

# How performance gaps between domestic firms and foreign affiliates matter for economic policy

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Empirical evidence showing that foreign affiliates perform better in almost all areas than their domestic counterparts is piling up. Yet, contrary to arguments of the public debate, it is *not* primarily foreign ownership which accounts for performance gaps between domestic firms and foreign affiliates. Firm-specific assets, firm characteristics, the home country of the parent firms and the transnationality of the firm matter more. Based on a survey of 56 empirical studies, this article establishes a relationship between the size of the performance gaps and the main economic effects of foreign direct investment on the host economy (spillovers; agglomeration effects; market structure; locational competition). The article concludes that policies should be gap-specific rather than ownership-specific. Several gap-specific policies are proposed, focusing on different groups of target firms.

**Key words:** foreign direct investment; performance; economic policy; investment promotion; welfare; firm growth; spillovers; productivity.

## Introduction

The impact of inward investment on the host economy has been studied widely (for example, Dunning 1994). It includes aspects of the balance of payments, employment, capital stock

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and resources, rent shifting, welfare, and dependence. Part of the impact of inward investment on the host economy is related to the existence of performance gaps between foreign-owned and domestically owned firms. Such performance gaps have been revealed empirically in areas like productivity, profitability, wages, skills, labour relations, technology, factor intensity and growth. The role of such performance gaps for policy has not been addressed systematically in the literature.

The traditional view developed on the basis of empirical results (which show that foreign affiliates generally perform better) is that countries with a larger share of foreign affiliates are better off. In other words, raising the share of foreign affiliates will raise the average performance of the total economy. The important question with respect to policy is, whether foreign ownership (that is, the nationality of the investing firm) really explains the performance gaps, as is maintained in policy discussion, or whether there are other explanatory factors.

While the role of the nationality for performance gaps cannot be denied, empirical evidence shows that the explanation of performance gaps is not as straightforward and simple as the above example suggests. If this were the case, there would be a simple policy solution: increase the share of foreign affiliates thereby improving the average performance of the host economy and thus compensating for the weakness of the domestic economy. However, the real situation – never *quite* in line with the idealized picture drawn by theory – suggests that matters are more complicated. Complexity emerges for several reasons. First, assuming that foreign affiliates perform better in all fields denies the variety and interrelationship of the gaps. Second, there are positive and negative externalities from inward foreign direct investment (FDI) (Hanson, 2001) and the net effect thus may well turn out to be negative. Third, there is no single logical argument – apart from differences in corporate governance systems (see below) – that relates to the distinction between domestic firms and foreign affiliates by ownership.

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What then is a more realistic view of the policy relevance of revealed performance gaps in economic terms? This article summarizes the main arguments of how the size of performance gaps matters for policy. Only a systematic exploitation of the theoretical and empirical literature on performance gaps allows us to design *gap-specific policies* rather than just *general policies*, which have been preached for decades (“build human capital”, “lower taxes” etc.). The article concludes that there is only a limited economic argument for discrimination of firms by foreign versus domestic ownership, but distinction between transnational and uni-national firms is relevant.

The article is structured as follows. First, a definition of performance gaps is briefly outlined. Second, empirical results of earlier studies are summarized and the quantitative relevance of performance gaps is shown. Third, the relation of five key impacts of FDI on the host economy and the size of performance gaps are discussed. Fourth, the pros and cons of policy intervention related to performance gaps are outlined. Finally, there is a short concluding section.

### **Performance gaps defined**

The economic theory of transnational corporations (TNCs) deals with the questions: why do TNCs exist? Why do they invest abroad? At the centre of the theory of the TNC lies the specific-advantage hypothesis (Dunning, 1977; Caves 1974, 1996; Koutsoyiannis, 1982; Markusen, 1995). Why these firms invest abroad needs to be explained by the position of the TNC relative to its competitors abroad. It is conceivable that a foreign entrant into a market encounters some disadvantages vis-à-vis established firms, but the specific-advantage hypothesis states that the firm-specific advantage compensates for such disadvantages (Koutsoyiannis, 1982). The specific-advantage theory also argues that firm-specific advantages that allow TNCs to overcome the burden of foreignness in markets abroad constitute the basis of their direct engagement abroad (Dunning, 1973, 1988; Hymer, 1976).

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A key prediction of this strand of theoretical literature then is that the firm-specific advantage gives rise to performance gaps. This argument is consistent with the notion that TNCs in knowledge-intensive industries possess assets, where imitation by competitors is very difficult and diffusion therefore slow. These assets can be denied to competitors (that is kept internally by the creator, the firm) and are transferable within the firm (that is, they are internationally mobile).

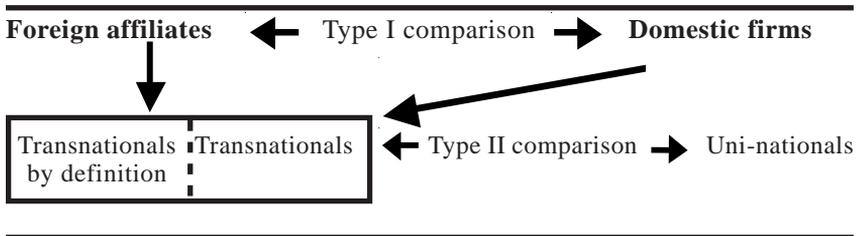
The *incentive to internalize* the advantage stems from the possibility of market failures when contractual market transactions are used. The *mobility* stems from its intangible nature and leads to low marginal cost when the advantage is used in an additional affiliate abroad. TNCs will therefore be concentrated in knowledge-intensive industries, which are generally characterized as growth and high-productivity industries. In the words of James R. Markusen: “multinationals tend to be important in industries and firms with four characteristics: high levels of R&D relative to sales; a large share of professional and technical workers in their workforces; products that are new and / or technically complex; and high levels of product differentiation and advertising. These characteristics appear in many studies, and I have never seen any of them contradicted in any study” (Markusen, 1995, p. 172). A sub-category of the *specific-advantage* hypothesis is the *strategic-advantage* hypothesis put forward by Nicola Acocella (1992), which assumes the firm-specific advantage to be the result of the strategic reactions of firms. It is important here, since TNCs have more options of strategic behaviour than un-national firms. Contrary to the specific-advantage hypothesis, here firm-specific advantages are not assumed as given. The internalization/ownership advantages (IO)-approach argues that the firm-specific advantages referred to above arise “as a product of oligopolistic rivalry” (Acocella, 1992, p. 234). The contribution of the IO-approach is therefore to reintroduce aspects of power and strategic behaviour. The strategic elements of FDI are important and include, for example: creation of excess capacities or overinvestment by the incumbent (foreign affiliate) in order to deter market entry by competitors (Lyons, 1987); the takeover of a competitor to reduce excess capacity and pressure on market

prices; the creation of entry barriers based on firm-specific advantages (for example, Harris, 2002); and the collusion and oligopolistic reactions. What these examples have in common is that their outcome is usually inefficient (Acocella, 1992, p. 241). Such behaviour is especially pronounced with TNCs, since “they face each other in several markets and hence recognize their mutual dependence more fully” (Caves, 1996, p. 90 et seq.).

Yet, to reduce the notion of strategic behaviour to the level of firm competition would fall short of the concept as “strategic interdependence with respect to governments and unions is particularly interesting” (Lyons, 1987, p. 78). It is sufficient to note here that strategic behaviour may also give rise to performance gaps and is especially important in industries in which market dominance and few firms are found. Kamal Abdel-Rahmen (1991), for example, emphasizes that performance gaps between firms with identical products – under given location-specific advantages – are explained by firm-specific, individual behaviour under the conditions of imperfect competition.

The theoretical concepts outlined are based on the firm-specific advantage literature and thus suggest a “Type II comparison” in figure 1. This aspect is stressed *inter alia* by Mark E. Doms and Bradford J. Jensen (1998), who find only small performance gaps between domestic-owned United States TNCs and foreign-owned TNCs in the United States. On the other hand, public perception, which is denoted as “Type I comparison” in figure 1, posits that foreign ownership matters for performance gaps. This view is, however, generally difficult to substantiate in the theoretical literature (Bellak, 2004).

**Figure 1. Type of comparison**



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## Empirical evidence on performance gaps

Turning to the empirical evidence on performance gaps between domestic firms and foreign affiliates and, without trying to generalize, we may briefly report a few results that emerge in many studies. These results, however, should not obscure the fact that the evidence is mixed in most cases. This subsection is based on a thorough survey of 56 empirical studies, most of which are very recent (that is, post-1995).<sup>1</sup> They are mainly studies of productivity gaps and wage and skill gaps. However, the lack of suitable data is still the most serious constraint to empirical analysis. For this reason, most of the studies have to date been carried out in the United States and the United Kingdom. Foreign affiliates generally perform better than domestic-owned firms, no matter which indicator is analysed – with the exception of profitability. Performance gaps may amount to several hundred times that of those recorded for domestic performance, depending on the indicator. To what extent are the five factors found to be relevant in empirical studies? Of course, this depends on the gap in question. Nevertheless, a few tentative results can be outlined.

- (i) *Ownership* mostly explains only a few percentage points of the variance after controlling for other variables.
- (ii) As *firm-specific advantages* cannot be observed *in praxi*, any unexplained variance after controlling for a number of factors is attributed to the transfer of firm-specific advantages. This is related to the next point.
- (iii) For the remaining variance *transnationality of firms* turns out to be important. Intra-firm spillovers between plants in different locations have been shown to be important. Cross-subsidization of plants has been reported in case studies. This means that gaps arise mainly between TNCs, whether they be foreign-owned or not, and uni-national firms (see figure 1 above).

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<sup>1</sup> Since a satisfactory discussion of the empirical results obtained in different studies as well as a comparison of the different methodologies would require considerable space, a summary is provided here. For further and fuller information, see Bellak, 2004.

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- (iv) *Firm-specific characteristics* are important determinants of performance gaps, which are found to be relevant at the establishment level and at the plant level. Primarily, size effects (economies of scale on the firm level) and efficiency are relevant.
  - (v) There have hardly been as yet any representative empirical studies carried out on the performance of TNCs which engage in (technological) *sourcing* abroad. Although there is some evidence derived from patent data and from the motivations for FDI which suggest the importance of such activities, such measures remain indirect. A recent study by Nigel Driffield and James M. Love (2002) showed not only instances of domestic-to-foreign spillovers, but the authors were able to relate these to technology sourcing, since such “reverse spillovers” appear primarily in research and development (R&D)-intensive industries.

The other determinants (“controls”) of the gaps are as follows: *industry distribution* accounts for the possibility that TNCs invest in better performing industries (for example, growth industries). Most studies reveal different impacts according to *parent countries*. While the parent country effect has not yet been explained on a satisfactory basis, corporate governance, history, legal environment, business cultures etc. may be the contributing factors. Factor-endowment differentials like the relative-unit labour cost gaps on the national level also contribute to performance gaps. Overall, the empirical evidence points to a limited explanatory power of foreign ownership and to a high importance of gains from transnationality per se. Thus, the empirical results are largely consistent with the theoretical argument.

### **Economic effects of FDI and the size of performance gaps**

From a policy point of view the sources of an improvement of a host country’s performance derived from inward FDI comprise: (i) the “presence effect” and (ii) the “transmission effect”. In the former case, the average performance of the host economy may be raised *ceteris paribus* by the mere presence of

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foreign affiliates, raising the average through their superior performance. This would reflect the relative disadvantage of the domestic sector (Driver and Temple, 1999, p. 172). In the latter case, the transmission effect may stem from two sources: (ii-1) the performance of domestic firms may be stimulated by spillovers from foreign affiliates to domestic firms (the source of the spillover is the firm-specific asset discussed in the previous section) and (ii-2) as with firm entry in general, the effect of foreign entry on competition may be stimulating or restricting in the affected industry (Caves, 1974).

This subsection raises the question: how are the size of performance gaps and five main effects of inward FDI related? In general economic terms the importance of the areas and the justification of policy intervention is defined by the net outcome of externalities (Hubert and Pain, 2001; Hanson, 2001). Competition among governments for TNCs is partly based on the belief in positive net effects of inward FDI. The size of the gaps is chosen as a decisive variable, since policies often aim to reduce the size of performance gaps of domestic-owned firms. Of central interest is the question: how to prevent negative effects and how to stimulate positive effects (direct and indirect)?

### *Spillover effects and linkage effects*

Spillovers may take the form of positive or negative externalities arising from inward FDI (Blomström and Kokko, 1998; Blomström, 2002). They may emerge as intra-firm or within-industry, as inter-firm or across-industry spillovers (Hubert and Pain, 2001) and may derive from any forward or backward linkages between domestic firms and foreign affiliates. On the recipient side, spillovers “depend crucially on the conditions for local firms” (Blomström, 2002, p. 177).

Brian Aitken et al. (1996, p. 363) discuss the relationship between the size of spillovers and gaps (see also Blomström and Sjöholm, 1999). The larger the former, the lower should be the dispersion of the performance. Mona Haddad and Ann Harrison (1993, p. 53) find that foreign affiliates have higher

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levels of productivity, but their rate of productivity growth is lower than for domestic-owned firms. Rather than suggesting a catch-up process, they conclude that domestic-owned firms do not have higher productivity *growth* in industries with a larger foreign presence (see also Aitken et al., 1997). The size of the gaps is thus one determinant for the likelihood of spillovers to occur between foreign-owned and domestic-owned firms (see for example, Driffield and Taylor, 1999; Girma et al., 2001; Hubert and Pain, 2001). *Small* gaps may typically arise in an industrialized country setting with high intra-industry FDI, where indigenous and investing firms from abroad have achieved a certain managerial and technical level. In such cases, spillovers may even tend to flow from domestic firms to foreign affiliates, yet generally will be small.

If gaps are of *medium* size, benefits derived from foreign affiliates are likely to be high in terms of technology spillovers (Girma et al., 2001; Castellani and Zanfei, 2002). A large absorptive capacity (Cohen and Levinthal, 1990) of domestic-owned firms is a decisive factor. If gaps are very *large*, such externalities arise to a small extent. Developing countries, which often lack absorptive capacity, will have to reach some threshold of their indigenous sector in order to reap such benefits. As Driffield and Taylor (1999) state, in such a case it is likely that domestic firms are unable to assimilate new technologies and therefore, spillovers are unlikely to occur.

If spillovers depend positively on foreign ownership, industries with a higher share of foreign affiliates should benefit most, while “national / local industries” would lose out with the danger of the emergence of a dual economy. If ownership does not matter, spillovers are possible in all industries and a rise in the foreign share would not automatically guarantee positive indirect effects.

Empirically, positive spillovers are hardly found. Evidence on the existence and magnitude of spillovers (for example, Blomström and Kokko, 1998) suggests that if they are significant at all, their size is rather small. Some studies (for example,

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Aitken and Harrison, 1999) reveal positive spillovers within the foreign sector and negative ones in the domestic sector. (See also Zhou et al., 2002, who reveal an overall positive net effect, despite important negative, that is, crowding-out, effects.) Interesting evidence on spillovers is provided by Sourafel Girma et al. (2001), who show that domestic-owned firms in the United Kingdom are not gaining from the presence of foreign affiliates as there is only a weak link between the growth of FDI and productivity growth (see also Jungnickel, 2002).

The notion of positive spillovers is based on the idea that FDI leads to growth in the host country. Yet, as Caroline Freund and Simeon Djankov (2000, p. 4) argue, on the basis of foreign takeovers in the Republic of Korea, “growth induces FDI”. Thus, reverse causality has to be taken into account here, since gaps tend to be small.<sup>2</sup> The local nature of spillovers has been frequently emphasized and may limit the influence of policy decisions on location decisions of TNCs<sup>3</sup> (Hanson, 2001). Since the net effect of positive and negative spillovers is difficult to calculate, optimal subsidies are difficult to determine.<sup>4</sup>

### *Agglomeration economies*

Agglomeration economies *inter alia* comprise labour market effects, localized spillovers (see above) and supplier network advantages. If foreign ownership determines agglomeration effects they will arise even without the participation of domestic-owned firms and thus may limit inter-firm spillovers to indigenous firms. In contrast, if it does not matter, whether domestic-owned firms or foreign affiliates agglomerate, then foreign affiliates would contribute just their firm-specific advantages and agglomeration economies would arise. Market forces may lead to an additional positive or

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<sup>2</sup> See also Benfratello and Sembenelli (2002) on the issue of causality.

<sup>3</sup> See, e.g. Blomström and Sjöholm (1999): “local participation matters”.

<sup>4</sup> See, e.g. the comment on Doms and Jensen, by Head (1998).

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negative externality, if local concentration of firms attracts new foreign entry.<sup>5</sup>

Therefore, if agglomeration effects are of a limited geographical range as is suggested by the local nature of spillovers, performance gaps between regionally closely located firms should diminish quicker than between distant firms in the host country. The size of the gaps may be less decisive here, but as agglomeration effects are part of the spatial component of spillovers mentioned above, they are of high policy relevance.

### *Effect of ownership change*

The literature on ownership change (for example, mergers, acquisitions) argues first a “disciplining effect” of a takeover on the management, whereby the takeover is stimulated by decreasing share prices. Favourable post-acquisition performance raises the value of the firm (see also Girma and Görg, 1994).<sup>6</sup> Efficiency effects stem from a reduction of labour and are size related. The other approach is to view takeovers as a result of “managerial decisions for growth of the firm” with efficiency considerations often being of a secondary nature.

Other questions related to ownership change are: does the postulated causality hold? Are high-productivity properties more likely to be overtaken? How do they perform after acquisition? Robert McGuckin and Sang Nguyen (1995) show that high-productivity plants (in the United States food industry) are indeed more likely to be taken over and that their growth

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<sup>5</sup> Head, Ries and Ruckman (1998) report such important indirect effects on Japanese affiliates in the United States. Mayer and Mucchielli (1998) also find spatial and temporal agglomeration of Japanese affiliates. Driffield and Love (2002) empirically establish “reverse spillovers” from domestic firms to foreign affiliates in the United Kingdom, which are linked to local agglomeration of firms.

<sup>6</sup> The substantial transaction costs incurred in a takeover may, however, limit efficiency gains. Support of the efficiency view is provided by a careful study of the effects of takeover and merger activity on firm employment in the United Kingdom (Conyon et al., 2002a).

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performance tends to be better compared to plants without ownership change. Notable exceptions are recent studies on the United Kingdom (Conyon et al., 2002b) and Ireland (Girma and Görg, 1994). In the United Kingdom, acquired firms improved their efficiency while growth of unskilled labour declined in the short term in Ireland. Foreign entry has been found to exert effects on indigenous firms in various industries, measured by indicators like profits (for example, Driffield and Munday, 1998), productivity (for example, Baldwin and Gorecki, 1991), excess capacity, growth (Mata and Portugal, 2000), employment (McGuckin et al., 1995) or market share (Baldwin, 1995). These effects need not be necessarily positive as, for example, Driffield and Munday (1998) find that foreign entry leads to a profit squeeze in the domestic sector.

There does not seem to be a close relationship of the change of ownership to the size of gaps, apart from the fact that efficiency gains may be positively correlated. The lower the development of the laggard firm, the easier it is for the acquired firm to catch up.

### *Competition effects*

The effects of inward FDI on the market structure of the host country are varied: Do entrants stimulate competition or do they, by takeovers, contribute to highly concentrated or oligopolistic markets? (Lichtenberg and Siegel, 1987) Further, do TNCs through the creation of linkages, have a positive effect on domestic entry or do they crowd-out domestic firms? Do takeovers lead to efficiency gains within the firm by reducing the gap or does it translate into efficiency gains for the host economy?

Contrary to the literature reviewed, here the gap is not related to some superior asset of the foreign-owned TNC, but is a result of the effect of a foreign-owned entrant on market structure. Entry affects the “rules of the game” and the type of

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entry is important for the costs incurred, since a greenfield investment enjoys all the advantages of a newcomer.<sup>7</sup>

Holger Görg and Eric Strobl (2002a) in their study of the Irish manufacturing sector find a positive effect of the presence of TNCs on indigenous *entry*. This is due to the presence of foreign affiliates in the same industry as well as the presence of foreign affiliates in downstream industries. *Exit* and survival of firms have also been dealt with in the empirical literature, first with respect to a comparison between domestic-owned firms and foreign affiliates and, second, with respect to the effect of a foreign acquisition of a domestic plant. An article by Görg and Strobl (2002b) finds that the risk of exiting is higher in foreign-owned than in domestic-owned firms in Ireland. For Ireland, Girma and Görg (1994) report that acquired Irish firms are more likely to exit, which might be due to the selection process (entry strategy) of foreign affiliates. Yet, as the authors suggest, the exit of (inefficient) acquired plants may positively contribute to restructuring of industries and thus may have a positive effect on the host economy, despite short-run job losses. Here again, the size of the performance gap matters: Girma et al. (2001, p. 131) suggest that firms with inferior performance may be driven out of the industry, while firms with low technology gaps relative to the technological leaders can indirectly benefit from the presence of foreign affiliates regardless of other characteristics in the sector.

### ***Effects on policy-making and on locational competition***

The larger the gaps, the more governments tend to rely on foreign affiliates to “solve” their competitiveness problems. The paradox situation arises that the larger the gaps, the lesser the chance to succeed on a regional or national level. Policy makers

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<sup>7</sup> The newcomer has the advantage of the choice of the optimum location, the implementation of the state-of-the-art technology and the choice of the optimum plant size. Established firms, on the other hand, may be located in marginal location, and may not follow regional shifts of markets or production etc.

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typically assume that performance gaps are due to foreign ownership. Therefore they engage in “locational tournaments” and tend to subsidize inward FDI heavily. This creates high opportunity costs compared to subsidizing growth industries at home. Yet, as Charles Oman (2000, p. 119 et seq.) argues “evidence also fails to support the hypothesis that more intense policy competition for FDI tends to increase the aggregate supply of FDI. ... However, the causal relationship almost certainly has worked in the opposite direction, that is, the significant growth of FDI has spurred competition among governments that want to be sure to attract “their share” of that FDI while its growth lasts”. This points to ineffective policy intervention with a welfare loss for society.

Another gap-related effect is *rent-seeking* behaviour of TNCs. Knowing that through their superior performance they are attractive to governments, such conduct might “bid away most of the benefits after subtracting the cost of the incentive package” (Head, 1998). Playing-off one government against another creates a prisoner’s dilemma situation and incentives will be the higher, the more governments expect from TNCs. Such negative effects have been shown, for example, by Jan Haaland and Ian Wooton (1999) theoretically, namely, that subsidy competition transfers much of the rents to the TNCs and there is also ample empirical evidence (for example, quoted in Hanson, 2001; Loewendahl, 2001; OECD, 2001; UNCTAD, 1996). In addition, *rent extraction* by transfer pricing may seriously reduce public gains of host countries.

## **Policy conclusions**

This final subsection outlines some implications for inward-FDI promotion policies.

The article questioned whether performance gaps and their impact on host countries can give rise to policy measures, and it was argued that there are important market failures involved that justify intervention in the form of FDI promotion. The foregoing discussion has cast doubt on the usefulness of a

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discrimination of firms by ownership. Similar conclusions are reached in the literature on spillovers, summarized for example by Blomström (2002, p. 178): "The use of investment incentives focusing exclusively on foreign affiliates, *although motivated in some cases from a theoretical point of view*, is not a recommended strategy" (emphasis added). Rather it points to structural and firm-specific characteristics as the relevant variables and therefore gap-specific policies are justified. Knowledge of the explanatory factors of performance gaps – other than nationality – is of vital importance for the design of appropriate policy measures. Precondition is a "mutually supportive dynamic interface between the evolving local sources of comparative advantage and the companies' pursuit of sustained global competitiveness" (Pearce, 2001, p. 66).

Giving up past strategies of favouring FDI over domestic investment is frequently demanded as indicated in the following quote: "Foreign affiliates often feel limited by unfair treatment, but overly positive treatment could also hinder their growth since they would be a target of jealousy from local companies. Accordingly, we need to reduce or eliminate unnecessary favouritism ... tax incentives for foreign investment often fail to generate high rates of return..." (*Korean Times*, 2 March 2002, www download).

Since the size of the gap, as has been shown above, is related to the level of development of countries and their particular environment, any specific policy measure must be differentiated by developing and developed countries, as well as economies in transition. Sanjaya Lall (2001) discusses the central problem of applying policy guidelines across a large spectrum of countries.

A few guiding principles are developed below:

- The likely positive and negative externalities, that is, social gains and losses (table 1) derived on a theoretical basis suggest some scope and justification for policy measures.
- As a general rule, following from empirical results but also from the theoretical discussion, policies should be gap-specific rather than ownership-specific.

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**Table 1. Externalities and performance gaps**

Positive	Negative
Spillovers of better performing firms to underperformers	Little empirical evidence of spillovers, yet some on negative spillovers
Spatial dimension of spillovers	Discouragement of entry by local firms
Competition enhancing effect	Crowding-out of weak domestic firms by foreign entry
Linkage creation	Foreign affiliates may reduce the opportunities for domestic agglomerative economies by confining their linkages to foreign suppliers and industrial customers. <sup>a</sup>

Source: author.

<sup>a</sup> See Dunning, 1994, table 4.

A good deal of the effects will depend on whether foreign investors are “stickers” (long-run establishments (see also Sumner, 1999)) or “snatchers” (short-run establishments (McAleese and Counahan, 1979)). Frank Barry et al. (1999) also discuss similar issues with respect to Ireland. How to turn snatchers into stickers in order to maximize the possibility of positive externalities is one important guideline for policy measures.

In principle there are three mutually reinforcing strategies available:

- A. *Rely exclusively on foreign affiliates* (increase the share of foreign affiliates, if the domestic industry is small and weak) and therefore stimulate foreign entry and foreign takeovers. Several types of advantages for domestic firms of being integrated in the (global) network of a TNC after they have been acquired are mentioned in the recent literature:
- Foreign affiliates enjoy better access to foreign markets through intra-firm trade and network economies, such that they can operate more

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profitable on a larger scale (Globerman et al., 1994, p. 154).

- Foreign affiliates can draw on their parent firm's managerial expertise to manage the complexity of larger scale.
- The possibility of spillovers between plants within a multi-plant firm should not be underestimated as a factor in the case of horizontal integration or gains of specialization deriving from the fragmentation of production stages in vertical integration.
- TNCs through their industrial and geographical diversification have a more extensive set of information and better capacity for evaluating different situations (Caves, 1996).
- Instruments available to a TNC against national governments and regulations are more incisive than those used for the same purpose by uni-national firms (for example, transfer pricing).
- Discussion of firm-specific advantages has led to the conclusion that TNCs are found in technology and knowledge-intensive industries. Access to superior technology creates additional possibilities for learning internally and building on existing strengths (path-dependency) is important in endogenous growth processes.
- To tap into local knowledge bases is also easier if a firm is geographically diversified. Non-TNCs may not have these possibilities and operate older, less efficient plants.
- Lastly, accounting practices of TNCs (e.g. profit shifting) may lead to gaps in the financial performance.

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As TNCs are the main vehicles of technology and growth there is a high possibility of success, but this has to be weighed against the costs of losing national sovereignty and the scope for national policy actions. It is an expensive strategy (as the “deepest pockets” will win) and may have detrimental effects on the domestic sectors.

To avoid negative externalities governments may try to induce foreign affiliates to generate/disseminate more externalities (more spillovers, more competition, and more linkages) in a desirable manner and to minimize any TNCs’ negative externalities by way of appropriate measures (like strong commitment of the host government and a high degree of stability and transparency of regulations concerning FDI). Concentrating on TNCs from certain home countries or industries may be desirable in this respect as empirical results suggest large differences in gaps by parent companies. Yet, most locations are not in a position to cherry-pick among the “best TNCs”, that is, the technological leaders from particular home countries (Fosfuri and Motta, 1999, p. 627; Girma et al., 2001, p. 131).

*B. Concentrate on domestic firms* and do not give preferential treatment to foreign affiliates. The larger the gap, the more important is the focus on domestic firms. In particular such a strategy may be relevant for less advanced countries and industries.

- **Sourcing FDI.** As Andrea Fosfuri and Massimo Motta (1999) suggest, a possible route for the less advanced country, which addresses the technology gap, would be to supply “some national firms with the proper incentives to undertake investments in high-tech regions abroad where they could benefit from geographical proximity with market leaders” (p. 627) (that is, sourcing FDI). They argue for a *technology acquisition* rationale for FDI on the basis of spatially-bounded spillovers. In their view laggard firms acquire location-specific knowledge via FDI on which they subsequently build their firm-specific

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advantages. Thus, FDI becomes the source, rather than the consequence of firm-specific advantages, and performance gaps may be reversed. Papanastassiou and Pearce (1997) describe the various roles of affiliates in technology sourcing.

- Internationalization: another aim could be to increase the degree of internationalization of domestic-owned firms, in order to induce more investment in firm-specific assets. Increasing the transnationality of domestic firms may thus help to build up firm-specific assets and may itself endogenously contribute to gap-closing given certain preconditions are met. In some industries, the gains from transnationality will be larger, which implies a concentration on those industries, where the potential is not yet exhausted.
- These gains from transnationality may spillover *within* the firm, thus justifying even outward-FDI promotion. A side effect of outward investment of domestic-owned firms may then be “reverse” spillovers, feeding back to the investing firm.
- Enhancing the absorptive capacity: increasing the absorptive capacity of domestic firms will strengthen their competitiveness. In particular, their capacity to learn should be promoted in order to enhance domestic firms’ ability to capitalize on positive externalities.
- Competition: domestic firms usually do not remain passive upon foreign entry, as they might try to lower their cost by job reduction and increase the capital-intensity of production, by relocation of value-added activities abroad. But such defensive behaviour is only one possibility, as incumbents may try to invest more in firm-specific assets, engage in sourcing FDI and build up (technological) entry barriers. Therefore, policies likely to improve the national innovation system are important forces in stimulating the latter behaviour.

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- A policy which favours domestic start-ups in high-productivity industries may improve diffusion of knowledge into actual production and thus help to narrow technology gaps.
  - Special incentives to domestic firms to catch-up in capabilities (that is, domestic-firm-focused measures, such as R&D subsidies / tax breaks) – independent of TNC-generated externalities – should be considered. Domestic firms lacking firm-specific advantages should directly or indirectly be encouraged to develop competitive advantages. Firms having developed firm-specific advantages should be encouraged to exploit them on a wider scale – either regionally and/or in the form of diversification.

C. *The interaction between the two sectors should be enhanced where possible.* The creation of linkages (table 1) of all kinds and long-term cooperation between domestic and foreign affiliates is, however, only partly a policy task. Local linkages create a high degree of embeddedness, which makes TNCs less mobile. As a general rule, attention should be given to those gaps, where the likelihood of positive externalities in the process of catching-up is highest. Focus should be put on specific industries, either to stimulate within or between industry effects and agglomeration economies.

The gap-specific policies outlined differ considerably from general inward-FDI policies. The ownership of firms plays only a minor role. In the concluding subsection some limitations are discussed to put the proposed policies in perspective.

### **Limitations**

The policy options need to be weighed against common sources of *government failure* in the promotion of inward FDI:

- Generally, the role of foreignness has been overstated compared to the influence of other (structural) factors.

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- Proposed measures have been too crudely introduced, mainly in the form of overbidding of the “deepest pockets”. A lack of *ex post* evaluation hinders improvement. (See also Fosfuri and Motta, 1999, p. 627) “... it is not clear that such policies would be easy to implement correctly”).
  - Empirical results based on questionable or weak methodological evidence may have led to misguided policy advice. One major issue is the aforementioned question of “reverse causality” between FDI and growth.
  - Recent empirical evidence based on sound methodology is mixed and idiosyncratic and only partly justifies government intervention at all. Rather it creates a high degree of uncertainty of what should be implemented.
  - Negative effects of foreign presence, though established in various studies, have too often been deliberately neglected by governments.
  - The local nature of some of the effects may limit the possibility to close these gaps by policy intervention.
  - Incentives have a marginal impact on location decisions of firms (Wells and Wint, 2002).

Given the existence of the various types of government failure outlined above and the fact that TNCs carry these structural characteristics to a considerable extent, gap-specific policies are a first-best strategy. To promote inward FDI in general is only a second-best strategy, since it neglects domestic firms as well as the interactions between foreign and domestic firms. This article seeks to provide a systematic exploitation of the literature on performance gaps in order to design gap-specific policies. The theoretical concepts and the empirical evidence produced so far have provided useful arguments. The efficient implementation and the critical evaluation of the proposed measures are of course indispensable preconditions for the success of the gap-specific policies outlined above.

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