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**Attracting “desirable” FDI:
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Attracting “desirable” FDI: theory and evidence

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A precondition for successful targeting of inward investment is an understanding of its likely impacts. To date, most attempts to assess the “desirability” of FDI have concentrated on short-term first-round impacts. The analysis of the determinants of desirability has tended to focus on simple structural factors, including firm size, entry mode, nationality and stage of value-adding, or classifications based on the motives for investment or affiliate strategy.

This article draws on the literature to develop a conceptual framework of how FDI might be expected to impact on a host economy. This framework is then contrasted with one derived from a major empirical study of the effects of international investment in four emerging economies undertaken by the McKinsey Global Institute. A number of similarities and differences are noted. The most significant difference between the two frameworks is the importance attributed to competitive pressure in the empirical study. The article also identifies a number of ambiguities associated with the concepts of investment targeting and desirability including endogeneity (the interaction of policy interventions and perceived desirability), sensitivity to the types of, and motives for, investment, and the complex effects of policy interventions.

Key words: FDI attraction, investment impact, targeting

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Introduction

There is considerable empirical support for the belief that foreign direct investment (FDI) is playing an increasingly important role in the world economy. FDI inflows as a proportion of gross fixed capital formation increased from just over 2% in the 1970s to almost 5% in the early 1990s (UNCTAD, 1999). Total sales of the foreign affiliates of transnational corporations (TNCs) reached \$17.5 trillion in 2003, some two and a half times higher than the level of world exports (UNCTAD, 2004). Foreign affiliates of TNCs accounted for 11% of world GDP in 2001, compared with 7% in 1990 (UNCTAD, 2002). The growing significance of FDI has important implications for a range of economies seeking growth and development. This is the case for developing, developed, and transition economies.

FDI can play a significant role in the development process (UNCTAD, 1999). Although the critical inputs to development are still viewed primarily in terms of the key factors of production – land, labour, capital, technology – the context within which these are effectively utilized has changed dramatically. In particular, increasing knowledge content, the growing mobility of factors, strong competitive pressure to attract FDI and widespread liberalization, have all impacted on the nature of the development process. This, in turn, has required host developing countries to consider carefully investment in appropriate assets and infrastructure, the coordinated integration of a range of policies (not just those directly affecting international investment), and the avoidance of expensive incentive competition to attract FDI.

Developing or transition economies have used FDI to supplement investment resources, to transfer much needed technology and organizational and managerial skills, to upgrade quality and productivity, and to gain improved access to world markets. More generally, inflows of FDI have stimulated the development of markets and the supporting regulatory infrastructure essential to their efficient working (Child and Tse, 2001; McMillan, 1993).

The competition to attract inward FDI by a wide range of economies has resulted in a number of responses. First, there have been widespread policy changes – more specifically, a marked trend towards the liberalization of regulatory frameworks (UNCTAD, 1999). Second, competition for FDI has contributed to the growing provision of incentives and inducements (Mytelka, 1999). Third, for a number of economies, the desire to avoid extreme competition has encouraged more selective targeting. Ireland is an example of a country that has increased its focus on particular industries, and even particular companies within those industries.

It is this area of selective targeting that is addressed in this article and, particularly, the idea that FDI varies in its “desirability”. “Desirability” appears to be generally interpreted as relating to the magnitude of likely impacts, specifically, economic impacts. A variety of bases for determining desirability have been suggested. A common feature is that they are generally built on simple dichotomies, such as the size of firm (larger firms are thought to be more desirable than smaller firms), industry (higher value-added is preferred to lower value-added), the functional focus of an affiliate (higher order functions such as research and development (R&D) or regional headquarters are preferred to assembly operations), the form of entry mode (greenfield investment is superior to mergers and acquisitions), or the orientation of a firm (Poynter and White, 1984). While the simplicity of such distinctions may appeal to policymakers, they are unlikely to provide meaningful insights into the complex issue of assessing the impact of FDI.

This article attempts to go beyond these simplistic approaches and provides the foundations for a more robust and comprehensive framework for assessing the desirability of FDI. It offers a contribution in three key ways. First, it provides a summary of current understanding of the possible impacts of FDI, bringing together direct and indirect impacts as well as three types of impact – primary, secondary and tertiary. Second, this analysis is then subjected to exploratory testing using the

findings of a recent study on international investment in developing countries (MGI, 2004). Third, the discussion raises a number of issues with regard to what the terms “targeting” and “desirability” mean, including the endogeneity problem of targeting where the impact of FDI depends, at least in part, on the policy framework that exists within a host economy. In this way, appropriate policy can increase the perceived desirability of FDI if it facilitates the attainment of policy goals.

To achieve these purposes, the article is organized into five principal sections. The next section summarizes the literature on approaches to FDI desirability and targeting. This is followed by a discussion and development of a more comprehensive framework for investment assessment. The fourth section develops an empirically based framework drawing on a recent large-scale case-based study. The following section contrasts the two frameworks and develops some of the implications of the findings for maximizing positive impacts and enhancing development. The final section offers conclusions.

Approaches to determining desirable FDI

As suggested above, attempts to define the desirability of FDI have focused on its likely economic impacts. In particular, because of the difficulties of the precise measurement of impacts, the majority of studies have confined themselves to first-round (or primary) impacts. Primary or first-round effects are the aggregate benefits and costs that accrue to an economy as a result of the bundle of resources brought by the investing firm. These effects include employment creation, capital inflows, the provision of technology and the transfer of new managerial and organizational practices.

Such effects are (comparatively) easy to define, and since they tend to manifest themselves largely within the short term, their measurement is more straightforward. This focus has resulted in attempts to try to identify particular types and forms

of FDI that are most likely to deliver the desired effects. We can identify several distinct sets of defining criteria that have been applied.

The first group relates to simple structural characteristics, including the size of the investing firm, the type of FDI in terms of value-adding, investor nationality, mode of market entry, and export-orientation. For many policy-makers there appears to be a preference for attracting larger investors, perhaps because of the expected considerable impact of such firms, a belief that larger firms are more robust or stable, or from a desire to attract perceived industry leaders. Larger TNCs can certainly have a major impact on an economy. For example, in Costa Rica, Hungary and Mexico, the largest three TNCs account for 29%, 26% and 13%, respectively, of total exports (UNCTAD, 2002). While size may be positively correlated with primary impacts, it appears to be negatively related to secondary impacts (which result from spillovers from foreign affiliates to local firms) and the development of linkages in the local market (Barkley and McNamara, 1994; Schachman and Fallis, 1989). Differences in the value-adding stages of FDI have also been used to judge desirability. The general belief is that higher value-added activities have a more significant impact and, hence, are more desirable.

The desirability of activities is also related to the level of a country's factor endowments and development. While a simple, labour-intensive assembly plant may be appropriate for a developing country such as China, Singapore seeks to attract higher-order functions such as R&D, strategic planning or financial management. Evidence on investor nationality is mixed. While early studies asserted that behavioural differences by nationality of investor resulted in differential impacts (Kojima, 1978), the globalization of business strategy means that such differences are unlikely to persist. More recent work suggests that nationality differences may serve as proxies for geographical or psychic distance (Driffield and Noor, 1999; Rodriguez-Clare, 1996).

The mode of entry also has a mixed effect on economic processes, depending on whether one considers primary or secondary impacts. Since greenfield investments normally bring a significant inflow of additional resources, their primary impact is likely to exceed that associated with acquisitions.¹ However, the situation may be reversed in the case of secondary impacts where, in the case of acquisitions, acquiring companies are likely to inherit local linkages that may have been established over a considerable period of time (Scott-Kennel and Enderwick, 2004; UNCTAD, 2000). The attraction of export-orientation as an indicator of investment desirability follows from the powerful links between economic openness, trade and growth. But the attraction of export-oriented investment is not based solely on its growth, or balance-of-payments effects. Rather, there is growing evidence that export-oriented FDI can play an important dynamic role in shifting and upgrading, over time, the productive structure of host economies (UNCTAD, 2002).

A second approach, which attempts to go beyond simple structural characteristics, focuses on the motives for FDI and relates these to expected impacts. John H. Dunning (1993) provides a widely used classification based on four primary motives: resource-seeking, market-seeking, efficiency-seeking and strategic asset seeking investment. The different motives for investment could imply differential impacts and the need for appropriate locational advantages if positive impacts are to be maximized. For example, resource-seeking investment is likely to have strong primary impacts as complementary ownership advantages are attracted to a host economy, but secondary impacts through the development of linkages may be low. Tertiary impacts on the general level of a country's infrastructure or utilization of natural resources may be more significant. In contrast, strategic asset seeking investments may occur in the form of acquisitions with limited primary impacts but stronger secondary effects where ownership advantages are transferred through collaborative arrangements.

¹ Provided that the crowding out effects of a greenfield investment are not significant this is likely to be the case. See UNCTAD (1999).

There is an element of dynamism underlying this approach when it is recognized that changes in the world economy, in particular declining costs of coordinating and integrating international business activities, have favoured a shift towards efficiency- and strategic-asset seeking FDI (Dunning and Narula, 1997).

A third and related approach, which draws on the strategy of TNCs and, in particular, the orientation or role of foreign affiliates, has a considerable legacy. The early studies emphasized the stage of development of a TNC, its likely strategy and its international orientation (Keegan, 1995; Perlmutter, 1969; Poynter and White, 1984). These characteristics and orientation were then related to likely impacts. For example, a TNC at an early stage of development was thought likely to display an ethnocentric orientation and operate a centralized strategy with affiliates taking the form of miniature replicas. Local sourcing and, hence, linkages, were expected to be low. Clearly, this approach is based on an incrementalist view of internationalization which delineates distinct, sequential stages of development.

Such an approach is less valuable in a dynamic global economy with declining information and transaction costs. Similarly, it also fails to recognize that a TNC's corporate strategy may provide the mechanism to incorporate and upgrade country-specific locational advantages within globally integrated international production systems that bring considerable dynamic competitive advantages (UNCTAD, 2002). More recent applications have applied strategy concepts such as the integration-responsiveness paradigm to identify the role of foreign affiliates and, from this, likely impacts (Jarillo and Martinez, 1990; Taggart, 1996; Liang and Nicholas, 2002).

While this approach is based on an essentially static typology, it does highlight the likelihood of shifts in the roles of foreign affiliates over time and, perhaps most importantly, of the need to relate locational advantages to their roles.

It is only a short step to a fourth approach which is currently being emphasized (UNCTAD, 2001), one that links the desirability of FDI to selective targeting designed to meet development goals. This approach is distinctive in a number of ways. First, rather than simply trying to relate TNC strategy or affiliate role to locational conditions, there is an attempt to link desired FDI to explicit development objectives. Such a view is based on the recognition that FDI is a means to an end and not an end in itself. The purpose of FDI, from the perspective of a host country government, is to contribute to competitiveness growth or development goals.

Second, neither the terms of an investment nor locational conditions are taken as given; both can be subject to policy intervention and manipulation. Effectively this means that the desirability of an investment project becomes endogenous.² At the most fundamental level there is a recognition of the distinction between the gross and net desirability of an investment. The difference between these two is accounted for by concessions such as incentives that may have to be provided to attract FDI. In this case, the relative bargaining strengths of the two parties – the host country government and the investing TNC – become relevant. At a more sophisticated level, targeting may focus on a limited number of competitive industries, a matching of investor assets and host country resources or the underlying sources of competitive advantage such as the facets of Michael Porter's diamond (Dunning, 1992). There is some evidence that targeting specific desired outcomes may be more effective in maximizing economic impacts than focusing on input variables such as firm or industry characteristics (Driffield and Noor, 1999).

Third, an effective targeting strategy is dynamic and should be capable of incorporating changing developmental goals as

² I recognize that investment desirability may also be a co- or joint product, that is, interactions between policy and the characteristics of the investment may increase desirability. A simple example would be where a government coordinates the supply of immobile assets with the specific needs of a proposed investor.

an economy evolves. While a targeting approach appears to offer considerable benefits in maximizing the developmental impact of FDI, it is subject to a clear limitation that arises from the endogeneity of desirability. To target appropriately, a government needs to be able to assess desirability. Thus, a targeting approach needs to be guided by a clear understanding of the likely impacts of various investments. That is the purpose of the framework summarized in the following section.

Development of the conceptual framework

Figure 1 summarizes the framework. Start by considering the current rate of economic growth and level of development of an economy. This influences the policy priorities of the country's government and, in particular, what it seeks to obtain from FDI. At the same time, a country's rate of growth and development level also in part determine the attractiveness of the economy as a location for FDI.

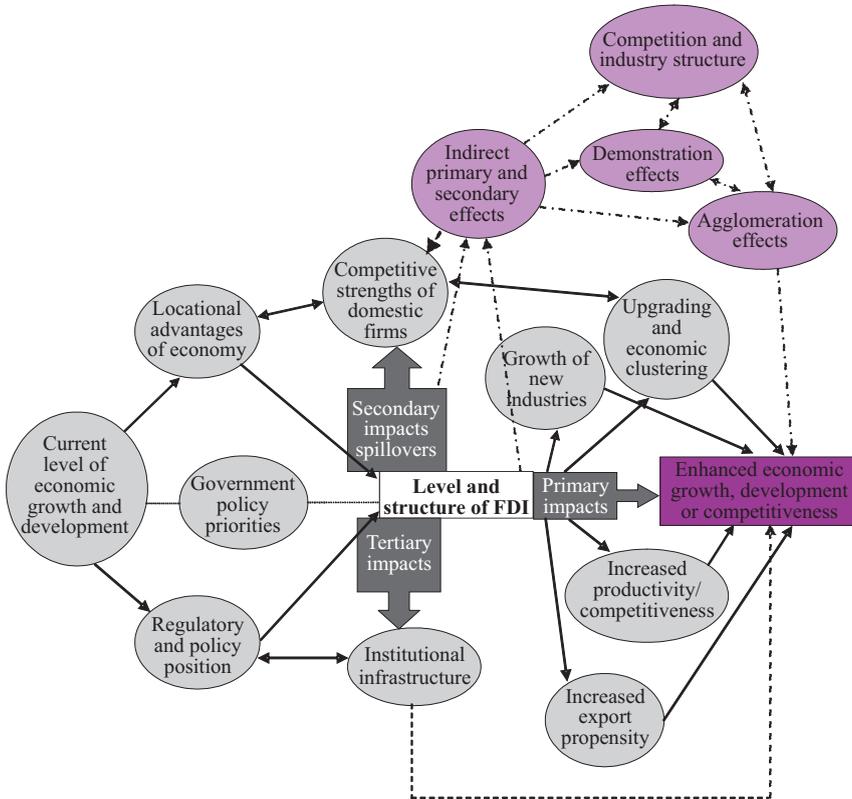
The two principal determinants of locational attractiveness identified in the model are the locational advantages of an economy and its regulatory and policy position. Locational advantages are well developed in the literature (Dunning, 1993) and encompass both simple factors such as natural resource endowments or market size, as well as created assets, including skilled labour, technological capability and infrastructure.

A country's regulatory and policy position is also likely to influence the level and structure of inward investment. FDI may be discouraged by what investors perceive to be overly onerous regulations or restrictions. This seems to have been the experience of India in the late 1970s and early 1980s. Similarly, policies that encourage particular entry modes such as joint ventures influence both the level and type of FDI received. An FDI policy that includes an element of targeting is likely to lead to a narrower range of foreign-owned activities within a country.

The combination of the locational advantages of an economy and its policy stances are the key determinants of the

level and type of FDI received. It is also notable that there is, in this framework, a two-way linkage between the locational advantages of an economy and the competitive strength of domestic firms. The assumption is that domestic firms draw competitive advantages from the locational assets of the economy, e.g. low cost labour or opportunities to process natural resources, in ways that may complement or compete with the aims of foreign investors. The activities of local firms influence the attractiveness of an economy in the eyes of foreign investors where domestic firms may be seen as complementary to the activities of foreign investors (suppliers, joint venture partners), or they constitute a potential asset (perhaps where resources

Figure 1. The impact of FDI in theory



Source: the author.

are under-utilized or managed inefficiently, or have unique and valued capabilities).

There is also a link between the regulatory and policy position of a country and its institutional infrastructure. Effectively, this captures the degree of policy effectiveness and credibility. Successful and consistent policy implementation is likely to be positively related to the level of institutional development. Similarly, as the level and sophistication of institutional infrastructure increases, more complex and discriminating policy options become possible.

The level and type of FDI that is attracted has various impacts on a host economy. The model distinguishes three principal levels of impact. The magnitude of each depends on a number of factors, the most important of which include the entry mode adopted, the assimilative capability of an economy and the policy environment of a host country.³

Direct effects

Primary impacts that result from ownership advantages and resources brought by foreign affiliates affect the rate of growth, development level or degree of competition directly in a number of ways. The first is the possibility of developing entirely new industries or activities. Examples include computer chips and pharmaceutical products in Ireland or clothing products in Sri Lanka and Mauritius. Where such activities displace declining industries, provide opportunities for higher value-added or enable industrial diversification, they may upgrade economic activity.

A second direct primary impact operates through increased export propensity. The growth and development impetus of export industries means that they offer considerable potential benefits. In addition to overcoming various domestic market

³ There may be dynamic or aggregation effects that influence the impact of FDI and that are not captured in the model. These will be considered in the subsequent discussion.

constraints, such industries are subject to the competitive discipline of competition in world markets. The reality of breaking into such industries, particularly those based on high levels of technology, means that TNC involvement may be both desirable and necessary (UNCTAD, 2002).

A third direct primary effect shown in figure 1 is increased productivity or competitiveness of resource use. This effect follows from the belief that TNCs bring both distinctive resources as well as the possibility of more efficient resource use. Differences in the economic, social and political contexts of home and host countries determine the distinctive nature of the bundle of resources transferred by a foreign investor. Such differences can enhance productivity through innovative combinations of foreign and local resources. Furthermore, the ways in which resources are utilized may differ as a result of their incorporation within a transnational production system (Dunning, 1992). There is considerable empirical evidence suggesting that the productivity performance of foreign affiliates is generally higher than that of uni-national local firms (Caves, 1996).

The fourth form of direct primary impact occurs through upgrading and economic clustering. It is important to distinguish these effects from those that occur through spillovers to local firms (secondary effects). In the case of direct primary upgrading and economic clustering, foreign investors engage in activities not available to domestic firms, perhaps because of a lack of technology, know-how or market awareness. An example is provided by the New Zealand forestry industry which was able to upgrade into the processing of medium density fibreboard following the importation of the necessary know-how by Japanese investors. The establishment of medium density fibreboard processing also fostered an important economic cluster linking wood processing, adhesive suppliers and fabricators.

As figure 1 shows, upgrading and economic clustering are linked to the competitive strengths of domestic firms. This occurs because domestic firms may provide the foundation for

upgrading (perhaps because of the prevailing underutilization of resources) and the critical mass for successful clusters. In turn, local firms may also benefit from the entry of foreign investors into similar or related industries.

The secondary direct impact of FDI occurs through the development of linkages and demonstration effects. As the figure shows, the principal route for such effects is through domestic firms.⁴ As domestic firms benefit from spillovers or demonstration effects, they add to the locational advantages of the economy and contribute to economic clustering and upgrading. The determinants of secondary or spill-over effects are complex (UNCTAD, 2001b).

The tertiary⁵ impacts of FDI are likely to affect economic outcomes indirectly. Their principal influence is through the formation and development of institutional infrastructure. These effects are of particular value to least developed countries and transition economies. In turn, the development of a country's institutional infrastructure can contribute to policy options and effectiveness as well as more directly to economic efficiency. More generally, FDI can assist the integration of a host economy into the world economic system and helps maintain its openness (Sachs and Warner, 1995).

Indirect effects

In addition to their direct impact on a host country's economy, FDI may also have indirect effects. Impacts of this type are difficult to measure and, as a result, have not been given much consideration in desirability and impact studies. They may,

⁴ This mechanism is implicit within the Investment Development Path model (Dunning and Narula, 1998) whereby inward investment contributes to the competitive advantage of domestic firms which, in due course, may become outward investors.

⁵ Tertiary effects refer to the cumulative impacts of FDI and may manifest themselves as changes in the structure or nature of an industry, institutional development or enhanced national competitiveness.

however, be significant and, as a result, need to be incorporated into robust decision-making.

Figure 1 shows three key indirect effects stemming from both primary and secondary impacts. The first, and often the most significant, relate to effects on competition and industry structure. The entry of foreign investors to an existing industry may have a sizeable impact on the structure and level of competition. The magnitude and relevance of this impact depends, in turn, on the mode of entry, regulatory policy and the bargaining strength of the investing firm and the host country government. All other things being equal, greenfield FDI is likely to have a more significant impact on structure and competition than an acquisition. Indeed, in a number of transition economies many of the benefits of privatisation have been lost where a private (foreign) monopoly simply replaces a State monopoly. Strong anti-trust policy may also be necessary to ensure that the full competitive effects of FDI actually materialize. Such policies should not distinguish between domestic and foreign firms; rather they should simply focus on maximizing the welfare-enhancing effects of competition.⁶ The likelihood of such policies (or their effective application) is related to the bargaining power of the two parties. Powerful TNCs may bargain for competitive relief (perhaps in the form of import restrictions, limits on the number of competitors or assured markets) as a precondition for investment. In such a case, the net desirability of the investment is likely to be less than the gross expectation.

The second indirect impact occurs through demonstration effects. In such a case, the activities of foreign affiliates provide valuable knowledge to domestic firms. Unlike direct impacts that are transferred through linkages, demonstration effects occur in a more nebulous fashion. A good example is provided by the

⁶ Clearly this does not mean simply maximizing the number of competitors in an industry as the relationship between structure and welfare is more complicated than this. Similarly, it may be necessary to distinguish between short-run (allocative) and long-run (dynamic) effects of competition.

international interest in Japanese production methods such as quality circles, just-in-time production and team work which was apparent in the 1980s. The adoption of such approaches by Western firms occurred primarily through the demonstration of apparent benefits rather than direct transfer between linked organizations.

The third indirect impact of FDI on an economy's performance occurs through the creation or strengthening of business clusters and the agglomerative economies that may be enjoyed by all firms, both domestic and foreign. Such effects are of particular importance in high-technology activities where there is evidence of the value of close physical association. For many advanced economies, this type of impact may be of considerable value since it both enables and encourages further specialization, which is fundamental to high-value production.

Figure 1 shows that the three indirect effects are related: this suggests that an economy may experience several effects simultaneously. For example, demonstration effects may be particularly strong within clusters, reinforcing agglomeration economies. At the same time, indirect effects feed back into the impact on the competitive strength of domestic firms. It is apparent that direct and indirect effects can be both substitutes and complements. The most desirable situation is when they operate in a complementary fashion. In this case the skills and resources of foreign investors are transferred directly to local firms through a variety of linkage forms; at the same time, these skills may be emulated by unrelated firms.

A relationship of substitution could occur where foreign firms eschew direct linkages (perhaps because of policy restrictions, the level of competitive assets held by local firms or the existence of considerable cultural gaps). In such a case, the diffusion process is likely to be slower, less significant and biased towards generic and non-proprietary skills. This is likely to mean a reduced impact on growth, development and competitiveness in the short term.

Exploratory test of the framework

In this section I offer a tentative testing of this framework, drawing upon the detailed case studies reported in MGI (2004). This study used an extensive case study approach to explore the impact of FDI in five industries in four emerging markets – Brazil, Mexico, India, China. These countries provide a useful test platform. All are large economies and are at different stages of economic development, with Brazil and Mexico enjoying income levels about twice those of China and India. Their economic experience has also been different: China has grown rapidly, while growth in Mexico and Brazil has been characterized by a high degree of volatility. Their policy environments also display diversity. China has placed considerable reliance upon State-owned enterprises, Brazil has followed an import substitution strategy, India has suffered from pervasive regulation, and Mexican liberalization has been driven by NAFTA membership in 1994. All have moved in recent years to liberalize FDI and have been successful in attracting international investment. Over the period 1995-2000, China attracted the most investment – a cumulative total of \$209 billion, some 70% more than Brazil, three and a half times the level in Mexico, and sixteen times more than India. The contrast provided by two Asian and two Latin American economies enriches the analysis.

We utilize part of this study, the auto industry experience in the four countries, to test the framework shown in figure 1. The auto industry is one that many developing countries seek to establish. It is characterized by considerable scale economies, high capital requirements, a modest rate of technical change, and high tariff levels. For these reasons it is dominated by large TNCs. Within the auto industry, the impact of FDI is largely a result of its integrative nature, and particularly the integration of capital, technology and skills. The MGI study found the overall impact of auto FDI to be positive in all four countries. I provide a summary overview of the four countries and principal findings in table 1.

Table 1. Summary of auto industry FDI impacts: Brazil, Mexico, China, India

Variable	Brazil	Mexico	China	India
<i>Liberalization</i>	From early 1990s, re-established tariffs 1995.	Imports liberalized 1990.	Limited.	Partial in 1983, subsequently in 1993. Still ongoing.
<i>Market size</i>	Tenth largest vehicle producer. 1.7m units in 2002.	Ninth largest vehicle producer. 1.8m units in 2002.	721,000 units in 2001.	More than a half million units.
<i>Type of firms</i>	All foreign investors.	All foreign investors. Top 5 firms have 90% of the market.	Three waves of FDI. VW/Beijing Jeep mid-1980s. Peugeot/Suzuki mid-1990s. GM, Honda, Nissan, Ford late 1990s. Good key domestic firms.	1983 Suzuki entered market. Since mid-1990s most major OEMs entered.
<i>FDI motives</i>	Market seeking (tariff jumping).	Early FDI market seeking (tariff jumping) More recently 70% efficiency seeking; 30% market-seeking.	Market seeking.	Market seeking.
<i>FDI forms</i>	100% greenfield.	100% greenfield.	100% joint ventures with State-owned enterprises.	Joint Ventures 82%; greenfield 18%. Most Joint Ventures subsequently majority foreign owned.
<i>Markets/exports</i>	75% domestic to rest of Latin America.	70-80% exports to North America.	Majority to domestic market. Limited exports.	10% of production now exported.
<i>Capacity changes</i>	1.85m units in 1995. 3m in 2001. Capacity utilization in 2002 = 55%.	1.3m units in 1994. 2m in 2001. OEMs increased capacity by 50% 1994-2000. Full utilization due to United States market.	Sales increased from 455,000 units in 1995 to 721,000 in 2001.	More than half a million units. 13-fold increase since 1983. 40% excess capacity.

Table 1. Summary of auto industry FDI impacts: Brazil, Mexico, China, India (continued)

Variable	Brazil	Mexico	China	India
<i>Labour productivity growth</i>	Strong.	Strong.	Strong.	Increased almost four-fold 1993-2001.
<i>Value added growth</i>	Modest.	High.	High.	-
<i>Employment trends</i>	Modest decline.	Very small growth.	Very small growth.	Stable.
<i>Adjustment processes</i>	Exit of weak firms. Upgrading of incumbents. Importance of competitive pressure.	Increased specialization and rationalization. Spillovers to the components industry.	Direct effects (operational improvements and economies of scale). Indirect competitive pressure.	Exit of weak firms. Upgrading of incumbents. Both direct and indirect effects.
<i>Productivity increased through</i>	Automation in old plants. Creation of new plants.	Incremental investment in existing plants. Increased specialization and rationalization.	New FDI by OEMs. Increased efficiency through transfer of best practice and increased economies of scale.	Infusion of new capital and technology. Increased productivity in incumbent firms. Emergence of a components industry.
<i>Economies of scale</i>	Increased product diversity limits scale economies.	Units per model produced increased from 24,000 to 58,000 1995-2001. Reduced diversity in production (consumer choice increased due to imports). Little shift in market shares.	Some increase.	Many sub-optimal plants.
<i>Imports/exports</i>	-	17% of all United States vehicle imports in 2001, up from 8% in 1994.	Exports of FBU vehicles small. Some export of components. Imports subject to 25% tariff on FBU vehicles.	Major importer of components.

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Table 1. Summary of auto industry FDI impacts: Brazil, Mexico, China, India (concluded)

Variable	Brazil	Mexico	China	India
<i>Sectoral spillovers</i>	Structural changes in components manufacture but productivity growth less than in vehicle assembly.	Structural changes in components manufacture but productivity growth less than in vehicle assembly.	OEMs invested directly in components industry.	Components industry has more than tripled in size. Significant OEM outsourcing. FDI by major international component makers, increasing quality and reliability.
<i>Domestic firms</i>	Last one exited early 1990s.	-	Very small and weak.	Exit of PAL in early 1990s.
<i>Profitability</i>	Declined for veteran OEMs. Poor for new entrants. (competition and market volatility).	-	High. Above expected risk adjusted rate of return.	Declined. A clear link between market share and profitability.
<i>Gap to best practice</i>	Medium.	Medium.	High. Average productivity at 13 joint ventures just 21% of United States levels.	Very high. Historically, domestic producers highly protected. Restrictions on FDI and imports persist.
<i>Impact of FDI has been</i>	Positive.	Very positive.	Positive (limited by low levels of competition).	Very positive.

Source: the author, based upon MGI (2004).

Using the data summarized here, figure 2 summarizes the impact of FDI in the auto industry in Brazil, Mexico, India and China. While there are clearly differences in experience between these four countries, there are sufficient commonalities to derive figure 2.

Discussion of the two frameworks

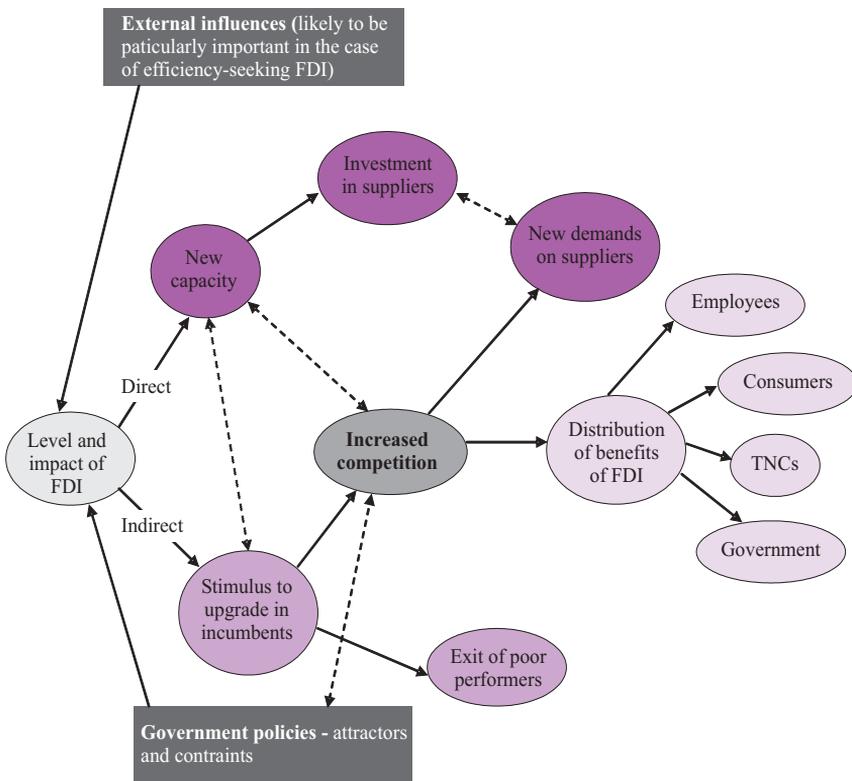
When the conceptual framework of figure 1 is compared with the empirically-based figure 2, a number of similarities and differences become apparent.

In terms of similarities, three main points are noteworthy. First, both frameworks identify direct and indirect impacts. The direct impacts are a reflection of the volume of FDI received and the conditions under which this is assimilated. For both approaches, competition and the ability to establish minimum scale or critical mass are significant influences on direct impacts. Indirect impacts are also central to both frameworks. The primary indirect impact occurs through spillovers. However, some differences in emphasis are apparent. The empirical framework emphasises the importance of spillover effects on incumbent firms and foreign-owned suppliers. Conceptual approaches tend to focus on spillovers to indigenous competitors and suppliers. Furthermore, it is competitive pressure that drives spillover effects in the empirical work. This is in addition to the linkage mechanisms (joint ventures, technological cooperation etc.) that are normally emphasized in conceptual thinking.

Second, the mechanisms by which the effects of FDI are diffused are broadly similar. For both frameworks, the drivers of increased productivity are automation, innovative management practices and the adoption of superior technologies. There are some differences in the underlying determinants of productivity improvements. In conceptual thinking, the motive is generally opportunities for increased profits. The empirical work highlights the need to upgrade simply to survive in the face of intense competition.

Third, both frameworks identify the importance of the entry mode and the motive for investment as significant determinants of the impact of FDI. For example, case studies of Mexico highlight the importance of efficiency-seeking investment. Such investment has encouraged specialization and rationalization. This has enabled producers to achieve economies of scale. At the same time, trade in finished vehicles has increased both market competition and consumer choice. Where the principal motive for investment is market seeking, and this is coupled with restrictions on imports (the situation in China), TNCs face lower levels of competition and excess profits may persist.

Figure 2. The impact of FDI in practice: the auto industry in four emerging economies



Source: the author.

Differences between the two frameworks are striking. There are important differences in locational advantages, the role of government policy and the recipients of the benefits of FDI. The empirical analysis emphasizes the centrality of government policies. In the conceptual framework, it is government priorities with regard to growth and development goals that are stressed. Similarly, the empirical work focuses more on the locational advantages of the (automobile) industry as opposed to country advantages. This probably more accurately reflects the decision-making process followed by large TNCs, particularly industry-specific businesses such as vehicle producers. A further difference is apparent in that the conceptual approaches emphasize the stimulus to domestic firms; empirical thinking, certainly in an established global industry dominated by large TNCs, also includes the shock effect experienced by incumbent firms.

Second, the case results highlight the criticality of economies of scale and not simply industry restructuring. In part this is linked to the importance attributed to the level of competitive pressure experienced by both new investors and established firms. In turn, the degree of competition is largely attributable to government policy decisions with regard to import restrictions, incentives and local content requirements. Competitive pressure is the driver of change and improvement in the case work, not simply absorptive capability of domestic businesses and presumed linkages between international and local firms. The degree of importance assigned to competitive pressure is perhaps the most important difference between the two frameworks.

Third, the empirical work gives greater emphasis to the distribution of the effects of FDI and how this impacts consumers, producers, employees, and government. In the four case countries examined, consumers are the principal beneficiaries. Similarly, the empirical work pays scant regard to the tertiary impacts of FDI, emphasizing primary and secondary impacts.

I recognize that this testing of the conceptual framework is, at best, exploratory. There are obvious limitations with any single industry study, and one that encompasses four very different emerging economies. Furthermore, the distinctive characteristics of the automobile industry – importance of economies of scale, domination by a small number of global TNCs, high levels of foreign ownership and control of the upstream supply industry – limit the generality of the empirical framework. Nevertheless, despite these limitations the contrasts do highlight our limited understanding of what determines the impact of FDI and how policy-makers can maximize the desirability of inward investment.

Conclusions

This article developed a conceptual framework for understanding the impact of FDI based on relevant literature. It was then contrasted with empirically-derived case evidence for the automobile industry in four emerging economies. A number of differences between the two frameworks can be discussed. The most important relates to the role of competition. In the case studies, the level of competitive pressure is the key determinant of both the magnitude and the distribution of the benefits of FDI. A number of conclusions can be drawn.

First, it is apparent that the conceptual literature on attracting desirable investment places a far greater emphasis on investor characteristics than does the empirical work which highlights the importance of the investment environment and policy regime. Of particular importance is the role of competition-related policy. Clearly, both investor characteristics and the business climate are important. For policy-makers, it is worth noting that different policy interventions are likely to have complex and perhaps contradictory effects. For example, import restrictions may increase the amount of inward investment due to tariff jumping, but the subsequent effect of limiting competition is likely to reduce the impact of an investment as well as the distribution of the benefits.

Second, the idea of “desirability” is a problematic one. There is clearly an endogeneity or joint-production problem: policy interventions determine, at least in part, FDI impacts. This means that desirability cannot be assessed independently of the investment climate. The focus in much of the conceptual work on investor characteristics needs to be supplemented with a consideration of the circumstances in which a firm’s competitive advantages are applied.

Third, generalizations regarding the desirability and impact of FDI are sensitive to both the type of, and motives for, investment. This adds to the complexity of effective FDI targeting.

Finally, there also appears to be some confusion regarding the meaning of FDI targeting. In the conceptual literature, targeting focuses on specific industries or firms in an attempt to build critical mass in new industries, deepen clusters or introduce new skills and technology. In the empirical work considered here, targeting is equated with the provision of incentives and other inducements. Clarification of the precise meaning of a targeted approach would be helpful.

In summary, the discussion offered here suggests that there is a significant gap between our understanding of how we think we maximize the desirability of inward investment and what happens in practice. If, as suggested by UNCTAD (2003), there is a need to emphasise the developmental benefits of FDI, we need a clearer understanding of effective targeting and what determines the desirability of international investment. ■

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