.).
Subsidiary development	Growth (but not evolution) of existing subsidiaries, i.e. quantitative extension of existing operations, creation of new jobs and reinvestment. The main objective is a higher role of foreign subsidiaries in manufacturing, employment and exports.	Upward evolution or functional upgrading of existing subsidiaries with the goal of enhancing their embeddedness in the host innovation system. Support to gaining new mandates that enhance subsidiary innovativeness. The objective is the higher integration of subsidiaries both within national innovation systems and within global innovation networks.

The combination of these two dimensions of FDI policy yields a 2×2 matrix with four different scenarios (Table 1). The upper-left quadrant presents a strategy of FDI attraction under the quantitative approach. As discussed above, the idea is long-established and straightforward – to attract as much FDI as possible and to generate new jobs. The second scenario, bottom left, consists in subsidiary development under the quantitative approach. It focuses on the quantitative extension of existing operations, involving the same operations and the same expertise in these operations. This would lead to higher amount of sales and exports, and hence higher amounts of tax income for the host government. It may also lead to higher employment, but not necessarily to industrial and technological upgrading. The third scenario, top right, is FDI attraction under the qualitative approach. It implies attraction of specific high value adding functions or specific sectors. This strategy has been adopted by advanced developed countries that fiercely compete for the best FDI and have identified target (or priority) sectors. Finally, the bottom right cell represents a strategy of subsidiary development under the qualitative approach. It

implies support to already established subsidiaries in their evolution and upgrading. This qualitative development is not equal to growth: the output and sales of a given subsidiary may remain the same or even be reduced as the subsidiary upgrades to higher value adding functions. The task of policy makers is more complex and implies a multitude of efforts to effectively embed the subsidiary in the national innovation system, as we shall discuss later.

In accordance with the goals and priorities of FDI policy, different indicators can be used to measure its success (see Table 2). Conventional thinking on FDI, under the quantitative approach, is in terms of the financial amounts and employment figures. The two most commonly used indicators are inward FDI flows (as percentage of gross fixed capital formation) and inward FDI stocks (as a percentage of gross domestic products). These statistics and readily available and published by various international organizations (the most authoritative publication is the World Investment Report by UNCTAD). The role of subsidiaries in a national economy can be measured in terms of their number, assets, employment, sales, value added, exports and imports. The indicators for the qualitative approach include the number of FDI projects in targeted high value adding functions and sectors, as well as the number of new jobs created by these investment projects for skilled workforce. Some investment promotion agencies realize the necessity to adjust the methodology to evaluate their work, and provide the aforementioned indicators. But developing this kind of indicators is a complex task. Even more difficult is assessing the capabilities of subsidiaries and the evolution of their competences. The evident problem is that there is no single methodology, and this qualitative assessment requires substantial expertise and financial resources, not available to many investment promotion agencies and national statistical offices.

Table 2 Indicators to Evaluate FDI Policy

	Quantitative Approach	Qualitative Approach
FDI attraction	- Inward FDI flows (as percentage of GFCF) - Number of FDI projects - Number of new jobs created	- Number of new FDI projects in R&D, BPO, headquarters, biotech, etc. - Number of new jobs created for skilled workforce, researchers, PhD holders, etc.
Subsidiary development	- Inward FDI stock (as percentage of GDP) - Number of subsidiaries - Assets of subsidiaries - Employment of subsidiaries - Wages and salaries of subsidiaries - Sales of subsidiaries - Value added of subsidiaries - Profits of subsidiaries - Exports/Imports of subsidiaries	- R&D expenditures of subsidiaries - Employment in R&D of subsidiaries - Industry-academic R&D collaborations - Royalty receipts and payments of subsidiaries - Patent applications filed by subsidiaries - Contribution of subsidiaries to domestic clusters

Finally, it needs to be emphasized that, despite our attempts to categorize, the borders between the different scenarios are quite often fuzzy in practice. In fact, a single country may strive to achieve both quantity and quality simultaneously. The challenge is that, as we discuss in the following section, the kind of policies required to promote quality are different from those aimed at increasing the quantity. This tradeoff between quantity and quality implies that governments need to better reflect on the most adequate policy mix given the country's circumstances. The allocation of resources to the different scenarios in Table 1 reflects the strategic objectives of an IPA and its choice of policy mix. But finding the right balance between quantity and quality in FDI policies is a complex task.

3 Targeting Quality and Subsidiary Development

The stronger focus on subsidiary development is grounded on the fact that the majority of new FDI is linked to re-investments of existing subsidiaries. Indeed, multinational companies normally undertake sequential investments, building higher value-adding activities in locations that have displayed competence in other activities such as manufacturing or sales and marketing (Hagedoorn and Narula, 2001), underpinning the importance of the duration of operations (Mudambi and Mudambi 2005). In fact, subsidiary evolution towards higher quality functions and industries can be interpreted along the lines of the classic Uppsala model of internationalization (Johanson and Vahlne, 1977). Internationalization is understood as a sequential process whereby the manufacturing or customer support subsidiaries already located in the country get progressively engaged in higher value adding functions after accumulating the necessary knowledge, and later may progressively increase the quality and scope of their activity. However, Narula and Dunning (2010) argue that the discussion on

MNE-assisted development continues to focus excessively on the attraction of new (initial) MNE affiliate establishments, ignoring the fact that any given subsidiary is in the process of its own internal dynamics which determines its evolution and potential to upgrade.

As specialization and segmentation of corporate functions deepens and MNEs rationalize their global value chains, the existing network of subsidiaries continuously competes against each other, and against 'hypothetical' new locations frequently in emerging markets. Thus from an evolutionary perspective upgrading towards higher value adding mandates is determined by the development of subsidiary-specific advantage (Rugman and Verbeke, 2001) and the FDI location decision depends on the response of the different subsidiaries to the needs of headquarters through proposals that exploit both subsidiary competencies and location advantages.

But, in addition, the geography of corporate value chains is determined by path dependencies which reflect past investment decisions. MNE investments in R&D have the tendency to be *sticky*, given the high costs and considerable time required to develop linkages with the innovation system, which means that MNEs tend to display a strong *inertia* towards maintaining their R&D activities in a few, carefully selected locations (Narula 2002).

Subsidiary development should have a twofold goal: retaining foreign subsidiaries and contributing to their upward evolution. Naturally, this calls for the embeddedness of the subsidiary into national economic and innovation systems. Subsidiary development is a broad policy area, which requires the identification and segmentation of foreign subsidiaries located in the host economy and the application of a set of comprehensive policy measures. Although IPAs possess precise information about their ongoing and completed investment projects, many of them do not have a clear picture of the main foreign subsidiaries already operating in the country, nor well defined systems to evaluate their dynamic contribution to the national economy. Hence, not even the object of the policy intervention is clear. Many governments realize the importance and relevance of the qualitative approach to FDI attraction. But they often lack adequate information and management systems to implement a new policy mix. As a result, very often the instruments used are still those of the quantitative approach.

However, policies for the qualitative development of subsidiaries are much more complex than traditional instruments such as advertisement and incentives which characterize the quantitative approach. The focus is on networking and providing tailored support services to already existing MNE subsidiaries. It also takes a more active role in fostering human resources, strengthening research capabilities, policies related to intellectual property, competition and innovation policy, etc. (Foray, 2006; UNCTAD, 2005). In a way, this is 'a race to the top' (competition in asset creation) as opposed to the classical 'race to the bottom' (competition based on lower costs and taxes) (Basinger and Hallerberg, 2004). Subsidiary development implies regular monitoring of subsidiaries with the goal of offering them complementary assistance, adapted to their level of development. This includes developing and maintaining a network of contacts between subsidiaries and domestic firms. This network should provide ideas for co-operation, mergers and expansions. Another important soft policy instrument is the attraction of new suppliers to subsidiaries and improving the efficiency of the existing supply chain.

Thus fostering linkages and creating clusters around MNE subsidiaries should be a critical part of FDI policies. But creating the kind of linkages and clusters around MNEs to foster technological upgrading is not automatic: it requires government intervention to enable the required institutional change and rapidly rising capabilities as wages rise and skill demands change (Lall, 2004). The key challenge consists in matching the industrial structure and comparative advantage of the region with the kinds of FDI that are being attracted. Policymakers need to place the endowments of the innovation system in a global context, identifying spaces for coupling domestic capabilities with the dynamics of global value chains.

Policies should be sensitive to the high heterogeneity in the kinds of MNEs, their subsidiaries, and the potential development effects they might have. Different kinds of subsidiaries will provide different kinds of potential linkage and spillover effects (Cantwell and Mudambi, 2000, Marin and Bell, 2006, Jindra et al., 2009). Given the heterogeneity of MNE activity, it makes sense that policies are fine-tuned to specific industries and clusters in particular countries rather than a general, one-size-fits-all approach. What is common, however, is that IPAs should focus on assisting the existing stock of foreign-owned companies in their efforts to attract higher quality mandates (and retain existing ones). A local subsidiary may compete with a subsidiary based in other countries for specific corporate mandates, projects or functions. A host country government may provide support to such efforts. For example, some scholars have proposed the use of public sector sponsored innovation-training programs for subsidiary teams and specific public support in preparing project proposals to headquarters (Young et al.,

1994). Narula and Dunning (2010) summarize the efforts directed to subsidiary development as attraction and embedding MNE activity, with emphasis on linkage creation and on upgrading the quality of FDI towards higher value-adding activities. They also emphasize that MNE activity needs to be evaluated through the prism of externalities that are generated and whether and how domestic actors can internalize them. IPAs should focus their limited resources on those foreign subsidiaries which are more likely to upgrade in corporate value chains and which are more likely to create domestic linkages.

The existing literature finds a positive relationship between investment promotion and success in attracting FDI (Harding and Javorcikr, 2007), but clearly the scope of activities that an agency undertakes influences its performance (Morisset, 2003). In particular, IPAs whose activity is limited to provision of information on investment possibilities are unlikely to achieve success within the framework of qualitative subsidiary development. An increasing number of IPAs offer so-called aftercare services (UNCTAD, 2007), i.e. post-investment services aimed at successful running of realised investment project. Along these lines, Brown and Raines (2000) speak of a shift in FDI policy since the 1990s, from strategies to attract investment towards those designed to securing additional investments from existing investors and deepening their impact on the local economy. However, most IPAs still tend to focus most of their resources on the attraction of FDI through pre-investment services, while very little is invested in aftercare (Costa and Filippov, 2008; Narula and Dunning, 2010).

A possible explanation of this paradox is that government inward investment policy is subject to competing pressures and long-term as well as short-term considerations. Velde (2001) suggests that FDI policies focussing on quality are expected to create less employment and more inequality than those focussing on quantity, although quality FDI better contributes to human capital formation and to technological upgrading (Velde, 2001). Mudambi and Mudambi (2005) show that policies aimed at maximizing knowledge flows do not contribute to reducing regional disparities, since knowledge-intensive subsidiaries will gravitate towards the most technologically advanced regions. Moreover, their study finds that subsidiary operations with high knowledge flows generate lower employment levels, suggesting some extent of quality/quantity tradeoff. Indeed, the kinds of policies appropriate for maximizing the quantity of FDI are not the same as those required to raise its quality.

From a long-term perspective, the focus remains on knowledge-intensive MNE subsidiaries that generate larger knowledge inflows and linkages. However, in the short term, political cycle considerations often require to emphasize employment generation, particularly in relatively backward areas of a country. Indeed, since FDI policy is also subject to short-term political pressures, the need for more obvious and easily measurable local benefits, such as headcount employment, often drives policy making and evaluation. This argument is critical in the current times of global economic crisis when unemployment and decreasing capital accumulation return to the top of the policy agenda, while innovation, technology and R&D (quality of investment) have declined in relative importance.

Targeting quality requires more proactive FDI policies based on substantive policy analysis capabilities, in contrast with policies focused on quantity which can rely on a more passive approach to government intervention focused on deregulation, liberalization, tax reduction and providing a stable macroeconomic environment. The key challenge for policy makers is to design a coherent and efficient policy mix that encompasses the right set of policies considering the country's circumstances and developmental strategies. But determining the correct policy mix is an extremely difficult task because it involves different government departments and agencies and because the relative efficiency of the different policy instruments is uncertain ex ante and hard to evaluate ex post. Not only are outcomes harder to measure, but it is also often extremely difficult to attribute outcomes to underlying policies. It needs to be emphasized that the policy mix is not a static structure: it necessarily changes through time in accordance with structural transformations of markets and technologies and to changes in broader economic development strategies. Moreover, each individual country would require a different mix of policies depending on its technological and institutional profile.

Beyond the investment promotion activities of IPAs, a multitude of actors are involved in subsidiary development. These may include regional economic development agencies, technology transfer organizations, R&D funding agencies, and ministries of economy, technology and innovation. This implies that FDI policies need to be closely linked and integrated with industrial and innovation policies (Costa and Filippov, 2008; Guimón, 2009; Narula and Dunning, 2010). Historically, FDI promotion has been framed within the context of industrial policy, since the main focus was placed on the creation of industrial capacities (Costa and Filippov, 2008). However, the qualitative approach towards FDI policy calls for a closer link with innovation policy. Innovation policy aims at improving the R&D investment climate by identifying and acting upon the strengths and weaknesses of the

national innovation system. Inward investment promotion communicates abroad the strengths of the country's national innovation system and provides targeted services to both potential and existing foreign investors in R&D. In sum, government policies to attract high quality FDI include signaling opportunities to foreign investors and facilitating the investment process, but also providing public goods in critical areas such as education and science and technology infrastructure. In this context, a key role for IPAs is to guide national innovation policies towards the factors that MNEs are looking at when deciding where to locate their international R&D centers and when rating alternative locations.

4 Management Challenges for Investment Promotion Agencies

Building on the previous sections, the objective here is to point out some of the management challenges facing investment promotion agencies in the transition from targeting quantity to targeting quality. We do so using an intellectual capital perspective, drawing attention to the key intangible resources and activities that IPAs should develop in order to be efficient in their new mandates. A variety of intellectual capital management and reporting models have emerged since the 1990s to better address the main drivers of innovation and value-creation within organizations that are not reflected in traditional management control and accounting systems (Brooking, 1996; Edvinsson and Malone, 1997; European Commission, 2006; MERITUM, 2002; Sveiby, 1997). More recently, an increasing number of non-profit organizations, research centers, universities and government departments have also adopted intellectual capital management concepts and tools (Bounfour and Edvinsson, 2005; Dalkir et al., 2007; Mouritsen et al., 2004; Sánchez and Elena, 2006).

Intellectual capital can be defined as the combination of an organization's intangible resources and activities. It is usually classified in the following three sources of knowledge-based capital, which constitute the key drivers of an organization's success in achieving its strategic objectives:

- Human capital: The knowledge that employees take with them when they leave the organization at the end of the working day. It includes the knowledge, skills, experiences and capabilities of people.
- Structural capital: The knowledge that stays within the organization at the end of the working day. It comprises organizational routines, procedures, systems, cultures and databases.
- Relational capital: The knowledge linked to the external relationships of the organization. It comprises the part of human and structural capital involved with the company's relations with stakeholders (including its owners, customers, suppliers, etc.), plus the perceptions that they hold about the company.

4.1 Human capital

The skill-sets of the employees of IPAs should be changing to reflect the agencies' new focus on quality and subsidiary development. As inward investment promotion becomes more connected with innovation policy, IPAs need to develop internally new skills and capabilities, not only to understand the changing technological strategies of multinational enterprises but also to be able to evaluate the interest of incoming FDI projects. The typical activities of the employees of IPAs are shifting from administrative and commercial functions towards highly specialized and complex functions, as discussed in Section 3. This means that existing employees need training on innovation and R&D and, at the same time, new employees with a technological background should be hired. It is important to stress that the new knowledge and capabilities required are not only strictly scientific and technological, but also comprise complementary, 'soft' capabilities such as analytical skills, polyvalence and the ability to sense and respond to technological and market trends.

The new challenges for investment promotion agencies also call for more flexible hiring procedures, including short-term and part-time contracts, to bring along specialized talent when needed, including for specific, short-term projects. Last but not least, a professional, results-oriented management and service culture should be inculcated in the work culture of IPAs.

4.2 Structural capital

Structural capital is related to organizational routines and management procedures, tools, systems and databases. It reflects the transformation of knowledge embedded in individuals (human capital) into knowledge that remains within the organizational structure. This occurs through codification, diffusion and standardization. When IPAs shift their strategies from quantity to quality, their structural capital needs to be developed by implementing new processes and service offerings. Targeting quality implies a more proactive, selective and customized approach than targeting quantity. IPAs should constantly evaluate the existing stock of inward FDI with the aim of focusing their limited resources on those foreign subsidiaries which are more likely to upgrade in corporate value chains. Indeed, the increased

competition for high quality FDI often requires an 'activist' policy approach aimed at specific foreign investors (Cantwell and Mudambi, 2000). As explained by Mudambi and Mudambi (2005), such activist policies generally encompass a two-stage strategy: the first stage consists in *targeting* the most appropriate investment projects while the second consists in *tailoring* the most appropriate package of incentives and services for the individual firms being considered.

Presently, many IPAs are developing new screening systems or checklists in accordance with this strategy. Targeting quality requires not only a set of performance measurement indicators, as discussed in Section 2, but also the development of new methods to evaluate and screen potential investment projects. The screening of FDI projects and potential investors against predefined criteria helps determine the extent of public support to provide (in the form of incentives or investment services) based on the expected benefits for the host country/region.

Structural capital is also related to the capacity of an IPA to design and 'package' new service offerings that may be attractive to foreign investors and contribute to the upgrading of existing subsidiaries. This implies the explicit design of policy instruments, which are offered to foreign investors and which receive a certain budget allocation. For example, many IPAs have set up 'technology linkage programs' to support the development of supplier networks and technology clusters around MNE subsidiaries. Policies may also include subsidies linked to performance requirements such as the collaboration between foreign subsidiaries and local firms, universities and research centres.

4.3 Relational capital

Relational capital is a central component of the value creation process of IPAs, because their aim is to improve the international image of the country/region, to network with existing investors and to imprint a higher responsiveness of other government departments and agencies. Our argument is that the shift from quality to quantity brings along a different approach to the management of IPAs relations both with MNEs and with other spheres of government. It requires a stronger steering and coordination capacity, aimed at generating dialogue and collaboration at various levels among a wide set of local and foreign actors.

With regard to MNEs, in Section 2 we have argued that targeting quality requires a stronger focus on subsidiary development rather than on greenfield FDI attraction. Subsidiary development should concentrate on selected groups of subsidiaries, following targeting and market segmentation efforts. It is important to recognize that subsidiaries are highly heterogeneous units in terms of their functions, scope of responsibilities, power relations with parent companies, industrial specificities, and so on. The identification of prospective companies for policy intervention is followed by efforts to gain audiences with decision-makers in these companies but, in the words of Loewendahl (2001, p. 22), "approaching companies should not be seen as a methodical exercise: it is not about one-off approaches to a fixed number of companies each day, but rather a market intelligence gathering and relationship building campaign". It is essential to develop formal and informal contacts between subsidiary executives and national investment promotion agency officials. A strong effort must be made to discuss with subsidiaries (and their headquarters) their future plans and prospects. This can help to identify ways in which the host country authorities might assist in reaching these goals.

Another critical role for IPAs emerging from the qualitative approach is to provide policy advice to the government bodies responsible for formulating and implementing innovation policy based on the needs of R&D investors. IPAs hold a unique insight into the problems investors face and their impressions of the country as an investment location, based on which they should draw attention to different agents of the national innovation system to areas that are important for making a location more attractive for knowledge-intensive investments.

To be effective in their policy advocacy role, IPAs need to develop strong links with other government ministries and agencies, in addition to the local managers of foreign multinationals and business and professional associations. In particular, as we argued earlier, a closer interplay is needed between IPAs and R&D funding bodies, universities, ministries of science, etc. Moreover, beyond policy advocacy and networking, some IPAs may also decide to become directly involved in the implementation of innovation policy, for example by developing new science and technology infrastructure.

In sum, building relational capital entails the development of formal and informal spaces for dialogue and cooperation, comprising different policy areas and industries and bringing together different stakeholders. It also comprises traditional activities such as participation in international fairs, exhibitions, conferences, forums and missions.

4.4 Discussion

We have discussed how the shift from a focus on quantity and attraction towards a focus on quality and subsidiary development calls for changes in the intellectual capital of IPAs. It is important to stress that the three types of intellectual capital that we have used in our discussion are closely connected with each other. For example, the knowledge of an employee (human capital) might turn into structural capital when it is codified and diffused throughout the organization, and it might also turn into relational capital when it is used to improve relationships with stakeholders. Indeed, it is important to pay attention to the transformation and combination of different types of intellectual capital as critical drivers of value creation.

Success in adapting to these challenges is driven by IPA's 'dynamic capabilities', a term defined by Porter (1985) as the ability to identify and profit from new opportunities, and to reconfigure and protect their knowledge in order to attain a sustainable competitiveness. Moreover, a prerequisite for successful investment promotion is that it takes place in the context of a broader strategy for improving the investment environment, across a wide range of policy areas. Successful promotion is expensive and resources need to be used wisely. Therefore, in order to achieve selected policy options efficiently, clear strategic plans and policy mixes need to be set out (OECD, 2006). However, as Rodrik (2004) argues, such strategy formulation efforts should be conceived as a "necessarily experimental process" involving a more "flexible form of strategic collaboration" between public and private sectors. Such forms of strategic collaboration between IPAs, national policy-makers, established subsidiaries, potential foreign investors and domestic businesses are of critical importance for the shift from quantity to quality in FDI policies.

5 Concluding Remarks

Based on the relevant academic and policy-oriented literature, we have developed a new conceptual approach for IPAs. We argue that reorientation towards quality of FDI is inextricably linked to the importance attached to the development of already established subsidiaries. In other words, the policy initiatives and the support of IPAs should be extended from facilitation of initial investments towards nurturing the qualitative evolution of established subsidiaries. However, as we have shown, adoption of the qualitative approach to FDI promotion strategy is associated with a number of challenges for IPAs, as it involves rethinking of existing strategies and organizational changes in the entire government. IPAs' work should be framed within a new policy mix and a broad policy agenda. Specifically, better coherence should be achieved between FDI policy and innovation policy. We argue that IPAs can manage the transition from quantity to quality by building upon an intellectual capital framework, consisting of three sources of knowledge-based capital: human capital, structural capital and relational capital. Presently, the performance of most IPAs is still normally measured by traditional indicators such as the amount of FDI attracted (the volume of investment) and the total number of jobs created. However, we have argued that a new system of indicators is necessary to evaluate the success of IPAs targeting quality.

Reference

[1] Amsden, A. The Rise of the Rest: Challenges to the West from Late-Industrialising Economies[M]. New York: Oxford University Press, 2001

[2] Basinger, S.J. and Hallerberg, M. Remodelling the Competition for Capital: How Domestic Politics Erases the Race to the Bottom[J]. American Political Science Review, 2004, 98(2): 261-276

[3] Best, M. The New Competition[M]. Cambridge: Polity Press，1990

[4] Birkinshaw, J. Entrepreneurship in Multinational Corporations: The Characteristics of Subsidiary Initiatives[J]. Strategic Management Journal, 1997, 18(3): 207-229

[5] Birkinshaw, J. and Hood, N. Multinational Subsidiary Evolution: Capability and Charter Change in Foreign-owned Subsidiary Companies[J]. Academy of Management Review, 1998, 23(4): 95-773

[6] Bounfour, A., and Edvinsson, L. IC For Communities, Nations, Regions and Cities[M]. Boston: Butterworth-Heinemann, 2005

[7] Brooking, A. Intellectual Capital: Core Asset for the Third Millennium Enterprise[M]. London: International Thomson Business Press, 1996

[8] Brown, B. and Raines, P. The Changing Nature of Foreign Direct Investment Policy in Europe: From Promotion to Management, in: Dunning, J. (ed.), Regions, Globalization and the Knowledge-Based Economy[M]. New York: Oxford University Press, 2000: 435-458

[9] Bruche, G. The Emergence of China and India as New Competitors in MNCs Innovation Networks[J]. Competition & Change, 2009, 13(3): 88-267
[10] Buckley, P. and Casson, M. The Future of the Multinational Enterprise[M]. London: Macmillan, 1976
[11] Cantwell, J. and Piscitello, L. Accumulating Technological Competence: Its Changing Impact on Corporate Diversification and Internationalisation[J]. Industrial and Corporate Change, 2000, 9(1): 21-51
[12] Cantwell, J. and Mudambi, R. The Location of MNE R&D Activity: The Role of Investment Incentives[J]. Management International Review, 2000, 40(1): 48-127
[13] Chaminade, C. and Vang, J. Globalisation of Knowledge Production and Regional Innovation Policy: Supporting Specialized Hubs in the Bangalore Software Industry[J]. Research Policy, 2008, 37(10): 96-1684
[14] Costa, I. and Filippov, S. Foreign-owned Subsidiaries: A Neglected Nexus Between Foreign Direct Investment, Industrial and Innovation Policies[J]. Science and Public Policy, 2008, 35(6): 379-90
[15] Dalkir, K., Wiseman, E., Shulha, M. and McIntyre, S. An Intellectual Capital Evaluation Approach in a Government Organization[J]. Management Decision, 2007, 45(9): 1497-1509
[16] Douglass, M. Intercity Competition and the Question of Economic Resilience: Globalization and the Crisis in Asia. In: Scott, A.J. (ed.) Global City-Regions: Trends, Theory, Policy[M]. Oxford: Oxford University Press, 2001
[17] Edvinsson, L. and Malone, M. Realizing Your Company's True Value by Finding Its Hidden Brain Power[M]. New York: Harper Collins Publishers, 1997
[18] Enderwick, P. Attracting "Desirable" FDI: Theory and Evidence[J]. Transnational Corporations, 2005, 14(2): 93-119
[19] Ernst, D. Asia's "Upgrading Through Innovation" Strategies and Global Innovation Networks: An Extension of Sanjaya Lall's Research Agenda[J]. Transnational Corporations, 2008, 17(3): 31-57
[20] European Commission. RICARDIS: Reporting Intellectual Capital to Augment Research, Development and Innovation in SMEs[R]. Report from an Expert Group, Brussels: European Commission, D.G. Research, 2006
[21] Evans, P. Dependent Development: The Alliance of Multinational, State and Local Capital in Brazil[M]. Princeton: Princeton University Press, 1979
[22] Fagerberg, J. Technology and International Differences in Growth Rates[J]. Journal of Economic Literature, 1994, 32(3): 1147-1175
[23] Filippov, S. Nurturing the Seeds of Investment[J]. FDI Magazine, 2008(6-7): 84-85
[24] Filippov, S. Multinational Subsidiary Evolution: Corporate Change in New EU Member States (Doctoral Dissertation)[M]. Maastricht：Maastricht University Press, 2009
[25] Foray, D. Globalization of R&D: Linking Better the European Economy to 'Foreign' Sources of Knowledge and Making EU a More Attractive Place for R&D Investment[R]. Technical Report by the Expert Group "Knowledge for Growth", 2006
[26] Ghoshal, S. and Bartlett, C.A. Creation, Adoption and Diffusion of Innovations by Subsidiaries of Multinational Corporations[J]. Journal of International Business Studies, 1988, 19(3): 365-388
[27] Guimón, J. Government Strategies to Attract R&D-intensive FDI[J]. Journal of Technology Transfer, 2009, 34(4): 364-379
[28] Hagedoorn, J. and Narula, R. Evolutionary Understanding of Corporate Foreign Investment Behaviour: US Foreign Direct Investment in Europe, in Narula, R. (Ed.), International Trade and Investment in a Globalising World[M]. New York: Pergamon, 2001
[29] Hanson, G. Should Countries Promote Foreign Direct Investment? G-24 Discussion Paper Series, No. 9. United Nations, New York and Geneva, 2001
[30] Harding, T. and Javorcikr, B.S. Developing Economies and International Investors: Do Investment Promotion Agencies Bring them Together?[R]. World Bank, Policy Research Working Paper 4339, 2007
[31] Hausmann, R. and Fernández-Arias, E. Foreign Direct Investment: Good Cholesterol?[R]. Inter-American Development Bank, Research Department Working Paper No. 417, 2000
[32] Hennart, J.F. A Theory of the Multinational Enterprise[M]. Ann Arbor: University of Michigan Press, 1982
[33] Hymer, S. The International Operations of National Firms: A Study of Direct Foreign Investment[M]. Cambridge: MIT Press, 1976

[34] Jaruzelski, B. and Dehoff, K. Beyond Borders: The Global Innovation 1000[J]. Strategy and Business, 2008:54
[35] Jindra, B., Giroud, A. and Scott-Kennel, J. Subsidiary Roles, Vertical Linkages and Economic Development: Lesson from Transition Economies[J]. Journal of World Business, 2009, 44(2): 167-179
[36] Johanson, J. and Vahlne, J.E. The Internationalisation Process of the Firm: A Model of Knowledge Development and Increasing Foreign Market Commitment[J]. Journal of International Business Studies, 1977(8): 23-32
[37] Lall, S. Technological Capabilities and Industrialisation[J]. World Development, 1992, 20(2): 165-186
[38] Lall, S. Industrial Strategy and Policies on Foreign Direct Investment in East Asia[J]. Transnational Corporations, 1995, 4(1): 1-26
[39] Lall, S. Reinventing Industrial Strategy: the Role of Government Policy in Building Industrial Competitiveness[C]. G-24 Discussion Paper Series No. 28, United Nations Conference on Trade and Development, New York and Geneva, 2004
[40] Ling, A., Floyd, S. and Baldridge, D. Towards a Model of Issue-selling by Subsidiary Managers in Multinational Organizations[J]. Journal of International Business Studies, 2005, 36(6): 637-654
[41] Loewendahl, H. A Framework for FDI Promotion[J]. Transnational Corporations, 2001, 10(1): 1-42
[42] Lundvall, B.A. National Systems of Innovation - Towards a Theory of Innovation and Interactive Learning[M]. London: Pinter, 1992
[43] Madeuf, B. International Technology Transfers and International Technology Payments: Definitions, Measurements and Firms' Behaviour[J]. Research Policy, 1984(13): 125-140
[44] Marin, A. and Bell, M. Technology Spillovers from Foreign Direct Investment (FDI): An Exploration of the Active Role of MNC Subsidiaries in the Case of Argentina in the 1990s[J]. Journal of Development Studies, 2006, 42(4): 678-697
[45] McManus, J. The Theory of the Multinational Firm, In: Paquet, G. (Ed.) The Multinational Firm and the Nation State[M]. Ontario: Collier Macmillan, 1972
[46] MERITUM. Guidelines for Managing and Reporting on Intangibles[R]. Intellectual Capital Report, Madrid: Airtel-Vodafone Foundation, 2002
[47] Morisset, J. Does a Country Need a Promotion Agency to Attract Foreign Direct Iinvestment? A Small Analytical Model Applied to 58 Countries[R]. World Bank Policy Research Working Paper Series No. 3028, Washington D.C, 2003
[48] Mouritsen, J., Thorbjørnsen, S., Bukh, P.N. and Johansen, M.R. Intellectual Capital and New Public Management: Reintroducing Enterprise[J]. The Learning Organization, 2004, 11(4/5): 380-392
[49] Mudambi, R. and Mudambi, S. Multinational Enterprise Knowledge Flows: The Effect of Government Inward Investment Policy[J]. Management International Review, 2005, 45(2): 155-178
[50] Mortimore, M. and Vergara, S. Targeting Winners: Can FDI Policy Help Developing Countries Industrialize? In: Lall, S. and Narula, R. (Eds.), Understanding FDI-Assisted Economic Development[M]. Routledge, London, 2006
[51] Mytelka, L. and Barclay, L. Using Foreign Investment Strategically for Innovation. In Lall, S. and Narula, R. (Eds.), Understanding FDI-assisted Economic Development[M]. London: Routledge, 2006
[52] Mytelka, L. and Barclay, L. Using Foreign Direct Investment Strategically for Innovation[J]. The European Journal of Development Research, 2004, 16(3): 531-560
[53] Narula, R. and Bellak, C. EU Enlargement and Consequences for FDI Assisted Industrial Development[J]. Transnational Corporations, 2009
[54] Narula, R. and Dunning, J.H. Multinational Enterprises, Development and Globalisation: Some Clarifications and a Research Agenda[J]. Oxford Development Studies, 2010
[55] Narula, R. and Zanfei, A. Globalization of Innovation: The Role of Multinational Enterprises. In: Fagerber, J., Mowery, D. and Nelson, R. (eds.), Handbook of Innovation[M]. Oxford: Oxford University Press, 2004
[56] Nelson, R. National Innovation Systems: A Comparative Study[M]. New York and Oxford: Oxford University Press, 1993

[57] OECD. Policy Framework for Investment: A Review of Good Practices. Paris: Organization for Economic Cooperation and Development, 2006
[58] Patel, P. and Pavitt, K. The Nature and Economic Importance of National Innovation Systems, STI Review, No 14. Paris: OECD, 1994
[59] Paterson, S. and Brock, D. The Development of Subsidiary-management Research: Review and Theoretical Analysis[J]. International Business Review, 2002, 11(2): 139-163
[60] Pearce, R. The Evolution of Technology in Multinational Enterprises: the Role of Creative Subsidiaries[J]. International Business Review, 1999, 8(2): 125-148
[61] Penrose, E. The Theory of the Growth of the Firm[M]. New York: John Wiley, 1959
[62] Phelps, N. and Raines, P. The New Competition for Inward Investment[M]. London: Edward Elgar, 2003
[63] Porter, M. E. Competitive Advantage: Creating and Sustaining Superior Performance[M]. New York: The Free Press, 1985
[64] Radosevic, S. and Sadowski, B. International Industrial Networks and Industrial Restructuring in Central and Eastern Europe[M]. Dordrecht: Kluwer Academic Publishers, 2004
[65] Rodrik, D. Industrial Policy for the Twenty-first Century. CEPR Discussion Papers, No. 4767, 2004
[66] Rosenberg, N. and Frischtak, C. International Technology Transfer. New York: Praeger, 1985
[67] Roth, K. and Morrison, A. Implementing a Global Strategy: Characteristics of Global Subsidiary Mandates[J]. Journal of International Business Studies, 1992, 23(4): 715-736
[68] Rugman, A. and Verbeke, A. Subsidiary-specific Advantages in Multinational Enterprises[J]. Strategic Management Journal, 2001, 22(3): 237-250
[69] Sánchez P and Elena, S. Intellectual Capital in Universities: Improving Transparency and Internal Management[J]. Journal of Intellectual Capital, 2006, 7(4): 529-548
[70] Santangelo, G. Technological Change and Economic Catch-up: The Role of Science and Multinationals[M]. Cheltenham: Edward Elgar, 2005
[71] Stewart, E. International Technology Transfer: Issues and Policy Options[R]. Staff Working Paper no. 344, Washington DC: World Bank, 1979
[72] Stopford, J. and Strange, S. Rival States, Rival Firms: Competition for World Market Shares[M]. Cambridge: Cambridge University Press, 1991
[73] Sveiby, K.E. The New Organizational Wealth: Managing and Measuring Knowledge-based Assets[M]. San Francisco: Berret-Koehler, 1997
[74] UNCTAD. World Investment Report 2001: Promoting Linkages[R]. New York and Geneva: United Nations, 2001
[75] UNCTAD. World Investment Report 2005: Transnational Corporations and the Internationalisation of R&D[R]. New York and Geneva: United Nations, 2005
[76] UNCTAD. Aftercare: A Core Function in Investment Promotion[C]. Investment Advisory Series, Series A, No. 1, United Nations Conference on Trade and Development, New York and Geneva, 2007
[77] Velde, te D.W. Government Policies Towards Inward Foreign Direct Investment in Developing Countries: Implications for Human Capital Formation and Income Inequality. FDI, Human Capital and Education in Developing Countries, Technical Meeting, Paris: OECD Development Centre, 2001
[78] Vernon, R. International Investment and International Trade in the Product Cycle[J]. Quarterly Journal of Economics, 1966, 82(2): 190-207
[79] Verspagen, B. Innovation and Economic Growth. In: Fagerberg, J., Mowery D. & Nelson, R. (eds.) The Oxford Handbook of Innovation[M]. Oxford: Oxford University Press, 2005
[80] Wells, L. and Wint, A. Marketing a Country: Promotion as a Tool for Attracting Foreign Investment (Revised Edition), Washington, DC: Foreign Investment Advisory Service, The World Bank, 2000
[81] Williamson, J. The Washington Consensus as Policy Prescription for Development. In: Besley, T. and Zagha, R. (Eds.), Development Challenges in the 1990s[M]. Washington and New York: The World Bank and Oxford University Press, 2005: 31-53
[82] Young, S., Hood, N. and Peters, E. Multinational Enterprises and Regional Economic Development[J]. Regional Studies, 1994, 28(7): 657-677