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Competing for High-quality FDI: Management Challenges for Investment Promotion Agencies

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***Abstract*:** Competition for FDI is intensifying and changing in scope as governments of developed and developing countries alike place a higher emphasis on the quality rather than on the quantity of FDI. Against the backdrop of contemporary international business trends, we argue that shifting from quantity to quality in FDI promotion entails a new policy mix and a new approach to performance evaluation. We examine the challenges that investment promotion agencies targeting quality are confronted with from an intellectual capital management perspective, drawing attention to the implications for their human, structural and relational capital. This study offers a broad framework to better guide FDI policy reform and evaluation.

***Key words*:** FDI, intellectual capital, investment promotion, multinational companies

***JEL Classifications*:** F23, O14, O19

1. Introduction

Foreign direct investment (FDI) is defined as investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy in an enterprise resident in another economy (UNCTAD, 2005). Beyond its direct benefits for host countries as a source of external finance and new employment, FDI is increasingly recognized for its contribution to national and regional competitiveness. 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 labour resulting from the

expansion and restructuring of corporate value chains. Multinational companies (MNC) are progressively fragmenting across regions and countries not only their production and sales functions but increasingly also their innovative activities such as research and development (R&D) (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), contrary to the neoliberal claim for a passive type of policy intervention focusing on liberalization and deregulation, the case for more proactive kinds of industrial policies has actually become stronger given the fast pace of globalization and technological change. In the particular case of developing countries, Rasiah (2000) also emphasizes that success in attracting FDI and capturing the associated benefits for the domestic economy is associated with effective government intervention. According to Velde (2001) pro-active and strategic FDI policy interventions affecting the dynamic pattern of national comparative advantages are required in order to avoid the risk of a low-skill, low-income trap.

It is against this background that we argue that the focus of FDI policies is shifting from *quantity* (more FDI) to *quality* (more beneficial FDI). 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). FDI is often seen as an engine for *upgrading through innovation* (Ernst, 2008; Mytelka and Barclay, 2006; 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 toward FDI and embraced development strategies based on the accumulation of scientific and technological knowledge. This also applies to emerging countries, for 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). Yet many developing economies and peripheral regions within developed countries face significant obstacles as they lack the absorptive capacity, large market size and specialized clusters that MNCs are looking for when deciding where to locate their higher value adding activities (Narula and Guimón, 2010).

Establishing an investment promotion agency (IPA) has become the most popular institutional approach in strategic FDI promotion across nations and regions worldwide, after a widespread growth of this kind of government agencies during the 1990s (OECD, 2006). The general purpose of IPAs is to increase the international visibility of the country (or region) through marketing campaigns and to facilitate the investment process by offering tailored services and incentives to foreign corporations, both before and after the initial investment. Institutionally, IPAs usually report to 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). 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 unique position to guide policy reform programs toward the dynamic needs of MNCs.

In this paper we hypothesize that competing for high quality FDI entails readjustments of existing national policies and, in particular, of the activities of IPAs. We first 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. We recommend a coordinated approach to FDI policies focused on subsidiary development and linkage facilitation in order to efficiently compete for high quality FDI. Following this discussion, we build upon an *intellectual capital* framework to better address the specific management challenges facing IPAs in the transition from targeting quantity to quality.

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 while advanced market economies intensify their promotion campaigns. The former skeptical attitude toward FDI, prevalent in most countries up until the 1980s and manifested in investment restrictions and conditionalities, has shifted toward a more investment-friendly view, leading

to intensified territorial competition for mobile investment at national and sub-national levels.

Traditionally, FDI promotion policies focused primarily on quantity, i.e. on maximizing inward investment flows. The quantitative approach emphasizes capital accumulation and employment generation. Neoclassical economics viewed the benefits of FDI primarily in terms of 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). During the 1970s and 1980s some countries, for example India, were already sensitive to improving the quality of FDI and imposed specific requirements on foreign investors, such as the need to establish a joint-venture with a local firm, to engage in local sourcing or to facilitate technology transfer. But integration into the world economy and into international institutions such as the WTO meant that these kinds of policy instruments became unfeasible, often implying an inevitable shift toward a quantitative approach in FDI policy.

The quantitative 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 crisis that started in 2007. Yet a new approach has clearly emerged in the post-Washington Consensus era focusing on the quality rather than the quantity of international investment. Recognizing the heterogeneity of FDI, the aim is to target the most *desirable* FDI to meet specific development objectives (Enderwick, 2005). Normally, the objective behind the qualitative approach to FDI policy is to attract the higher value-adding operations of foreign companies, including R&D, business process outsourcing (BPO), headquarter functions, as well as high-technology and high-growth industries such as information and communication technologies (ICT), biotechnology or nanotechnology. Another manifestation of the shift towards quality is the growing attention to sustainable FDI, specifically in terms of its contribution to the protection of the environment and to the efficient long term management of natural resources.

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 toward increasing efforts to support the development of already existing foreign subsidiaries. The key idea here is that FDI needs to be interpreted not as a discrete, single-period flow, but as a multi-period 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).

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 number of sales, and hence higher tax revenue 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 generally implies attraction of specific high value-adding functions or specific 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, since the output and sales of a given subsidiary may remain the same or even be reduced as the subsidiary upgrades to higher value adding activities. The task of policy makers is more complex and implies a multitude of efforts to embed the subsidiary in the national innovation system.

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 industrialization.	Attraction of FDI which can result in technological upgrading and knowledge spillovers. Selective targeting of specific business functions and industrial sectors. Greater attention to sustainability.
Subsidiary development	Growth (but not evolution) of existing subsidiaries, i.e. quantitative extension of existing operations, creation of new jobs and reinvestment. The objective is to increase capital inflows and enhance the role of foreign subsidiaries in manufacturing, employment and exports.	Upward evolution or functional upgrading of existing subsidiaries to better contribute to national development objectives. The objective is the higher integration of subsidiaries both within the national innovation system and within global innovation networks.

Source: Authors.

In accordance with the goals and priorities of FDI policy, different indicators and targets can be used to measure its success (Table 2 presents several possible indicators, but it should be stressed that this list is not exhaustive). Conventional thinking on FDI, under the quantitative approach, is in terms of financial flows and employment figures. The two most commonly used indicators are inward FDI flows (as a percentage of gross fixed capital formation) and inward FDI stocks (as a percentage of gross domestic product). These statistics are readily available from national statistical offices and from various international organizations (the most authoritative publication is the World Investment Report by UNCTAD). The role and evolution of subsidiaries under the quantitative approach can be measured in terms of their number, assets, employment, sales, value added, etc. On the other hand, the indicators for the qualitative approach often include the number of FDI projects in targeted high value-adding functions and sectors, as well as the number of new jobs created for highly-skilled workforces. Clearly, evaluation under the qualitative approach is harder, because there are no clearly defined measures and many of the impacts such as knowledge creation or industrial upgrading are to a large extent intangible in nature. 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. This qualitative assessment requires substantial expertise and financial resources, which are not available to many investment promotion agencies and national statistical offices.

Table 2: Selected Indicators to Evaluate FDI Policy

	Quantitative approach	Qualitative approach
FDI attraction	- Inward FDI flows (% of GFCF) - Number of new FDI projects - Number of new jobs created	- Number of new FDI projects in R&D, BPO, headquarters, ICT, biotech, etc. - Number of new jobs created for skilled workforce, researchers, PhD holders, etc.
Subsidiary development	- Inward FDI stock (% of GDP) - Number of subsidiaries - Assets of subsidiaries - Employment of subsidiaries (Domestic) sales of subsidiaries Added-value of subsidiaries Profits of subsidiaries	- R&D expenditures of subsidiaries - Employment of skilled workforce - Industry-university R&D collaborations - Patent applications by subsidiaries - Linkages and contribution of subsidiaries to domestic clusters - Exports of subsidiaries

Source: Authors.

These are just a few examples to help illustrate, albeit in a simplified manner, the different kind of priorities and performance indicators under the different scenarios of FDI policy. As argued by Head (2010) a key challenge is to develop and adjust useful performance indicators given the dynamic nature of complex evolving problems, where it is often unfeasible to predetermine reliable and stable indicators.

It needs to be emphasized that despite our attempts to categorize, these scenarios are not mutually exclusive. Instead, the borders between them are quite often fuzzy in practice. Even the countries with the strategies most targeted toward attracting high quality FDI still encourage other kinds of FDI, since they realize that quantity is also beneficial. More importantly, an IPA should not focus either on FDI attraction or on subsidiary development. These tasks are complementary. The challenge for IPAs is to efficiently diversify their efforts throughout the different scenarios.

However, as we discuss further in the following section, the kind of policies aimed at quality are different from those aimed at quantity. This apparent tradeoff between quantity and quality implies that governments need to better reflect on the most adequate policy mix given each of their 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. It entails placing the endowments of the local economy in a global context, identifying spaces for matching domestic capacities with the dynamics of global supply chains.

3. Targeting Quality and Subsidiary Development

Policies for the qualitative development of subsidiaries are 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 MNC subsidiaries. IPAs also play 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).

The stronger focus on subsidiary development is grounded in the fact that MNCs normally undertake sequential investments, building higher value-adding activities in locations that have displayed competence in other previous activities such as manufacturing or sales and marketing, underpinning the importance of the duration of operations (Johanson and Vahlne, 1977; Mudambi and Mudambi 2005). This implies that high quality FDI may follow after lower quality FDI,

meaning that quantity and quality should not be seen as contradictory objectives but rather as parts of a continuum (Sargent and Matthews, 2009). However such a positive evolution is by no means automatic – technological upgrading through FDI requires raising local capabilities and absorptive capacity (Kemeny, 2010).

As specialization and segmentation of corporate functions deepens and MNCs rationalize their supply chains, existing subsidiaries continuously compete against each other for higher value-adding mandates. The location decision depends on the response of the different subsidiaries to the needs of headquarters through proposals that exploit both subsidiary competencies and location-specific advantages. Thus from an evolutionary perspective upgrading is determined by the development of *subsidiary-specific advantage* (Rugman and Verbeke, 2001). Simultaneously, the geography of corporate value chains is highly influenced by path dependencies and inertia reflecting past investment decisions.

Subsidiary development calls for a regular monitoring of subsidiaries with the goal of offering them complementary assistance, adapted to their level of development. This requires building and maintaining a network of contacts between foreign subsidiaries, governments and domestic firms. This network should provide ideas for co-operation, linkages and expansion. Promoting linkages and creating clusters around MNC subsidiaries should be a critical part of FDI policies. But creating the kind of linkages and clusters around MNCs to foster technological upgrading is not straightforward, as it requires 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 advantages of the region with the kinds of FDI that are being attracted. Many of the most successful cases of FDI-assisted upgrading are often framed within strategic government intervention, such as for example the case of Costa Rica (Box 1).

Box 1: FDI-assisted Upgrading in Costa Rica

> Intel's investment in Costa Rica in the mid-1990s represented the consolidation of the national strategy to diversify out of apparel and natural resources toward electronics. According to Mortimore and Vergara (2004: 505), Costa Rica took advantage of Intel's announcement of its intention to open a new site in Latin America "by designing and implementing a focused, targeted and active FDI policy that emphasised the coincidence between Intel's corporate objectives and Costa Rica's development strategy". Costa Rica then successfully implemented a new development strategy based on attracting FDI to upgrade into more technologically-sophisticated activities. Substantial success was achieved in electronics, medical devices and logistics by way of selective interventions related to improving domestic capabilities to attract FDI, implementing an active and targeted FDI policy reflecting national developmental priorities, negotiating firm-level packages and deploying specific industrial policies to promote productive linkages.

Sources: Mortimore and Vergara (2004); Mytelka and Barclay (2006).

IPAs should focus their limited resources on those foreign subsidiaries which are more likely to upgrade in corporate value chains and to create domestic linkages. Policies should be sensitive to high heterogeneity in the kinds of MNCs, their subsidiaries, and the potential development effects these 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 MNC activity, it makes sense that policies are fine-tuned to specific industries and clusters in particular regions rather than a general, one-size-fits-all approach.

In sum, targeting quality requires more proactive FDI policies based on substantive policy analysis capabilities, in contrast to 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. Policies oriented to the quality of FDI necessarily need to consider more closely the kind of national capabilities that need to be developed, both to become an attractive destination and to be able to reap the potential benefits and synergies associated with this kind of investment. The upgrading efforts involve system coordination initiatives to improve the education system, infrastructure, institutions, and so forth (Rasiah, 2002, 2009).

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. Moreover, the policy mix is not a static structure – it necessarily changes through time in response to structural transformations of markets and technologies and to changes in broader economic development strategies. Each individual country would require a different mix of policies depending on its technological and institutional profile.

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 the provision of information on investment possibilities are unlikely to have an impact 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 realized investment projects. Along these lines, Brown and Raines (2000) speak of a shift in FDI policy since the 1990s, from strategies to attract investment toward 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 new FDI through pre-investment services, while very little is invested in aftercare (Costa and Filippov, 2008; Filippov, 2008; Narula and Dunning, 2010). In general, even IPAs explicitly targeting high quality FDI often continue focusing on traditional policy instruments and are often evaluated based on traditional performance indicators.

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. Mudambi and Mudambi (2005) argue that policies aimed at maximizing knowledge flows do not contribute to reducing regional disparities, since knowledge-intensive subsidiaries will gravitate toward 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. From a long-term perspective, the focus remains on knowledge-intensive MNC subsidiaries that generate larger knowledge inflows and linkages. However, in the short term, political cycle considerations often require an emphasis on 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 where employment and capital accumulation return to the top of the policy agenda.

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). 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 reform programs toward the factors that MNCs are looking at when deciding where to locate their higher quality FDI.

4. Management Challenges for Investment Promotion Agencies from an Intellectual Capital Perspective

Building on the previous sections, the objective here is to point out some of the main management challenges facing investment promotion agencies in the transition from targeting quantity to targeting quality. We do so using an *intellectual capital* framework, drawing attention to the key intangible resources and activities that IPAs should develop in order to be efficient in their shifting mandate. Intellectual capital can be defined as the combination of an organization's intangible resources and activities.

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 (e.g. Brooking, 1996; Edvinsson and Malone, 1997; MERITUM, 2002). Although these were originally addressed to the private sector a growing number of government departments and agencies have also adopted intellectual capital management tools (Bounfour and Edvinsson, 2005; Dalkir *et al*., 2007; Mouritsen *et al*., 2004; Wall, 2005). This reflects the aim to apply business concepts and frameworks to the public sector, which characterizes the so-called *new public management* movement (Williams, 2008).

Thus the attempts to better measure and manage intellectual capital represent a departure from traditional accounting and control systems which focus on tangible and financial indicators. Intellectual capital is usually classified into 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 in the company's relations with stakeholders (including its owners, customers, suppliers, etc.), plus the perceptions that these hold about the company (including reputation, brand image, etc.).

4.1 Human Capital

IPAs' focus on quality and subsidiary development implies the need for a new kind of human capital. The typical activities of the employees of IPAs

are shifting from administrative and commercial functions toward highly specialized and complex functions. Existing employees need training on innovation and R&D and, at the same time, new employees with a technological background may need to be hired. As inward investment promotion becomes more connected with innovation policy, IPAs would 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.

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 procedures, including subcontracting and part-time employment contracts to bring along specialized knowledge when needed, including for specific, short-term projects.

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 evolve through the implementation of new processes and service offerings. Indeed, the increased competition for high quality FDI often requires an *activist* policy approach aimed at specific foreign investors. 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 new set of performance measurement indicators, as discussed earlier, but also 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, as illustrated by the case of Invest in Spain (Box 2).

Box 2: The Screening System of Investment in Spain

> In 2008 the Spanish investment promotion agency, Invest in Spain, implemented a Customer Relationships Management (CRM) model which rates incoming projects and existing investors according to four criteria, two quantitative and two qualitative. The quantitative are 'financial investment' and 'number of employees'. The qualitative are 'quality of jobs created' and 'functional focus of the project'. To determine the score in each criterion, a Likert-type scale from one to five is used. In 'functional focus of the project', the highest score (5) is assigned if it is an R&D center or a regional headquarter. In 'quality of employment', the highest score is assigned if most of the employees will be researchers and PhDs. The final rating is based on a weighted average of the four categories, and the qualitative indicators have a higher weight than the quantitative ones in the final score.

Source: Personal interviews with managers of Invest in Spain (Madrid, 2008).

Structural capital is also related to the capacity of an IPA to *package* new service offerings that may be attractive to foreign investors and contribute to the upgrading of existing subsidiaries. This entails 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 MNC subsidiaries. Policies may also include subsidies linked to performance requirements such as the collaboration between foreign subsidiaries and local firms, universities and research centres. Another typical approach is to offer *research hosting* services to foreign firms through technology parks, which may include subsidized office space, access to research equipment and administrative services.

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 on other government departments and agencies. The shift from quantity to quality brings along a different approach to the management of IPAs external relationships, both with MNCs 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 MNCs, 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: 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". The development of formal and informal contacts between subsidiary executives and national investment promotion agency officers may help identify new ways in which host country authorities might assist subsidiaries in their upgrading efforts.

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 government and firms 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 to be able to attract and embed higher quality FDI, as illustrated by the case of Ireland's National Institute of Bioprocessing Research and Training (Box 3).

Box 3: The Case of Ireland's NIBRT

> In 2005, the Irish investment promotion agency, IDA Ireland, dedicated 70 million euro to the creation of the National Institute of Bioprocessing Research and Training (NIBRT), its most costly project of that year. IDA Ireland saw bioprocessing as a strategic industry where existing MNC subsidiaries had the potential to upgrade their R&D activity, and saw the necessity to create this research and training centre in order to stimulate the upgrading process. This is a rare role for an investment promotion agency and a manifestation of how FDI policies and innovation policies become more closely interconnected when the focus is on attracting high quality FDI.

Sources: http://www.nibrt.ie and personal interview with executives of IDA Ireland (Dublin, 2007).

4.4 Discussion

The notion of intellectual capital represents a useful tool for analyzing the strategic challenges of IPAs in a structured manner, but further work remains to be done in order to better address the specific indicators needed, priority actions, management practices, etc. We have argued that the shift from a focus

on quantity and attraction toward a focus on quality and subsidiary development needs to be accompanied by changes in the intellectual capital of IPAs, as summarized in Table 3. Although the classification into three types of intellectual capital is useful for analytical purposes, in practice they are closely connected with each other and often hard to differentiate. 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. This kind of transformation and combination of different types of intellectual capital is a critical driver of successful organizational change.

Table 3: Management Challenges for IPAs: An Intellectual Capital Perspective

Human capital	- Building new skills and capabilities in existing employees - Hiring new employees with technological and scientific backgrounds
Structural capital	- Developing new targeting tools and checklists - Developing and standardizing new services - More flexible and customized forms of intervention - New performance measurement and evaluation systems
Structural capital Relational capital	- Stronger emphasis on subsidiary development - Closer interaction with other spheres of government

Source: Authors

Success in adapting to these strategic challenges is driven by IPA's *dynamic capabilities*, a term defined by Teece *et al*. (1997: 516) as the "ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments". Needless to say, there is a wide heterogeneity of IPAs and each will face its specific institutional constraints and opportunities for reform. In any case, 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. In order to achieve selected policy options efficiently, clear strategic plans and policy mixes need to be set out (OECD, 2006). Successful promotion is expensive and resources need to be used wisely.

5. Conclusion

This paper has developed a new conceptual approach to analyzing FDI policies and the management of IPAs. We have argued that the policy initiatives and services provided by IPAs are being extended from facilitation of the maximum initial investments toward nurturing the qualitative evolution of established subsidiaries. The kinds of policies appropriate for maximizing the quantity

of FDI are different from those required to raise its quality. But the adoption of the qualitative approach to FDI promotion is associated with a number of challenges for IPAs, as it involves rethinking of existing strategies and significant organizational changes. We have discussed the strategic challenges that IPAs face in the transition from quantity to quality building upon an intellectual capital framework. Presently, the performance of most IPAs is still normally measured primarily by traditional indicators such as the amount of FDI attracted (the volume of investment) and the total number of jobs created. However, a new system of indicators is necessary to evaluate the success of IPAs targeting quality. The strategic reorientation needed to face these challenges will differ significantly across countries, but the present study can still be taken as a broad framework to guide and evaluate such efforts.

Note

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