



Foreign Direct Investment for Development

**MAXIMISING BENEFITS,
MINIMISING COSTS**



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MINIMISING COSTS



ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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- to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;
- to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and
- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

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OPTIMISER LES AVANTAGES, MINIMISER LES COÛTS

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Foreword

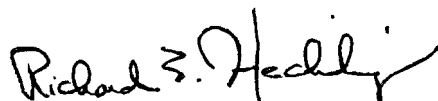
This OECD report responds to the international community's reinvigorated efforts to mobilise foreign direct investment in support of development. The Doha Development Agenda, the Monterrey Consensus, the New Partnership for Africa's Development, the 2002 OECD Ministerial and the Johannesburg World Summit all underscore the importance of international investment in achieving sustainable development goals and ensuring that poor countries are not left behind and benefit from globalisation.

Foreign Direct Investment for Development represents the first comprehensive OECD study of the development dimensions of foreign direct investment (FDI). It is the result of extensive work and consultation by the OECD investment policy community represented by the Committee on International Investment and Multinational Enterprises. It addresses a wide number of issues, among which:

- What is the impact of FDI on macro-economic growth?
- What is the link with trade integration?
- How can FDI best contribute to technology diffusion and human capital formation in the local economy?
- Is FDI beneficial for sound competition, enterprise restructuring and corporate governance?
- How does it affect social and environmental performance of the host countries?
- What are the policy requirements to maximise the benefits and minimise the costs of FDI?

While possible drawbacks of FDI are reviewed, one of the main findings of the report is that the benefits generally outweigh the costs by a wide margin. Yet the benefits of FDI do not accrue automatically. Policies matter greatly for developing countries' ability to reap fully these benefits. The report reviews main areas for consideration by policy-makers, together with supporting actions from developed countries and the role of responsible international business.

Building on this work and other similar initiatives, the OECD is committed to engaging non-member countries and civil society partners in experience sharing and dialogue to enhance the role of international investment as a catalyst for poverty alleviation in the world as a whole.



Richard Hecklinger
Deputy Secretary-General

Note by the editor

This report was prepared within the framework of the activities of the Committee for International Investment and Multinational Enterprises (CIME). It is based on a study by the OECD Secretariat, which was reviewed by members and observers in the Committee at its meetings in December 2001 and April 2002. The process included consultations with the Business and Industry Advisory Committee, Trade Union Advisory Committee and other civil society partners of the Committee. This report has been approved for publication by CIME.

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Overview

Foreign direct investment (FDI) is an integral part of an open and effective international economic system and a major catalyst to development. Yet, the benefits of FDI do not accrue automatically and evenly across countries, sectors and local communities. National policies and the international investment architecture matter for attracting FDI to a larger number of developing countries and for reaping the full benefits of FDI for development. The challenges primarily address host countries, which need to establish a transparent, broad and effective enabling policy environment for investment and to build the human and institutional capacities to implement them.

With most FDI flows originating from OECD countries, developed countries can contribute to advancing this agenda. They can facilitate developing countries' access to international markets and technology, and ensure policy coherence for development more generally; use overseas development assistance (ODA) to leverage public/private investment projects; encourage non-OECD countries to integrate further into rules-based international frameworks for investment; actively promote the OECD Guidelines for Multinational Enterprises, together with other elements of the OECD Declaration on International Investment; and share with non-members the OECD peer review-based approach to building investment capacity.

Summary and Conclusions

Developing countries, emerging economies and countries in transition have come increasingly to see FDI as a source of economic development and modernisation, income growth and employment. Countries have liberalised their FDI regimes and pursued other policies to attract investment. They have addressed the issue of how best to pursue domestic policies to maximise the benefits of foreign presence in the domestic economy. The study *Foreign Direct Investment for Development* attempts primarily to shed light on the second issue, by focusing on the overall effect of FDI on macroeconomic growth and other welfare-enhancing processes, and on the channels through which these benefits take effect.

The overall benefits of FDI for developing country economies are well documented. Given the appropriate host-country policies and a basic level of development, a preponderance of studies shows that FDI triggers technology spillovers, assists human capital formation, contributes to international trade integration, helps create a more competitive business environment and enhances enterprise development. All of these contribute to higher economic growth, which is the most potent tool for alleviating poverty in developing countries. Moreover, beyond the strictly economic benefits, FDI may help improve environmental and social conditions in the host country by, for example, transferring “cleaner” technologies and leading to more socially responsible corporate policies.

The present study focuses on maximising the benefits of foreign corporate presence...

... while also taking stock of the possible costs and proposing ways to reduce them.

The report does not focus solely on the positive effects of FDI for development. It also addresses concerns about potential drawbacks for host economies, economic as well as non-economic. While many of the drawbacks, referred to as “costs” in this report, arguably reflect shortcomings in the domestic policies of host countries, important challenges may nevertheless arise when these shortcomings cannot easily be addressed. Potential drawbacks include a deterioration of the balance of payments as profits are repatriated (albeit often offset by incoming FDI), a lack of positive linkages with local communities, the potentially harmful environmental impact of FDI, especially in the extractive and heavy industries, social disruptions of accelerated commercialisation in less developed countries, and the effects on competition in national markets. Moreover, some host country authorities perceive an increasing dependence on internationally operating enterprises as representing a loss of political sovereignty. Even some expected benefits may prove elusive if, for example, the host economy, in its current state of economic development, is not able to take advantage of the technologies or know-how transferred through FDI.

I. Trends

FDI hit new records in 1999 and 2000...

The magnitude of FDI flows continued to set records through the last decade, before falling back in 2001. In 2000, world total inflows reached 1.3 trillion US dollars (USD) – or four times the levels of five years earlier. More than 80 % of the recipients of these inflows, and more than 90 % of the initiators of the outflows, were located in “developed countries”. A breakdown of the outflows from OECD countries is provided in Table 1.

... and although developed countries were the main recipients, developing countries also received economically significant sums...

The limited share of FDI that goes to developing countries is spread very unevenly, with two-thirds of total FDI flows from OECD members to non-OECD countries going to Asia and Latin America. Within regions there are some strong concentrations on a few countries, such as China and Singapore in the case of Asia. Even so, FDI inflows represent significant sums for many developing countries, several of them recording levels of FDI, relative to the size of the domestic economy, that overshadow the largest OECD

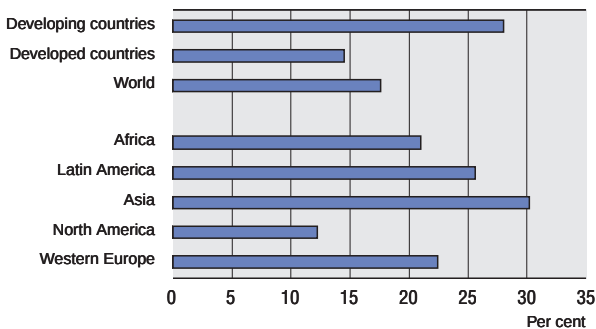
Table 1. **OECD FDI outflows by region**

	In USD million				Percentage of total			
	1985	1990	1995	2000	1985	1990	1995	2000
WORLD	61 277	235 836	335 194	1 068 786	100	100	100	100
of which:								
OECD countries	42 055	189 166	263 716	904 349	68.6	80.2	79.7	84.6
Non-OECD countries	19 222	46 670	71 437	137 747	31.4	19.8	21.3	12.9
of which:								
Africa	404	195	3 100	7 267	0.7	0.1	0.9	0.7
Asia*	2 171	12 650	25 106	29 494	3.5	5.4	7.5	2.8
Europe*	8	408	3 570	14 026	0.0	0.2	1.1	1.3
Latin America and Caribbean*	9 101	18 948	23 632	68 374	14.9	8.0	7.1	6.4
Near and Middle East	212	1 056	1 936	1 571	0.3	0.4	0.6	0.1
Unallocated	7 325	13 413	14 093	17 015	12.0	5.7	4.2	1.6

* Excluding OECD countries.

Source: OECD International Direct Investment Statistics.

economies (Figure 1). Moreover, the flow of FDI to developing countries worldwide currently overshadows official development assistance by a wide margin, further highlighting the need to address the use of FDI as a tool for economic development. The African continent's apparent problem with attracting FDI is briefly discussed in Box 1.

Figure 1. **Inward FDI stock, 2000 (share of GDP)**

Source: UNCTAD

Box 1. Inward FDI in Africa

The entire African continent (except South Africa) received FDI inflows worth an estimated US\$ 8.2 billion in 2000. For comparison, this equals the amount of inward FDI attracted by Finland this year, and it represented a mere 0.6 per cent of total world FDI flows. Several recent studies have discussed the possible reasons for this seemingly spectacular failure of African countries at attracting foreign investors.

The main factors motivating FDI into Africa in recent decades appear to have been the availability of natural resources in the host countries (*e.g.* investment in the oil industries of Nigeria and Angola) and, to a lesser extent, the size of the domestic economy. The reasons for the lacklustre FDI in most other African countries are most likely the same factors that have contributed to a generally low rate of private investment to GDP across the continent. Studies have attributed this to the fact that, while gross returns on investment can be very high in Africa, the effect is more than counterbalanced by high taxes and a significant risk of capital losses. As for the risk factors, analysts now agree that three of them may be particularly pertinent: macroeconomic instability; loss of assets due to non-enforceability of contracts; and physical destruction caused by armed conflicts.¹ The second of these may be particularly discouraging to investors domiciled abroad, since they are generally excluded from the informal networks of agreements and enforcement that develop in the absence of a transparent judicial system.

Several other factors holding back FDI have been proposed in recent studies, notably the perceived sustainability of national economic policies, poor quality of public services and closed trade regimes.² Even where the obstacles to FDI do not seem insurmountable, investors may have powerful incentives to adopt a wait-and-see attitude. FDI (and especially greenfield investment) contains an important irreversible element, so where investors' risk perception is heightened the inducement would have to be massive to make them undertake FDI as opposed to deferring their decision.³ This problem is compounded where a deficit of democracy, or of other kinds of political legitimacy, makes the system of government prone to sudden changes. Finally, a lack of effective regional trade integration efforts has been singled out as a factor.⁴ Due to this, national markets remained small and grew at a modest pace (and, in some cases, they even contracted).

A few countries have, however, been able to attract FDI, apparently by virtue of the quality of their domestic business climates. It has been argued that countries such as Mozambique, Namibia, Senegal and Mali in the late 1990s became perceived as having a relatively benign investment environment.⁵ This seems to have resulted primarily from government policies toward trade liberalisation; the launch of privatisation programmes; modernising investment codes and adopting international FDI agreements; developing a few priority projects of wider economic impact; and, finally, engaging in high-profile publicity efforts, aimed at informing investors of these improvements.

Box 1. Inward FDI in Africa (cont.)

1. E. Hernández-Catá (2000), "Raising Growth and Investment in Sub-Saharan Africa: What Can Be Done?", IMF Policy Discussion Paper, PDP/00/4.
2. See, for example, D. Dollar and W. Easterly (1998), "The Search for the Key: Aid, Investment and Policies in Africa", World Bank Working Paper.
3. L. Serván (1996), "Irreversibility, Uncertainty and Private Investment: Analytical Issues and Some Lessons for Africa", World Bank Working Paper.
4. N. Odenthal (2001), "FDI in Sub-Saharan Africa", Technical Paper No. 173, OECD Development Centre.
5. J. Morisset (2000), "Foreign Direct Investment in Africa: Policies also Matter", World Bank Working Paper.

In recent years, an increasingly large share of FDI flows has been through mergers and acquisitions (M&As). This partly reflects a flurry of transatlantic corporate takeovers, and partly the large-scale privatisation programmes that were implemented throughout much of the world in the 1990s. In developing countries, however, greenfield investment has remained the predominant mode of entry for direct investors, followed by foreign companies' participation in privatisations.

*... mainly
in the form
of greenfield
investment.*

II. FDI and growth

Beyond the initial macroeconomic stimulus from the actual investment, FDI influences growth by raising total factor productivity and, more generally, the efficiency of resource use in the recipient economy. This works through three channels: the linkages between FDI and foreign trade flows, the spillovers and other externalities vis-à-vis the host country business sector, and the direct impact on structural factors in the host economy.

Most empirical studies conclude that FDI contributes to both factor productivity and income growth in host countries, beyond what domestic investment normally would trigger. It is more difficult, however, to assess the magnitude of this impact, not least because large FDI inflows to developing countries often concur with unusually high

*The existence of an
"additional" growth
impact of FDI
is widely accepted.
The magnitude
is less clear...*

growth rates triggered by unrelated factors. Whether, as sometimes asserted, the positive effects of FDI are mitigated by a partial “crowding out” of domestic investment is far from clear. Some researchers have found evidence of crowding out, while others conclude that FDI may actually serve to increase domestic investment. Regardless, even where crowding out does take place, the net effect generally remains beneficial, not least as the replacement tends to result in the release of scarce domestic funds for other investment purposes.

*... particularly
in the least
developed
countries, where
low educational
and technological
standards and weak
financial markets
can hold back
the benefits.*

In the least developed economies, FDI seems to have a somewhat smaller effect on growth, which has been attributed to the presence of “threshold externalities”. Apparently, developing countries need to have reached a certain level of development in education, technology, infrastructure and health before being able to benefit from a foreign presence in their markets. Imperfect and underdeveloped financial markets may also prevent a country from reaping the full benefits of FDI. Weak financial intermediation hits domestic enterprises much harder than it does multinational enterprises (MNEs). In some cases it may lead to a scarcity of financial resources that precludes them from seizing the business opportunities arising from the foreign presence. Foreign investors’ participation in physical infrastructure and in the financial sectors (subject to adequate regulatory frameworks) can help on these two grounds.

a) Trade and investment

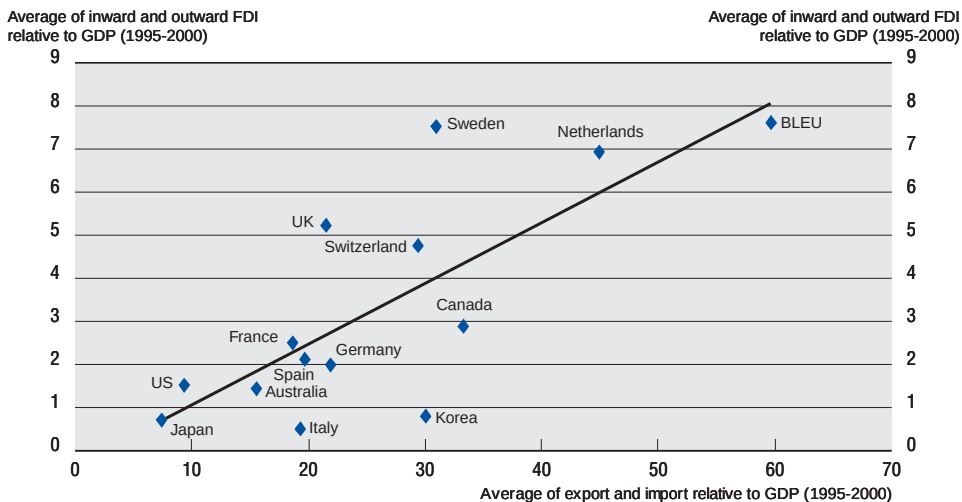
While the empirical evidence of FDI's effects on host-country foreign trade differs significantly across countries and economic sectors, a consensus is nevertheless emerging that the FDI-trade linkage must be seen in a broader context than the direct impact of investment on imports and exports. The main trade-related benefit of FDI for developing countries lies in its long-term contribution to integrating the host economy more closely into the world economy in a process likely to include higher imports as well as exports. In other words, trade and investment are increasingly recognised as mutually reinforcing channels for cross-border activities. However, host-country authorities need to consider the short and medium-term impacts of FDI on foreign trade

as well, particularly when faced with current-account pressures, and they sometimes have to face the question of whether some of the foreign-owned enterprises' transactions with their mother companies could diminish foreign reserves.

As countries develop and approach industrialised-nation status, inward FDI contributes to their further integration into the global economy by engendering and boosting foreign trade flows (the link between openness to trade and investment is illustrated by Figure 2). Apparently, several factors are at play. They include the development and strengthening of international networks of related enterprises and an increasing importance of foreign subsidiaries in MNEs' strategies for distribution, sales and marketing. In both cases, this leads to an important policy conclusion, namely that a developing country's ability to attract FDI is influenced significantly by the entrant's subsequent access to engage in importing and exporting activities. This, in turn, implies that would-be host countries should consider a policy of openness to international trade as central in

FDI generally occurs in tandem with greater international trade integration, which may reflect increasing vertical integration as well as the establishment of transnational distribution networks.

Figure 2. The openness to FDI and trade



Source: OECD International Direct Investment Statistics and OECD Economic Outlook.

their strategies to benefit from FDI, and that, by restricting imports from developing countries, home countries effectively curtail these countries' ability to attract foreign direct investment. Host countries could consider a strategy of attracting FDI through raising the size of the relevant market by pursuing policies of regional trade liberalisation and integration.

The ability of FDI to contribute to developing export capabilities depends on context. Export-processing zones may be a tool for closer integration into world trade, but they come at a cost.

Host countries' ability to use FDI as a means to increase exports in the short and medium term depends on the context. The clearest examples of FDI boosting exports are found where inward investment helps host countries that had been financially constrained make use either of their resource endowment (*e.g.* foreign investment in mineral extraction) or their geographical location (*e.g.* investment in some transition economies). Targeted measures to harness the benefits of FDI for integrating host economies more closely into international trade flows, notably by establishing export-processing zones (EPZs), have attracted increasing attention. In many cases they have contributed to a raising of imports as well as exports of developing countries. However, it is not clear whether the benefits to the domestic economy justify drawbacks such as the cost to the public purse of maintaining EPZs or the risks of creating an uneven playing field between domestic and foreign enterprises and of triggering international bidding wars.

FDI has generally not been an appropriate tool for import-substitution strategies.

Recent studies do not support the presumption that lesser developed countries may use inward FDI as a substitute for imports. Rather, FDI tends to lead to an upsurge in imports, which is often gradually reduced as local companies acquire the skills to serve as subcontractors to the entrant MNEs.

6) Technology transfers

Economic literature identifies technology transfers as perhaps the most important channel through which foreign corporate presence may produce positive externalities in the host developing economy. MNEs are the developed world's most important source of corporate research and development (R&D) activity, and they generally possess a higher level of technology than is available in developing countries, so they

have the potential to generate considerable technological spillovers. However, whether and to what extent MNEs facilitate such spillovers varies according to context and sectors.

Technology transfer and diffusion work via four interrelated channels: vertical linkages with suppliers or purchasers in the host countries; horizontal linkages with competing or complementary companies in the same industry; migration of skilled labour; and the internationalisation of R&D. The evidence of positive spillovers is strongest and most consistent in the case of vertical linkages, in particular, the “backward” linkages with local suppliers in developing countries. MNEs generally are found to provide technical assistance, training and other information to raise the quality of the suppliers’ products. Many MNEs assist local suppliers in purchasing raw materials and intermediate goods and in modernising or upgrading production facilities.

Reliable empirical evidence on horizontal spillovers is hard to obtain, because the entry of an MNE into a less-developed economy affects the local market structure in ways for which researchers cannot easily control. The relatively few studies on the horizontal dimension of spillovers have found mixed results. One reason for this could be efforts by foreign enterprises to avoid a spillover of know-how to their immediate competition. Some recent evidence appears to indicate that horizontal spillovers are more important between enterprises operating in unrelated sectors.

A proviso relates to the relevance of the technologies transferred. For technology transfer to generate externalities, the technologies need to be relevant to the host-country business sector beyond the company that receives them first. The technological level of the host country’s business sector is of great importance. Evidence suggests that for FDI to have a more positive impact than domestic investment on productivity, the “technology gap” between domestic enterprises and foreign investors must be relatively limited. Where important differences prevail, or where the absolute technological level in the host country is low, local enterprises are unlikely to be able to absorb foreign technologies transferred via MNEs.

Technology transfers are an important aspect of MNE presence, particularly through vertical linkages...

... whereas the importance of horizontal linkages is still the subject of debate.

The effect on growth depends on the “relevance” of the foreign technologies, and on the basic technological level of the host country.

c) Human capital enhancement

The major impact of FDI on human capital in developing countries appears to be indirect, occurring not principally through the efforts of MNEs, but rather from government policies seeking to attract FDI via enhanced human capital. Once individuals are employed by MNE subsidiaries, their human capital may be enhanced further through training and on-the-job learning. Those subsidiaries may also have a positive influence on human capital enhancement in other enterprises with which they develop links, including suppliers. Such enhancement can have further effects as that labour moves to other firms and as some employees become entrepreneurs. Thus, the issue of human capital development is intimately related with other, broader development issues.

Human capital is an essential part of a country's enabling environment. In particular, a certain minimum level of education should be reached...

... and basic labour market standards should be respected.

Investment in general education and other generic human capital is of the utmost importance in creating an enabling environment for FDI. Achieving a certain minimum level of educational attainment is paramount to a country's ability both to attract FDI and to maximise the human capital spillovers from foreign enterprise presence. The minimum level differs between industries and according to other characteristics of the host country's enabling environment; education in itself is unlikely to make a country attractive to foreign direct investors. However, where a significant "knowledge gap" is allowed to persist between foreign entry and the rest of the host economy, no significant spillovers are likely.

Among the other important elements of the enabling environment are the host country's labour market standards. By taking steps against discrimination and abuse, the authorities bolster employees' opportunities to upgrade their human capital, and strengthen their incentives for doing so. Also, a labour market where participants have access to a certain degree of security and social acceptance lends itself more readily to the flexibility that is key to the success of economic strategies based on human capital. It provides an environment in which MNEs based in OECD countries can more easily operate, applying their home country standards and contributing to human capital development. One strategy to further this goal is a wider

adherence to the OECD Declaration on International Investment and Multinational Enterprises, which would further the acceptance of the principles laid down in the Guidelines for Multinational Enterprises.

While the benefits of MNE presence for human capital enhancement are commonly accepted, it is equally clear that their magnitude is significantly smaller than that of general (public) education. The beneficial effects of training provided by FDI can supplement, but not replace, a generic increase in skill levels. The presence of MNEs may, however, provide a useful demonstration effect, as the demand for skilled labour by these enterprises provides host-country authorities with an early indication of what skills are in demand. The challenge for the authorities is to meet this demand in a timely manner while providing education that is of such general usefulness that it does not implicitly favour specific enterprises.

Empirical and anecdotal evidence indicates that, while considerable national and sectoral discrepancies persist, MNEs tend to provide more training and other upgrading of human capital than do domestic enterprises. However, evidence that the human capital thus created spills over to the rest of the host economy is much weaker. Policies to enhance labour-market flexibility and encourage entrepreneurship, among other strategies, could help buttress such spillovers.

Human capital levels and spillovers are closely interrelated with technology transfers. In particular, technologically advanced sectors and host countries are more likely to see human capital spillovers and, conversely, economies with a high human capital component lend themselves more easily to technology spillovers. The implication of this is that efforts to reap the benefits of technology and human capital spillovers could gain effectiveness when policies of technological and educational improvement are undertaken conjointly.

Generic education in the host economy remains essential. Human capital enhancement via foreign subsidiaries may provide a useful supplement...

... especially as MNEs in most cases provide more training than local enterprises.

Technological and educational achievements are mutually reinforcing, which would justify a co-ordinated approach by policy makers.

d) Competition

FDI and the presence of MNEs may exert a significant influence on competition in host-country markets. However, since there is no

commonly accepted way of measuring the degree of competition in a given market, few firm conclusions may be drawn from empirical evidence. The presence of foreign enterprises may greatly assist economic development by spurring domestic competition and thereby leading eventually to higher productivity, lower prices and more efficient resource allocation. Conversely, the entry of MNEs also tends to raise the levels of concentration in host-country markets, which can hurt competition. This risk is exacerbated by any of several factors: if the host country constitutes a separate geographic market, the barriers to entry are high, the host country is small, the entrant has an important international market position, or the host-country competition law framework is weak or weakly enforced.

**Market
concentration
has increased
in response to M&As
and strategies
for corporate
co-operation...**

Market concentration worldwide has increased significantly since the early 1990s due to a wave of M&As that has reshaped the global corporate landscape. At the same time, a surge in the number of strategic alliances has changed the way in which formally independent corporate entities interact. Alliances are generally thought to limit direct competition while generating efficiency gains, but evidence of this is not firmly established. There has also been a wave of privatisations that has attracted considerable foreign direct investment (mainly in developing and emerging countries), and this, too, could have important effects on competition.

**... not least among
developing
countries...**

Empirical studies suggest that the effect of FDI on host-country concentration is, if anything, stronger in developing countries than in more mature economies. This could raise the concern that MNE entry into less-developed countries can be anti-competitive. Moreover, while ample evidence shows MNE entry raising productivity levels among host-country incumbents in developed countries, the evidence from developing countries is weaker. Where such spillovers are found, the magnitude and dispersion of their effects are linked positively to prevailing levels of competition.

However, the direct impact of rising concentration on competition, if any, appears to vary by sector and host country. There are relatively few industries where global concentration has reached levels causing real concern for competition, especially if relevant markets are global in scope. In addition, high levels of concentration in properly defined markets may not result in reduced competition if barriers to entry and exit are low or buyers are in a good position to protect themselves from higher prices.

... but in most cases not to levels that give rise to immediate concerns about competition.

While it is economically desirable that strongly performing foreign competitors be allowed to replace less productive domestic enterprises, policies to safeguard a healthy degree of competition must be in place. Arguably the best way of achieving this is by expanding the “relevant market” by increasing the host economy’s openness to international trade. In addition, efficiency-enhancing national competition laws and enforcement agencies are advisable to minimise the anti-competitive effects of weaker firms exiting the market. When mergers are being reviewed and when possible abuses of dominance cases are being assessed, the accent should be on protecting competition rather than competitors. Modern competition policy focuses on efficiency and protecting consumers; any other approach may lead to competition policy being reduced to an industrial policy that may fail to deliver long-term benefits to consumers.

The strategies for avoiding anti-competitive practices include openness to foreign trade and the tightening of domestic competition rules and practices.

e) Enterprise development

FDI has the potential significantly to spur enterprise development in host countries. The direct impact on the targeted enterprise includes the achievement of synergies within the acquiring MNE, efforts to raise efficiency and reduce costs in the targeted enterprise, and the development of new activities. In addition, efficiency gains may occur in unrelated enterprises through demonstration effects and other spillovers akin to those that lead to technology and human capital spillovers. Available evidence points to a significant improvement in economic efficiency in enterprises acquired by MNEs, albeit to degrees that vary by country and sector. The strongest evidence of improvement is found in industries with economies of scale. Here, the submersion of an individual enterprise into a larger corporate entity generally gives rise to important efficiency gains.

Takeovers generally lead to beneficial upgrades of governance and management, whereby a balance between foreign and domestic competences must be struck.

Foreign-orchestrated takeovers lead to changes in management and corporate governance. MNEs generally impose their own company policies, internal reporting systems and principles of information disclosure on acquired enterprises (although cases of learning from subsidiaries have also been seen), and a number of foreign managers normally come with the takeover. Insofar as foreign corporate practices are superior to the ones prevailing in the host economy, this may boost corporate efficiency, empirical studies have found. However, to the extent that country-specific competences are an asset for managers in subsidiaries, MNEs need to strive toward an optimal mix of local and foreign management.

The experiences with foreign participation in privatisations have been positive, although measures to boost efficiencies have sometimes been politically controversial.

An important special case relates to foreign participation in the privatisation of government-owned enterprises. Experiences, many of them from the transition economies in East and Central Europe, have been largely positive; participation by MNEs in privatisations has consistently improved the efficiency of the acquired enterprises. Some political controversies have, however, occurred because the efficiency gains were often associated with sizeable near-term job losses. Moreover, the value of FDI in connection with privatisation in transition economies could partly reflect the fact that few domestic strategic investors have access to sufficient finance. In those few cases where domestic private investors were brought into previously publicly owned enterprises, important efficiency gains resulted.

The privatisation of utilities in developing countries has sometimes given rise to problems with safeguarding competition.

The privatisation of utilities is often particularly sensitive, as these enterprises often enjoy monopolistic market power, at least within segments of the local economy. The first-best privatisation strategy is arguably to link privatisation with an opening of markets to greater competition. But where the privatised entity remains largely unreconstructed prior to privatisation, local authorities often resort to attracting foreign investors by promising them protection from competition for a designated period. In this case there is a heightened need for strong, independent domestic regulatory oversight.

Overall, the picture of the effects of FDI on enterprise restructuring that we can derive from recent experience may be too positive, because investors will have picked their targets among enterprises with a potential for achieving efficiency gains. However, from a policy perspective, this makes little difference, as long as foreign investors differ from domestic investors in their ability or willingness to improve efficiency or realise new business opportunities. Authorities aiming to improve the economic efficiency of their domestic business sectors have incentives to encourage FDI as a vehicle for enterprise restructuring.

Authorities have incentives to use FDI as a tool in their strategies toward enterprise development and restructuring.

III. FDI and environmental and social concerns

FDI has the potential to bring social and environmental benefits to host economies through the dissemination of good practices and technologies within MNEs, and through their subsequent spillovers to domestic enterprises. There is a risk, however, that foreign-owned enterprises could use FDI to “export” production no longer approved in their home countries. In this case, and especially where host-country authorities are keen to attract FDI, there would be a risk of a lowering or a freezing of regulatory standards. In fact, there is little empirical evidence to support the risk scenario.

The direct environmental impact of FDI is generally positive, at least where host-country environmental policies are adequate. There are, however, examples to the contrary, especially in particular industries and sectors. Most importantly, to reap the full environmental benefits of inward FDI, adequate local capacities are needed, as regards environmental practices and the broader technological capabilities of host-country enterprises.

While responsibility rests largely with the host-country authorities, FDI has a strong potential to benefit the environment...

The technologies that are transferred to developing countries in connection with foreign direct investment tend to be more modern, and environmentally “cleaner”, than what is locally available. Moreover, positive externalities have been observed where local imitation, employment turnover and supply-chain requirements led to more general environmental improvements in the host economy. There have been some instances, however, of MNEs moving equipment deemed environmentally unsuitable in the home country to their affiliates in developing countries.

... since MNEs generally possess “cleaner” and more modern technologies.

The use of such inferior technology will usually not be in the better interest of a company; this demonstrates the sort of environmental risk associated with FDI.

There is little evidence of MNEs inducing host countries to loosen their environmental standards.

Empirical studies have found little support for the assertion that policy makers' efforts to attract FDI may lead to "pollution havens" or a "race to the bottom". The possibility of a "regulatory chill", however, is harder to refute for the lack of a counterfactual scenario. Apparently, the cost of environmental compliance is so limited (and the cost to a firm's reputation of being seen to try to avoid them so great) that most MNEs allocate production to developing countries regardless of these countries' environmental regulations. The evidence supporting this argument seems to depend on the wealth and the degree of environmental concern in the MNEs' other countries of operation.

FDI may help address social concerns by acting as a tool to alleviate poverty...

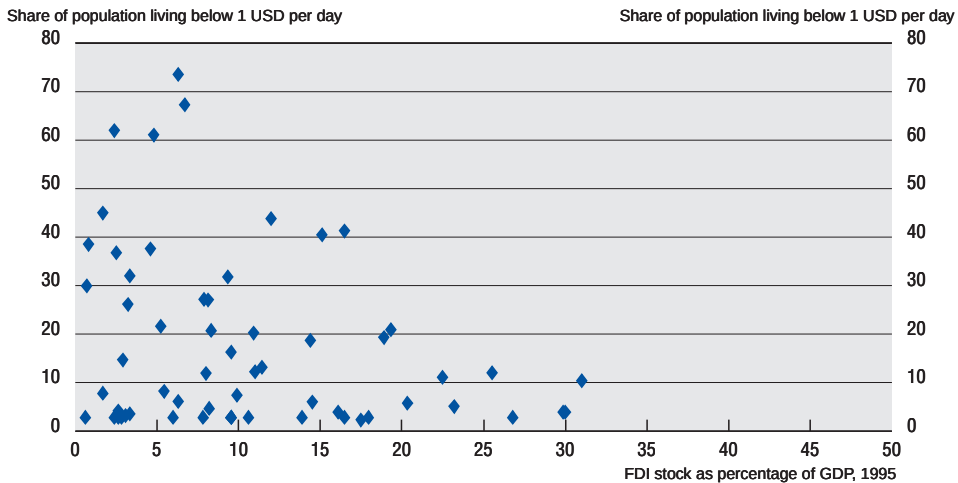
Empirical evidence of the social consequences of FDI is far from abundant. Overall, however, it supports the notion that foreign investment may help reduce poverty and improve social conditions (see also Figure 3). The general effects of FDI on growth are essential. Studies have found that higher incomes in developing countries generally benefit the poorest segments of the population proportionately. The beneficial effects of FDI on poverty reduction are potentially stronger when FDI is employed as a tool to develop labour-intensive industries – and where it is anchored in the adherence of MNEs to national labour law and internationally accepted labour standards.

... especially as most MNEs take an interest in furthering social cohesion and labour standards.

There are, however, some examples, in specific countries and sectors, of the opposite effect.

There is little evidence that foreign corporate presence in developing countries leads to a general deterioration of basic social values, such as core labour standards. On the contrary, empirical studies have found a positive relationship between FDI and workers' rights. Low labour standards may, in some cases, even act as a deterrent to FDI, due to investors' concerns about their reputation elsewhere in the world and their fears of social unrest in the host country. Problems may, however, arise in specific contexts. For example, the non-trivial role that EPZs play in many developing countries could, some have argued, raise concerns regarding the respect for basic social values.

Figure 3. Poverty and inward FDI stock (in 60 developing countries)



Source: World Development Indications.

IV. Conclusion: benefits and costs

The main policy conclusion that can be drawn from the study is that the economic benefits of FDI are real, but they do not accrue automatically. To reap the maximum benefits from foreign corporate presence a healthy enabling environment for business is paramount, which encourages domestic as well as foreign investment, provides incentives for innovation and improvements of skills and contributes to a competitive corporate climate.

The net benefits from FDI do not accrue automatically, and their magnitude differs according to host country and context. The factors that hold back the full benefits of FDI in some developing countries include the level of general education and health, the technological level of host-country enterprises, insufficient openness to trade, weak competition and inadequate regulatory frameworks. Conversely, a level of technological, educational and infrastructure achievement in a developing country does, other things being equal, equip it better to benefit from a foreign presence in its markets.

The magnitude of the benefits from FDI depends on the efforts of host countries to put in place the appropriate frameworks...

... but even less-well performing countries may benefit, inter alia by using FDI as a supplement to scarce financial resources.

FDI-induced economic change may produce some adverse distributional and employment effects in the host country. Both categories of problems should be temporary, but they can be prolonged and aggravated in the absence of appropriate policy responses.

FDI tends to act as a catalyst for underlying strengths and weaknesses in the host economy, bringing to the fore both its advantages and its problems.

Yet even countries at levels of economic development that do not lend themselves to positive externalities from foreign presence may benefit from inward FDI through the limited access to international funding. By easing financial restraint, FDI enables host countries to achieve the higher growth rates that generally emanate from a faster pace of gross fixed capital formation. The eventual economic effect of FDI on economies with little other recourse to finance depends crucially on the policies pursued by host-country authorities. The sectoral composition of an economy can also make a difference. While the service sectors of many developing countries may be underdeveloped and hence unable to attract large inflows of FDI, extractive industries in countries with abundant natural resources can be developed beneficially with the aid of foreign investors.

In addition to the potential drawbacks of inward FDI mentioned earlier, some micro-oriented problems could arise. For instance, while the overall impact of FDI on enterprise development and productivity is almost always positive, it generally also brings distributional changes and a need for industrial restructuring in the host economy. Changes give rise to adjustment costs and are resisted by social groups that do not expect to be among the beneficiaries. Structural rigidities in the host economy exacerbate such costs, not least where labour markets are too slow to provide new opportunities for individuals touched by restructuring. Overall, the costs are best mitigated when appropriate practices are pursued toward flexibility, coupled with macroeconomic stability and the implementation of adequate legal and regulatory frameworks. While the responsibility for this lies largely with host-country authorities, home countries, MNEs and international forums also have important roles to play.

In cases where domestic legal, competition and environmental frameworks are weak or weakly enforced, the presence of financially strong foreign enterprises may not be sufficient to assist economic development – although there are examples (notably in finance) where the entry of MNEs based in OECD member countries has contributed to an upgrading of industry standards. Where economic and legal structures create a healthy environment for business,

the entry of strong foreign corporate contenders tends to stimulate the host-country business sector, whether through competition, vertical linkages or demonstration effects. FDI can be said to act as a catalyst for underlying strengths and weaknesses in the host countries' corporate environments, possibly exacerbating the problems in "non-governance zones", while eliciting the advantages in countries with a more benign business climate and better governance. This reinforces the point made above about the need for host (and home) countries to work to improve regulatory and legal frameworks and other elements that help enable the business sector.

Finally, FDI – like official development aid – cannot be the main source for solving poor countries' development problems. With average inward FDI stocks representing around 15 % of gross domestic capital formation in developing countries, foreign investment acts as a valuable supplement to domestically provided fixed capital rather than a primary source of finance. Countries incapable of raising funds for investment locally are unlikely beneficiaries of FDI. Likewise, while FDI may contribute significantly to human capital formation, the transfer of state-of-the-art technologies, enterprise restructuring and increased competition, it is the host country authorities that must undertake basic efforts to raise education levels, invest in infrastructure and improve the health of domestic business sectors. Domestic subsidiaries of MNEs have the potential to supplement such efforts, and foreign or international agencies may assist, for example through measures to build capacity. But the benign effects of FDI remain contingent upon timely and appropriate policy action by the relevant national authorities.

Countries generally should not base their development strategies on the benefits of FDI. Inward FDI should be seen as a valuable supplement to local efforts rather than as a main source of growth.

V. Policy recommendations

Policies matter for reaping the full benefits of FDI. Foreign investors are influenced by three broad groups of factors: the expected profitability of individual projects; the ease with which subsidiaries' operations in a given country can be integrated in the investor's global strategies; and the overall quality of the host country's enabling environment. Some important parameters that may limit expected profitability

(e.g. local market size and geographical location) are largely outside the influence of policy makers. Moreover, in many cases the profitability of individual investment projects in developing countries may be at least as high as elsewhere. Conversely, developed economies retain clear advantages in the second and third factors mentioned above, which should induce less advanced economies to undertake policy action to catch up. Important factors such as the host country's infrastructure, its integration into the world trade systems and the availability of relevant national competences are all priority areas.

a) The challenges facing host country authorities

Sound FDI policies and policies toward domestic enterprise development are largely equivalent.

Sound host-country policies toward attracting FDI and benefiting from foreign corporate presence are largely equivalent to policies for mobilising domestic resources for productive investment. As stated in the Monterrey Declaration, domestic resources in most cases provide the foundation for self-sustaining development. An enabling domestic business environment is vital not only to mobilise domestic resources but to attract and effectively use international investment.

They fall into three categories, namely...

As the experience of OECD members and other countries has shown, the measures available to host-country authorities fall into three categories: improvements of the general macroeconomic and institutional frameworks; creation of a regulatory environment that is conducive to inward FDI; and upgrading of infrastructure, technology and human competences to the level where the full potential benefits of foreign corporate presence can be realised.

... macroeconomic stability and quality of financial intermediation,

The first of these points establishes the fact that every aspect of host countries' economic and governance practices affects the investment climate. The overall goal for policy makers must, therefore, be to strive for the greatest possible macroeconomic stability and institutional predictability. More concretely (and while macroeconomic and financial enabling environments have not been the focus of the main report), the following recommendations are widely supported:

- Pursue sound macroeconomic policies geared to sustained high economic growth and employment, price stability and sustainable external accounts.

- Promote medium-term fiscal discipline, efficient and socially just tax systems, and prudent public-sector debt management.
- Strengthen domestic financial systems, in order to make domestic financial resources available to supplement and complement foreign investment. A priority area is the development of capital markets and financial instruments to promote savings and provide long-term credit efficiently. This will help alleviate funding constraints in general and allow local enterprise development to benefit those business opportunities arising from foreign corporate activities. This process will entail a progressive implementation of multilaterally agreed financial standards.

The broader enabling environment for FDI is generally identical with best practices for creating a dynamic and competitive domestic business environment. The principles of transparency (both as regards host country regulatory action and business sector practices) and non-discrimination are instrumental in attracting foreign enterprises and in benefiting from their presence in the domestic economy. FDI is unlikely unless investors have a reasonable understanding of the environment in which they will be operating. Moreover, a lack of transparency may lead to illicit and other unethical practices, which generally weaken the host country's business environment (Box 2). In this context, host-country authorities should undertake the following measures:

*... an improved
enabling
environment,*

- Strengthen their efforts to consolidate the rule of law and good governance, including by stepping up efforts against corruption and enhancing policy and regulatory frameworks (*e.g.* as regards competition, financial reporting and intellectual property protection) to foster a dynamic and well-functioning business sector. Such policies will benefit the climate for FDI through their effect on transparency. By bringing a larger share of the informal economy into the open, they will also have important secondary effects on countries' ability to attract investment.
- Work toward increased openness to foreign trade, so the domestic enterprise sector can participate fully

Box 2. **Host-country transparency**

Among the elements of the enabling environment that can be influenced by policies, transparency is arguably the most important. Case studies suggest that companies may, for example, be willing to invest in countries with legal and regulatory frameworks that would not otherwise be considered as “investor friendly”, provided they are able to obtain reasonable clarity about the environment in which they will be operating. Conversely, there appear to be certain threshold levels for transparency beneath which business conditions become so opaque that virtually no investor is willing to enter, regardless of the inducements. Another important factor related to transparency is the degree of social cohesion and stability of the host country. The absence of cohesion and stability greatly adds to investors’ risk perception, and may spark concerns among foreign enterprises about possible damage to their reputations.

The need for transparency relates both to the actions taken by authorities and to the broader business environment of the host country. Given the relative irreversibility of FDI, uncertainties about legislative action and rules enforcement act as major impediments, giving rise to risk premiums and raising fears of discriminatory treatment. A non-transparent host-country business environment raises information costs, diverts corporate energies toward rent-seeking activities, and may give rise to outright crime such as corruption. While this weighs on the host-country business sector, it arguably acts as an even greater discouragement to outsiders, who are not privy to locally available information.

The costs to host-country authorities and enterprises of achieving a high level of transparency, while nontrivial, must be contrasted with the considerable costs to both domestic and foreign investment of maintaining a non-transparent national business environment. Home-country institutions and international organisations may assist host-country authorities through measures toward capacity building.

FDI often contributes to creating a more transparent environment. There are cases of foreign corporate presences encouraging more open government practices, raising corporate transparency and assisting in the fight against corruption. More generally, by inducing MNEs to observe commonly agreed standards such as the OECD Convention on Combating Bribery of Foreign Public Officials, the Declaration on International Investment, and the Guidelines for Multinational Enterprises, home-country authorities can contribute to raising standards for corporate social responsibility in host countries.

in the global economy. This approach should be undertaken jointly with efforts to increase business-sector competition. A combined approach would allow a greater domestic and international openness to business to go hand-in-hand with safeguards

against the negative effects of a rise in concentration. Moreover, the successful elimination of global and regional trade barriers makes participating countries more attractive for FDI, owing to the concomitant expansion of the “relevant” market.

- Enshrine the principle of non-discrimination in national legislation and implement procedures to enforce it through all levels of government and public administration. Given the importance of competition for resource allocation and sustained economic growth, it is essential that foreign entrants should be able to compete without government prejudice, and that incumbent enterprises are not unduly disadvantaged *vis-à-vis* foreign-owned ones.

To reap the maximum benefits from corporate presence in a national economy, domestic competences, technologies and infrastructure need to be sufficiently well developed to allow nationals to take full advantage of the spillovers that foreign-owned enterprises generate. Host-country authorities should therefore – with due regard to the balance between costs and expected benefits, and the state of development of the domestic economy – undertake measures to the following effect:

*... and an upgrading
of the relevant
infrastructure.*

- Put in place, and raise the quality of, relevant physical and technological infrastructure. The presence of such infrastructure is instrumental in attracting MNEs, in allowing national enterprises to integrate the technological spinoffs from foreign-owned enterprises in their production processes, and in facilitating their diffusion through the host economy. Allowing foreign investment in infrastructure sectors and leveraging such investment by means of ODA may assist in these efforts.
- Given the importance of basic, widespread education for development, raise the basic level of education of national workforces. The provision of specialised skills beyond basic education should build on existing competences in the host economy, rather than target the short-term or specific needs of individual foreign-owned enterprises. A healthy workforce population is

also needed, which requires basic public health infrastructure (*e.g.* clean water).

- Implement internationally agreed. Efforts to reduce child labour, eliminate workplace discrimination and remove impediments to collective bargaining are important in their own right. They also serve as tools to upgrade the skills and raise the motivation of the labour force and facilitate linkages with MNEs operating on higher standards. Additionally, a comparatively sound environmental and social framework becomes increasingly important for countries seeking to attract international investments operating on high standards.
- Consider carefully the effects of imposing performance requirements on foreign investors. Rather than justifying performance requirements as a necessary counterweight to generous FDI incentives, countries may wish to reassess the incentive schemes themselves. Moreover, it should be recognised that such requirements may work against efforts to attract higher quality FDI.

b) The challenges facing home-country authorities

Home-country authorities may assist the efforts of host countries, for example by...

While host-country authorities should bear the brunt of the policy adjustments needed to reap the benefits of FDI for development, the home countries of MNEs – and the developed world more generally – should review the ways in which their national policies affect developing countries. Thus, the benefits of FDI that flow from increased international trade integration and diffusion of technology, as mentioned in this report, are influenced significantly by the policies of developed countries.

... liberalising their foreign trade regimes,

Further trade liberalisation would contribute substantially to worldwide economic development, benefiting both developed and developing countries. In the FDI context, the trade policies of developed (home) countries gain a further dimension, insofar as an important share of FDI is contingent upon subsequent trade between related enterprises. Trade barriers and subsidies aimed at limiting imports into developed countries currently impose costs on developing countries (the magnitude of which arguably exceeds aid

flows). The authorities in developed countries could enhance developing countries' ability to attract foreign investment by working to reduce and eventually eliminate these barriers and subsidies.

Home-country governments need to assess the effects that their technology policies may have on the transfer of technologies to the host economy. Authorities can contribute to a positive outcome by encouraging MNEs to consider the technological needs of host countries. The OECD Guidelines for Multinational Enterprises, which adhering countries are committed to promote, stipulate that enterprises should adopt practices that "permit the transfer and rapid diffusion of technologies and know-how, with due regard to the protection of intellectual property rights".* The need for home-country governments to play a role with respect to least developed countries is highlighted by Article 66(2) of the TRIPS Agreement, which states that:

"Developed country members shall provide incentives to enterprises and institutions in the territories for the purpose of promoting and encouraging technology transfer to least-developed country members in order to enable them to create a sound and viable technological base".

While recognising that developed and developing countries generally do not compete for the same investment projects, developed countries should remain attentive to the potential impacts of their measures of subsidising inward direct investment on developing countries' ability to attract FDI.

Another area of action relates to improving the synergies between FDI flows and ODA. While ODA has been, in certain least-developed countries, the only substitute for inadequate FDI, there is evidence that carefully targeted development assistance may assist in leveraging FDI flows and creating a virtuous circle of increasing savings and investment. ODA can be used to buttress or develop institutions and policies in developing countries. This helps create a favourable environment for domestic savings, and

*... encouraging
technology transfers
to developing
countries,*

*... reviewing
their own policies
for attracting FDI,*

*... and exploiting
the synergies
between FDI
and official
development
assistance.*

* The OECD Declaration and Decisions on International Investment and Multinational Enterprises, Annex I, section VII.2.

for domestic and foreign investment and growth. Some donor and recipient countries are already working along these lines. ODA funds can be used to support those areas considered important to investors in determining investment decisions, notably by helping host countries achieve some of the measures outlined in the previous section. Efforts to improve physical infrastructure, human capital and health in developing countries are all cases in point. Moreover, through its effect on social cohesion, ODA may help make developing countries more attractive locations for FDI.

c) The role of multinational enterprises

MNEs also have responsibilities...

The private sector (notably foreign investors) plays a vital role in generating economic growth, and contributing to achieving sustainable development goals. Therefore, the way private enterprises behave and are governed is important in maximising the benefits of FDI for economic development. OECD countries have launched several initiatives to promote responsible corporate behaviour. Among these are the OECD Guidelines for Multinational Enterprises.

... as stipulated, for example, by the OECD Guidelines for Multinational Enterprises...

Along with provisions for national treatment and other elements of the OECD Declaration on International Investment and Multinational Enterprises, voluntary principles and standards for responsible business conduct are provided by the Guidelines for Multinational Enterprises, recommended by 36 OECD and non-OECD governments to MNEs operating in and from their countries. These recommendations can be read as an approach to the Development Agenda now facing the international community in areas such as technology transfer, human capital management practices, transparency and competition. Moreover, companies should refrain from seeking exemptions from national environmental, labour and health standards.

... and by codes of conduct drawn up by the enterprises themselves.

Multinational enterprises have attempted to respond to public concerns by issuing policy statements, or codes of conduct, which set forth their commitments in various areas of business ethics and legal compliance. Management systems have been designed to stimulate compliance with these commitments, and a number of standardised management

systems have emerged. The Guidelines can be used by governments, business associations and other stakeholders to support these initiatives and enlist a larger number of companies in the search for best development practices.

d) *The importance of international co-operation*

International co-operation, whether under the auspices of international organisations or bilaterally, may assist and reinforce the FDI-related efforts of host countries, home countries and multinational enterprises (a point touched upon in the previous section). The added value of co-operation in the context of home countries, or developed countries more broadly, lies in the fact that the fields for policy action suggested above cannot easily be pursued by countries acting alone. Embarking on the vast array of policy measures proposed above for host countries is beyond the capabilities of many poorer nations. This creates a scope for other countries and organisations to help via measures aimed at technical assistance and capacity building.

*International
co-operation
remains vital...*

Against the background of the Doha and Monterrey Declarations, which identify capacity building as a priority area for international co-operation, international organisations and relevant national agencies should carefully assess the need for activities in the field of international investment – particularly FDI. Increased capacity-building measures would focus on assisting developing countries to develop stronger competences in the following fields: general supply-side challenges; formulation and implementation of broad-based policies toward FDI; and the specific architecture for negotiating and implementing international treaties and agreements related to foreign investment.

*... not least in areas
such as investment
capacity building.*

The OECD has a key responsibility to act as a forum for sharing members' experience with capacity building and with investment instruments of co-operation. The OECD's distinctive methodology relies on a peer-review process based on long-tested benchmarking for FDI policies, recommendations from governments with diverse perspectives and cultures, and the monitoring of process.

*The OECD is well
placed to contribute
to these efforts...*

*... which must be
undertaken by
several international
organisations
in concert.*

The success of such an approach will depend on the mechanisms for co-ordinating the use of resources for capacity building and technical assistance. The challenges are so great that no single institution can respond adequately to the needs of developing countries. This implies a need for greater co-operation among investment and aid agencies, and for institutional support to field representatives of aid agencies to engage in a broader range of investment capacity-building activities. Such enhanced responses presuppose that international organisations give investment capacity building a very high priority at both headquarters and the field level.

Chapter I

Introduction: The Complex Nature of FDI

Before reviewing the numerous potential benefits and costs of Foreign Direct Investment (FDI) in the development context, the extreme complexity of FDI bears remembering. Not only do the costs and benefits of investment projects vary by economic sector and according to a host of socio-political factors, further differences emanate from the corporate strategies of investors, the mode of entry of FDI, the cyclical positions of home and host economies, and the economic development of the host country. Empirical and case study evidence of FDI costs and benefits therefore needs to be assessed carefully in light of the complex and special factors that may affect concrete cases. Given these complexities, sweeping conclusions cannot readily be made about universally applying FDI benefits and costs; one-size-fits-all policy prescriptions do not come easily. Nevertheless, in order to create a framework for analysis in the remainder of this report, the following sections draw a stylised picture of some of the most important sources of difference between FDI projects.

I.1. Investors' choice of location

Firms face many options when they extend operations abroad: FDI, exporting, licensing or entering into a joint venture or strategic alliance. Traditional theories of international business cite the advantages of ownership, location and internalisation – widely known as the OLI Paradigm, as described by Dunning in 1993 – to explain why multinational enterprises (MNEs) choose FDI. Ownership advantages are those assets of a firm that allow it to compete successfully in overseas markets, despite having less knowledge of the local market than do local firms, and despite the costs of setting up a foreign affiliate. Ownership advantages usually include superior technology and management knowledge. Location advantages are those benefits that a host country can offer a firm: large markets, low labour or production costs or both, and a good infrastructure. Internalisation advantages refer to transaction costs, and occur when it is cheaper to exploit ownership and location advantages through FDI than it is to export. While ownership and internalisation advantages vary by the investor, the location advantage is specific to the host

country. However, this latter advantage may have gained importance in investors' decision-making process as host countries compete increasingly to attract FDI.

a) Host countries' enabling environment

There is a vast literature on the location advantages of FDI. UNCTAD, the United Nations Conference on Trade and Development, in 1998 presented the main ideas now found systematically in this literature by categorising the location determinants of FDI into three main groups: economic determinants; the host country policy framework for FDI; and business facilitation. Lee and Houde (2000) discuss the six main location advantages of countries, along with the characteristics of the FDI flows they might attract.¹ These advantages consist of:

- *Market size and growth prospects.* Factors such as market size, prospects for market growth, the degree of development and per capita incomes of host countries are important determinants in MNEs' location decisions. Host countries with larger market size, faster economic growth and a higher degree of economic development will provide better opportunities for enterprises to exploit their ownership advantages and create possibilities for economies of scale. FDI attracted by these advantages is called "market-oriented".
- *Natural and human resource endowments – including the cost and productivity of labour.* Factor cost advantages and the availability of natural and human resources are, as discussed below, a driving force behind FDI. FDI oriented towards exports (to the home country or to third countries) seeks in particular to use those comparative advantages related to low labour costs or abundant natural resources. Attention has shifted recently from *natural* endowments of resources and labour to *acquired* endowments of resources, such as the availability of intermediate goods and skilled labour. The availability of strategic assets, such as technological and innovative assets (*e.g.* brand names), has become another important determinant in the location decisions of MNEs.
- *Physical, financial and technological infrastructure.* Differences in infrastructure, such as for transportation, influence FDI location decisions not only amongst candidate countries but amongst regions within a country. FDI is most likely to flow to those areas with good accessibility and consequently lower transportation costs. Besides the quality of highways, railways, sea-ports and airports, the level of telecommunication services has gained increasing importance as the information and telecommunications industries have been transformed in recent decades. High-level local technological capabilities are an important factor for attracting FDI in high-value-added activities.

- *Openness to international trade and access to international markets.* Economic reforms, open-door policies and other efforts to promote trade – *inter alia* through bilateral trade agreements and unilateral actions such as the lowering of tariff barriers – can attract export-oriented FDI. Attractive and strategic geographic positions, adjacent to potential importing countries and providing access to regional and global markets, are also significant factors in attracting FDI, especially FDI flows aimed at exports.
- *The regulatory and policy framework and policy coherence.* General economic, political and social stability forms the background of a host country's FDI policy. A transparent and well-functioning legal framework and business environment is of the first importance since it lowers the (political) risk of doing business in an unfamiliar environment. Rules and regulations regarding the entry and operations of foreign firms, and standards of treatment of foreign firms, are particularly relevant in this respect. Good corporate governance and fair business practices are equally important. Bureaucratic and restrictive administrative practices, coupled with a pervasiveness of bribery, create additional costs. This adversely affects not only initial FDI decisions but also the successive reinvestment of earnings. Also important are policies that affect the functioning and structure of markets, such as policies concerning trade, competition, mergers and acquisitions (M&A), and privatisation, as well as the coherence of such policies. Finally, reliable investment protection is usually a minimum requirement for FDI. Where transparent dispute-settlement procedures are absent, and existing measures are unreasonably interpreted, FDI might be deterred.

b) Factors driving investment decisions

The above factors make certain groups of countries more or less likely to attract FDI. However, actual investment decisions by MNEs are driven by more complex strategic considerations, including the nature of the concrete gains that investors expect from relocating abroad as opposed to investing in their home economy. At its most general, integrated international production involves the allocation of any component in the value-chain of an MNE to the locus where it contributes the most to profitability. Some of the most important “motivation factors” underlying FDI are listed below (for an alternative breakdown, see UNCTAD, 1999b):

- *Resource-seeking FDI.* The arguably “classic” motivation for MNE presence in a developing country is the availability there of abundant or low-priced production factors. While natural resources are the production factor that traditionally has attracted the greatest interest among foreign investors, the availability of skilled inexpensive labour is becoming an increasingly important motivation.

- *Natural resources.* MNEs operating in sectors such as mining, mineral extraction and the operation of large-scale agricultural business are naturally attracted to countries with an abundance of the relevant natural resources. However, in a development context it bears noting that the foreign enterprises tend to directly export most of their production and rely largely on imported inputs, thus (except, arguably, for the case of agriculture) generating limited additional economic activity in the host economies. This tendency may be exacerbated by the import policies of the MNEs' home countries, which in some cases discourage local processing in developing countries.
- *Human resources.* FDI that seeks to benefit from low-priced labour often occurs in conjunction with the efficiency-seeking approaches mentioned below, as MNEs respond to rising wage pressures at home by shifting labour-intensive production processes to developing countries. Moreover, the benefits of FDI over other forms of MNE involvement in labour-intensive industries in developing countries relates to the informational and scale disadvantages that impede host countries from fully benefiting from their factor endowment on their own. In the absence of MNE involvement, it may be very costly for firms in developing countries to penetrate the markets of developed countries.
- *Market-seeking FDI.* Access to host-country markets for processed goods is an important motive for investing in the manufacturing sectors of developing countries, particularly where import-substitution and related policies impede direct export from the home countries. Additional reasons include transport costs, differences in consumer tastes and the sheer magnitude of the host economy. Reinforcing the latter point, the recent formation and/or strengthening of regional groupings appears to have given rise to significant investments to serve enlarged markets from corporate presence within a select few participating countries.²
- *Efficiency-seeking FDI.* MNE strategies to boost efficiency via foreign direct investment into developing countries increasingly go beyond the simple reallocation of labour-intensive production. Under one such strategy, known as "component outsourcing", firms in developing countries undertake to supply MNEs with fully manufactured products that will bear the MNEs' brand names. The potential benefits to the host economy are greater than those of simple labour-seeking relationships, but this also requires that the developing country firms have fairly advanced technological capabilities. Another form of efficiency-seeking FDI is "horizontal" FDI in differentiated products, whereby foreign enterprises are established or acquired to cater to local tastes and quality requirements. This kind of FDI is, however, so far limited to relatively few large or economically advanced developing countries.

- *Strategic asset-seeking* FDI. Enterprises in search of assets giving them a competitive edge – and, in many cases, a degree of incipient monopoly – undertake FDI with the purpose of acquiring “strategic assets”. In some publicised cases, companies have invested abroad to acquire research and development (R&D) capabilities, and some have allocated high value-added activities such as design and R&D away from their home bases. Developing countries may make themselves more attractive to such FDI by investing in human resources and infrastructure. For example, some Asian economies have attracted significant MNE investment into R&D centres and software development activities over the past decade. Another kind of strategic asset sometimes sought by MNEs (from a host country perspective, a generally less beneficial one) is market power, which may be sought either by acquiring foreign direct competitors or by attempting to gain control over parts of the vertical production process.

1.2. The macroeconomic benefits to the host country

The impact of FDI and, in particular, the benefits that a country may seek to reap from inward FDI, depend on macroeconomic factors such as the savings/investment balance of the host country, and on its degree of integration into the international financial system. As for the savings/investment balance, a crucial separation should be made between those developing countries with sufficient domestic savings to finance an optimal rate of capital accumulation, in economic or social terms, and those which fall short of this objective. A second important division occurs between those countries that, in theory, have unrestricted access to finance current account deficits via borrowed funds, and those that lack such access. (The latter separation is notoriously difficult to make in practice. Very few developing countries are entirely cut off from borrowing internationally. The more relevant criterion, arguably, is whether the interest rate premiums levied on international borrowing are inordinately above the expected returns on investment in the host economy.)

The potential channels through which inward FDI can influence macroeconomic performance (and, hence, economic growth) may be divided into three categories. FDI may: 1) boost the total funds available for investment in the host economy; 2) provide a less volatile or “footloose” source of funds than loans and portfolio investment; and 3) contribute to international integration, generate positive externalities or trigger structural reform beyond what domestically funded investment would have achieved. It should, however, be noted that points 1) and 2) are generic benefits from investment that could in principle be derived regardless of the nationality of investors; FDI indirectly helps achieve them by providing additional finance or contributing to a more stable investment environment.

**Table I.1. The potential benefits of inward FDI
(according to host country characteristics)**

	Restricted access to borrowing abroad	Unlimited access to borrowing abroad
Insufficient domestic savings	(1) Increased funds (3) Benefits specific to FDI	(2) Stability of external finance (3) Benefits specific to FDI
Sufficient domestic savings	(3) Benefits specific to FDI	(3) Benefits specific to FDI

Table I.1 offers a stylised representation of the linkages between benefit categories (1), (2) and (3) and the host country's macroeconomic situation.

As illustrated above, the benefits of boosting the funds available for investment through FDI relate largely to countries with rationed access to both domestic and international credit – or which pay risk premiums on borrowed funds that are so high that investment is financed most appropriately through direct investment. The nature of the “rationing” may be due either to a low overall level of national savings or an inefficient financial system unable to assure sufficient credit intermediation. In this category one will naturally expect to find the poorest nations in the world, and countries in areas where a heightened risk of *force majeure* deters financial institutions.

The combination of “insufficient” domestic savings and a relatively free access to borrowing abroad is often found in emerging economies and other countries in a process of rapid industrialisation. Policy makers and enterprises in these economies need to assess FDI in terms of the optimal mix of equity and credit financing of their growth process. FDI is generally considered as a less volatile source of external finance than portfolio investment and loans, especially short-term credits, whereby it supports growth rates by eliminating risk (for a survey of recent evidence, see Chapter III). Additionally, a higher degree of equity financing, whether domestic or foreign, helps reduce the leverage of host-country investors, thereby minimising another potential source of excess volatility.

Finally, insofar as FDI brings macroeconomic advantages beyond the generic benefits of investment, these should apply equally regardless of the macroeconomic position of the host country (but *not* necessarily regardless of the structural features of the host economy, as discussed in this report).

I.3. Economic costs of FDI: Some caveats

The economic “costs” of inward FDI and foreign corporate presence may be defined most meaningfully as any associated welfare loss in the host country. However, this raises conceptual problems insofar as FDI often occurs in conjuncture with, or contributes to, broader economic changes, which may have both positive

and negative effects. For instance, if FDI is used successfully as a tool for engendering economic growth in a given host economy, it would make little sense to characterise any negative fallout from the growth process itself as a cost of FDI.

Moreover, it is important to distinguish between net and gross costs. For example, to improve economic performance in the host economy, FDI needs first to affect prevailing economic structures and practices, and some agents inevitably will see the resultant changes as a deterioration of their situation. Host-country policy makers face the challenge of weighing the social and other costs that may accrue in parts of society against the overall gains from investment. Only in the rare case of drawbacks that are not intrinsically linked with gross benefits from the same investment projects can policy makers focus their FDI policies solely on cost limitation.

Finally, the need to view gross costs over the long term is important. Host-country authorities who view the immediate negative economic effects of FDI as excessive need to take the longer-term impact into account. Notably, FDI that raises macroeconomic productivity or efficiency is likely to have an adverse short-term distributional and employment effect, but with sufficient flexibility and adaptability in the host economy, the longer-term welfare effects will be positive. In the absence of labour and product market flexibility, the adverse effects will persist significantly longer, but this, it can be argued, should be seen as a host-country policy failure, not as an actual cost of FDI.

I.4. Modes of entry

FDI flows consist largely of four categories of capital account transactions (commonly referred to as “modes of entry”), namely: “greenfield” investment (whereby an enterprise is created essentially from scratch); mergers and acquisitions involving significant cross-border elements; earnings reinvested in foreign-owned companies; and cross-border loans and trade credits between related enterprises. The latter two are not of major concern in a development context, whereas reinvested earnings sometimes make up a significant part of the FDI flows between mature economies.

The potential benefits of FDI summarised above apply in principle to all FDI, regardless of modes of entry. Nevertheless, many developing-country governments have expressed a strong preference for greenfield over other types of investment, and some have voiced concerns over the effects of M&As originating abroad. This persistent scepticism towards the takeover of domestic enterprises by foreign investors generally has both political and economic roots.

In *political* terms, host-country authorities may convince their domestic constituency relatively easily of the advantages of greenfield investment, whereas the acquisition of entrenched national enterprises by foreigners often breeds resentment.

Moreover, in cases where host-country authorities use their influence over domestic enterprises to make them pursue aims other than the maximisation of shareholder value, transferring the ownership to foreign investors may be considered as a loss of sovereignty. Finally, where corporate restructuring is a likely outcome of foreign takeovers, M&As, however potentially beneficial to the broader host economy, – are often opposed by powerful interest groups.

The *economic* arguments most often made for preferring greenfield investment to M&As relate to the amount of money eventually made available for productive investment in the host economy. Except for the unlikely case where the sellers of an enterprise promptly reinvest the entire proceeds in the domestic enterprise sector, portfolio reallocation will, at least in the short term, divert some of the M&A proceeds away from productive investment. This scenario is exacerbated where the host country investment climate is perceived as poor, particularly where confidence is so low that the national authorities face problems of capital flight. Another economic argument for greenfield investment is based on the value of FDI as a source of stable external finance. The irreversibility of most greenfield investment makes it a more “patient” source of capital than M&As, at least where M&As take the form of the acquisition of listed equity on secondary markets.

A further rationale for host countries’ preference for greenfield investment could emanate from the fact that the motivation factors surveyed above do not always apply equally across the modes of delivery. A stylised representation is proposed in Table I.2.

While no firm conclusions should be drawn from this simple categorisation, it is interesting to note how resource-seeking FDI, which is almost universally sought by countries at an early stage of economic development, tends to take the form of greenfield investment. Strategic – asset-seeking FDI, on the other hand, consists mainly of enterprise takeovers, and while such investment generally benefits the host country, certain special cases continue to raise concerns among policy makers. Technologies acquired via M&As, for example, may be priced at market values that fail to reflect their potential future external effects, which, if they are subsequently transferred out of the host economy, may lead to an overall economic

Table I.2. **Predominant motivation factors and modes of delivery**

	Greenfield	Mergers and acquisitions
Resource-seeking FDI	Yes	Rare
Market-seeking FDI	Yes	Yes
Efficiency-seeking FDI	Rare	Yes
Strategic-asset seeking FDI	Rare	Yes

loss. Another example of “unwanted” M&As is the case in which foreign investors acquire enterprises with the main purpose of increasing their market power. This may stifle competition in the host economy.

I.5. Organisation of the remainder of the study

The remainder of this paper covers several topics, including recent trends, foreign investment's impact on macroeconomic growth, social and environmental costs and benefits of FDI, and policy approaches aimed at benefiting from FDI. The main focus is on the impact of FDI on economic growth, which is commonly considered as the most potent source of poverty relief, particularly in the poorest countries.

While recognising that FDI is one of the only sources of finance for some countries, and the most stable one for others, the main emphasis is on the *additional* benefits of FDI for development over other kinds of capital formation (benefits type 3 in Table I.1). Economic literature identifies three main channels through which FDI may exert a positive impact on economic growth beyond investment financed by other means. First, FDI may be an essential part of developing countries' integration into world trade flows, and hence a key to realising the commonly recognised benefits of increased international division of labour. Second, the “new growth theories” highlight the role of externalities (*e.g.* technology spillovers and human capital generation) from foreign-induced investment to domestic economic performance. Third, FDI may directly affect business sector performance in host economies by stimulating competition and acting as a catalyst for enterprise restructuring. Each of these channels is reviewed in detail.

The paper is organised as follows (for a more intuitive overview, see Box I.1). Chapter II discusses some recent trends concerning FDI in both OECD member countries and non-OECD countries. Chapter III looks at the overall impact of FDI on economic growth. Chapter IV reviews the linkages between FDI and foreign trade, with special regard to the role of FDI as a catalyst for economic growth through trade integration. Chapter V discusses the evidence that technology transfers have an impact on growth. Chapter VI examines the effects of FDI on human capital formation in the host economy. Chapter VII deals with the impact of FDI on competition in the host-country business sector. Chapter VIII surveys the evidence of an impact of FDI on enterprise restructuring and corporate governance. Chapter IX presents some empirical evidence of the linkages between FDI and non-economic variables such as social and environmental indicators. Chapter X reviews some of the policy developments that have influenced FDI trends over the past decade and discusses selected policy requirements to maximise the benefits of FDI.

Box I.1. **The present study in overview**

Overview

Summary and conclusions

Main Report

Introduction: the complex nature of FDI (Chapter I)

Recent Trends (Chapter II)

FDI's impact on growth (Chapter III)

FDI and Trade linkages (Chapter V)

FDI as a source of externalities:

FDI and human capital formation (Chapter II)

FDI as a source of structural change:

FDI and competition (Chapter III)

FDI and enterprise restructuring (Chapter IV)

FDI and non-Economic indicators of quality of life (Chapter V)

Selected policy approaches toward benefiting from FDI (Chapter VI)

Notes

1. Some of these advantages may fall under several categories. For example, investment promotion and investor protection are both part of the host-country policy framework and business facilitation; and the abundance of cheap natural resource is both resource/asset seeking and efficiency seeking FDI.
2. This holds particularly true for investment into Mexico after the conclusion of the NAFTA agreement.

Chapter II

Recent Trends in FDI

Foreign direct investment has been a defining feature of the world economy and of globalisation over the past 20 years. It implies the creation of enterprises abroad, or the acquisition of substantial stakes in existing foreign enterprises. This form of investment has grown at an unprecedented pace for two decades, exceeding official aid flows by a factor of more than three, with only a slight interruption in this trend during the recession of the early 1990s. More firms than ever, and in more industries and countries, are expanding abroad through direct investment. At the microeconomic level, far-reaching organisational change is taking place as a result of e-business and new technologies, which are transforming the value chain for many industries. MNEs are evolving both in their structures and their FDI strategies.

Today, some 60 000 parent companies worldwide have established more than 500 000 foreign affiliates, with inward FDI stock valued at roughly USD 4 thousand billion. These foreign affiliates are estimated to have generated total gross output of more than USD 2.6 thousand billion and total employment of more than 35 million in host countries. While about 90% of all parent companies are located in OECD member countries, a little more than half of all foreign affiliates operate in non-OECD countries. They provide a major source of industrial production and employment in many emerging and developing economies.¹ This chapter discusses factors determining the location of FDI, and recent trends and the policy developments that influence these trends. An assessment of these recent developments aids in understanding the scope for continued growth in FDI and the potential benefits for developing countries.

II.1. FDI in overview

The growth of world FDI in recent years has been exceptional, and the worldwide production and consumption of goods and services have become increasingly internationalised over the past two decades. The US dollar value of world FDI inflows reached a record USD 1.3 thousand billion in 2000, from just over USD 200 billion in 1993. While at the beginning of the 1990s, FDI flows from OECD member countries to developing countries accounted for around 30% of private

Table II.1. **Total world FDI flows**
USD million

	1995	1996	1997	1998	1999	2000
Total outflows						
World	355 284	391 554	466 030	711 914	1 005 782	1 149 903
OECD	306 148	335 908	400 126	676 816	947 115	1 050 052
(OECD as % of world)	(86%)	(86%)	(86%)	(95%)	(94%)	(91%)
Total inflows						
World	331 068	384 910	477 918	692 544	1 075 049	1 270 764
OECD	223 928	238 884	292 010	511 564	865 143	1 041 909
(OECD as % of world)	(68%)	(62%)	(61%)	(74%)	(80%)	(82%)

Note: Since statistical definitions differ from the ones applied by the OECD International Direct Investment Statistics, the data in this table are not directly comparable with Tables 2, 3 and 4.

Source: UNCTAD *World Investment Report* 2001.

capital flows to developing countries, by 1999 this had risen to as much as 80%. In 1980, the FDI stock represented the equivalent of only 5% of world GDP; by the end of the 1990s, this percentage had more than tripled to 17% (UNCTAD 2001d). However, the vast majority of world investment is very concentrated, and still takes place amongst OECD member countries. More than 90% of world FDI outflows originates in OECD member countries. In recent years, these countries have received around three-quarters of FDI inflows as well (Table II.1).

However, even among OECD countries there are significant differences (Table II.2). The 15 member states of the European Union were collectively the largest source of FDI, followed by two North American members of OECD, Canada and the United States. In contrast, the relative importance of Asia-Pacific members of OECD fell dramatically, from more than 20% in 1989-91 to a mere 3.5% in 1998-2000. This was due mainly to the diminishing role of Japan as a source country, relative to the European and North American counterparts.

a) Sectors and modes of entry

The relative weights of different modes of entry of FDI have shifted in recent years. M&As gained importance, while greenfield investments steadily lost ground. In 1980-99, the value of mergers and acquisitions increased each year, by an average of 42%, to a level of USD 3.4 thousand billion in 2000 (UNCTAD, 2000a and Thomson Financial, 2002).² Almost four-fifths of all foreign direct investment is now aimed at mergers or acquisitions. Not only the well-known large multinationals, but also small and medium-sized enterprises have become increasingly active in cross-border mergers and acquisitions. One-third of international acquisitions had a value of less than USD 100 million, and 3% were valued below USD 1 million. Though mergers and acquisitions are often mentioned in one breath, the majority

Table II.2. **World FDI outflows by home region**

Home region	Annual average			
	1989-91	1992-94	1995-97	1998-2000
World total (value USD billion)	215.3	234.5	404.3	955.9
	Percentage shares			
OECD Regions (30)	95.0	87.3	84.9	92.9
Asia/Pacific (4)	20.9	8.9	8.1	3.5
Europe (23)	57.9	49.7	50.7	71.5
EU (15)	52.9	45.6	45.9	67.6
North America (3)	16.2	28.6	26.1	17.8
Non-OECD Regions	5.0	12.7	15.1	7.1
Asia/Pacific	3.1	10.5	11.6	5.2
East Asia and Pacific	3.1	10.0	10.4	4.7
China	0.4	1.5	0.5	0.2
ASEAN (10)	0.6	2.1	2.7	0.5
South Asia	0.0	0.0	0.0	0.0
Europe and Central Asia	0.0	0.0	0.4	0.3
Latin America and Caribbean	0.4	1.9	2.1	1.4
MERCOSUR (4)	0.3	0.4	0.8	0.4
Middle East and North Africa	1.1	0.1	0.3	0.1
Sub-Saharan Africa	0.5	0.2	0.6	0.2

Notes:

1. "OECD Regions" comprises OECD Asia/Pacific (4), OECD Europe (23) and North America (3).
2. "OECD Asia/Pacific" includes Australia, Japan, Korea, Rep., and New Zealand.
3. "OECD Europe" comprises EU (15), Czech Rep., Hungary, Iceland, Norway, Poland, Slovak Rep., Switzerland and Turkey.
4. "EU (15)" consists of Austria, Belgium-Luxembourg, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden and United Kingdom.
5. "North America" includes Canada, United States and Mexico.
6. "ASEAN (10)" comprises Brunei Darussalam, Cambodia, Indonesia, Laos PDR., Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.
7. "Mercosur (4)" includes Argentina, Brazil, Paraguay and Uruguay.

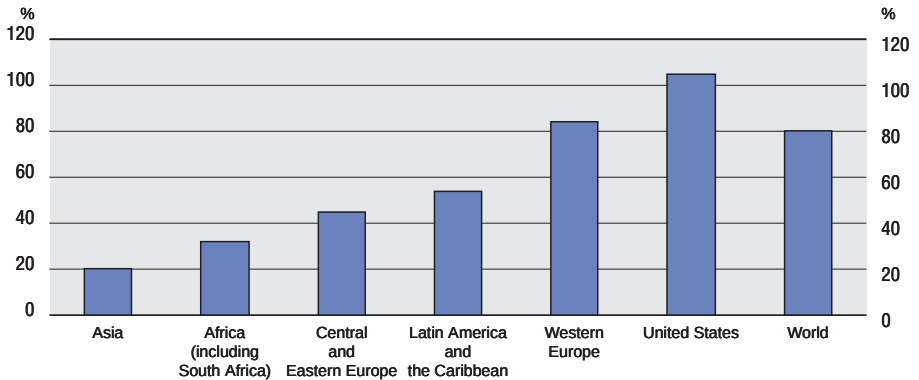
The regional groupings as noted above are defined as if their member countries remained the same throughout the whole period.

Sources: United Nations, *World Investment Report* (various years).

of M&As involve takeovers. For tactical reasons, the firms concerned sometimes describe a takeover as a merger.

Trends in the mode of entry of firms investing in developing countries differ considerably from those of developed countries, where greenfield investment continues to dominate. However, driven by privatisation, mergers and acquisitions have become an increasingly important mode of entry in developing countries as well in recent years. Still, in value terms, developing countries continue to account for 10% or less of global M&A transactions. At the beginning of 2000, the share of developing countries in the value of mergers and acquisition was 10%, though it has been increasing since the mid-1990s. Two-thirds of FDI flows to developing countries can be classified as greenfield investments, although there are important regional

Figure II.1. Share of international M&As in FDI inflows, 1998-2000



Source: UNCTAD (2001d). Based on data from Thomson Financial Securities.

differences: the share of FDI that took the form of mergers and acquisition in Latin America increased from 18% in 1987-89 to 54% in 1998-2000. In Asia, this share increased from 8% to 20% in the same period. Figure II.1 illustrates the differences between the share of mergers and acquisitions in FDI in the various regions.

The sectoral distribution of cross-border M&As has changed as well. Whereas at the start of the 1990s most international M&As occurred in the manufacturing sector, by 2000 the tertiary, or services-sector accounts represented the lion's share of all cross-border M&As. Finance, business services, transport, storage and communications saw particularly important increases in the number and value of M&A transactions. In the manufacturing sector, food, beverages and tobacco, as well as coke, petroleum and nuclear fuel continue to be characterised by high M&A activity. Table II.3 gives an overview of changes in the sectoral distribution of cross-border mergers and acquisitions during the 1990s.

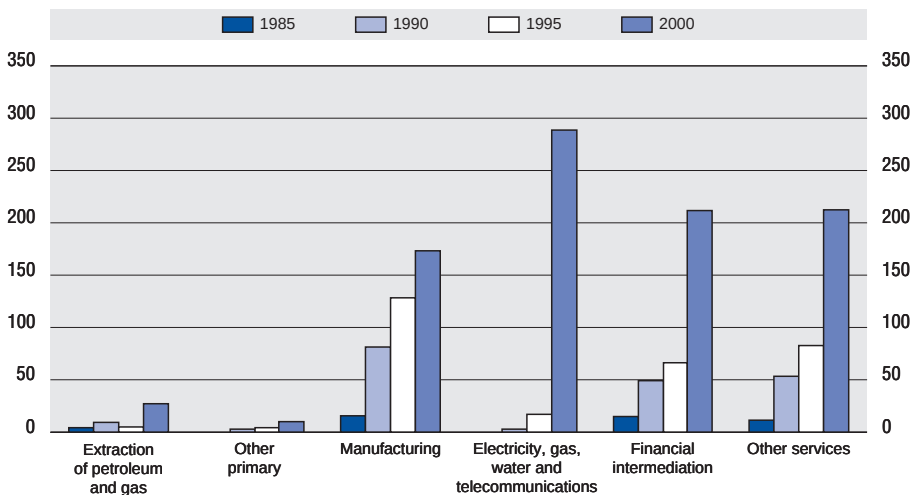
This trend is reflected in overall FDI as well. In 2000, more than half of FDI outflows from OECD countries involved the service sector, with banks and other financial institutions accounting for the largest share. However, FDI in electricity, gas, water and telecommunications saw the most dramatic increase, reflecting the widespread privatisation and deregulation of these public utilities over the past decade. The share of FDI in the primary sector fell steadily from 1985 to 1995, but large investments in petroleum and gas extraction reversed this trend in 2000 (Figure II.2). The share of manufacturing, on the other hand, increased steadily from 1985 to 1995, but witnessed a relative drop in 2000 due to the surge in services-related FDI.

Table II.3. **Cross-border Mergers and Acquisitions by sector/industry of seller**
USD million

	1988	1990	1992	1994	1996	1998	2000
Total	115 623	150 576	79 280	127 110	227 023	531 648	1 143 816
Primary	3 911	5 170	3 637	5 517	7 935	10 599	9 815
Manufacturing	73 727	75 495	43 222	69 321	88 522	263 206	291 654
<i>of which:</i>							
Food beverages and tobacco	14 462	12 676	9 398	13 528	6 558	17 001	50 247
Coke, petroleum and nuclear fuel	17 868	6 480	1 596	4 216	13 965	67 280	45 015
Chemicals and chemical products	5 008	12 275	5 581	20 061	15 430	31 806	30 446
Electrical and electronic equipment	6 998	6 114	6 198	3 432	7 573	35 819	53 859
Tertiary	37 986	69 911	32 384	52 270	130 232	257 843	842 342
<i>of which:</i>							
Electric, gas and water	116	609	1 847	2 510	21 274	32 249	46 711
Transport, storage and communications	2 182	14 460	3 035	13 540	17 523	51 445	365 673
Finance	14 471	21 722	13 178	10 568	36 693	83 432	183 665
Business services	3 009	11 831	3 808	8 406	13 154	42 497	137 416
Other	0	0	37	1	334	0	5

Source: UNCTAD, cross-border M&A database, 2001.

Figure II.2. **Total OECD FDI outflows to selected sectors**



Source: OECD, International Direct Investment Statistics.

II.2. The developing-country context

While FDI remains highly concentrated among OECD countries, that part that flows to non-OECD countries is also distributed very unequally. FDI received by non-OECD countries is highly concentrated in Latin America and Asia; two-thirds of total FDI flows from OECD countries to non-OECD countries goes to these regions (Table II.4). Furthermore, nearly all the top 10 non-OECD recipients of FDI from the OECD area are in these regions (Table II.5). Throughout the 1990s, the

Table II.4. **OECD FDI outflows by region**

	In USD million				Percentage of total			
	1985	1990	1995	2000	1985	1990	1995	2000
World	61 277	235 836	335 194	1 068 786	100	100	100	100
<i>of which:</i>								
OECD countries	42 055	189 166	263 716	904 349	68.6	80.2	79.7	84.6
Non-OECD countries	19 222	46 670	71 437	137 747	31.4	19.8	21.3	12.9
<i>of which:</i>								
Africa	404	195	3 100	7 267	0.7	0.1	0.9	0.7
Asia*	2 171	12 650	25 106	29 494	3.5	5.4	7.5	2.8
Europe*	8	408	3 570	14 026	0.0	0.2	1.1	1.3
Latin America and Caribbean*	9 101	18 948	23 632	68 374	14.9	8.0	7.1	6.4
Near and Middle East	212	1 056	1 936	1 571	0.3	0.4	0.6	0.1
Unallocated	7 325	13 413	14 093	17 015	12.0	5.7	4.2	1.6

* Excluding OECD countries.

Source: OECD International Direct Investment Statistics.

Table II.5. **Major non-OECD recipients of OECD FDI outflows**

USD million

1985		1990		1995		2000	
1	Brazil 785	Singapore 2 458	Brazil 9 271	Brazil 20 032			
2	Indonesia 616	Brazil 2 118	China 6 898	Singapore 9 167			
3	Singapore 562	Hong Kong, China 1 949	Hong Kong, China 3 654	Bermuda 7 507			
4	Egypt 426	Indonesia 1 931	Argentina 3 578	China 7 041			
5	Hong Kong, China 322	Thailand 1 645	Indonesia 3 143	Argentina 5 584			
6	China 319	Malaysia 1 271	Singapore 3 005	Venezuela 5 303			
7	Neth. Antilles 247	Chinese Taipei 816	Thailand 2 794	Philippines 5 127			
8	Malaysia 181	Argentina 748	Chile 2 115	Colombia 3 007			
9	Liberia 159	Chile 646	Malaysia 1 674	Chinese Taipei 2 653			
10	Guatemala 140	Liberia 552	South Africa 1 519	South Africa 2 288			
<i>Top 10 as percentage of total non-OECD</i>							
	19.5%	30.3%	52.7%	49.1%			

Source: OECD International Direct Investment Statistics.

non-OECD countries on the top 10 list have been broadly the same, accounting for just over 50% of total FDI outflows from OECD countries to developing countries. The reasons some countries lag so badly are largely outside the scope of this report. However, Box II.1 below attempts to shed some light in the case of Africa.

Box II.1. Inward FDI in Africa

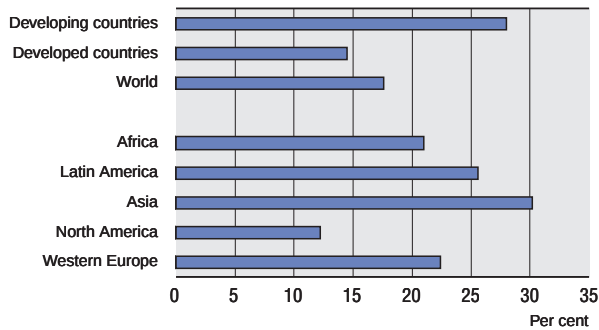
The entire African continent (except South Africa) received FDI inflows worth an estimated USD 8.2 billion in 2000. For comparison, this equals the amount of inward FDI attracted by Finland (this year), and it represented a mere 0.6% of total world FDI flows. Several recent studies have discussed the possible reasons for this seemingly spectacular failure of African countries at attracting foreign investors.

The main factors motivating FDI into Africa in recent decades appear to have been the availability of natural resources in the host countries (*e.g.* investment in the oil industries of Nigeria and Angola) and, to a lesser extent, the size of the domestic economy. The reasons for the lacklustre FDI in most other African countries are most likely the same factors that have contributed to a generally low rate of private investment to GDP across the continent. Studies have attributed this to the fact that, while gross returns on investment can be very high in Africa, the effect is more than counterbalanced by high taxes and a significant risk of capital losses. As for the risk factors, analysts now agree that three of them may be particularly pertinent: macroeconomic instability; loss of assets due to non-enforceability of contracts; and physical destruction caused by armed conflicts (*e.g.* Hernández-Catá, 2000). The second of these may be particularly discouraging to investors domiciled abroad, since they are generally excluded from the informal networks of agreements and enforcement that develop in the absence of a transparent judicial system.

Several other factors holding back FDI have been proposed in recent studies, notably the perceived sustainability of national economic policies, poor quality of public services and closed trade regimes (see, for example, Dollar and Easterly, 1998). Even where the obstacles to FDI do not seem insurmountable, investors may have powerful incentives to adopt a wait-and-see attitude. FDI (and especially green-field investment) contains an important irreversible element, so where investors' risk perception is heightened the inducement would have to be massive to make them undertake FDI as opposed to deferring their decision (Serván, 1996). This problem is compounded where a deficit of democracy, or of other kinds of political legitimacy, makes the system of government prone to sudden changes.

A few countries have, however, been able to attract FDI, apparently by virtue of the quality of their domestic business climates. Morisset (2000) argues that countries such as Mozambique, Namibia, Senegal and Mali in the late 1990s became perceived as having a relatively benign investment environment. This seems to have resulted primarily from government policies toward trade liberalisation; the launch of privatisation programmes; modernising investment codes and adopting international FDI agreements; developing a few priority projects of wider economic impact; and, finally, engaging in high-profile publicity efforts, aimed at informing investors of these improvements.

Figure II.3. **Inward FDI stock, 2000**
Share of GDP



Source: UNCTAD.

For OECD member countries, FDI outflows to developing countries have accounted for only a small part of their GDP and total outflows. However, FDI has been of great importance to certain developing countries – the most important source of external financing for some of them, particularly in the least-developed regions of the world. Moreover, developing countries have attracted inward FDI stocks relative to national GDP that on average exceed the levels recorded in the mature economies (Figure II.3). The non-OECD countries that rank among the top 20 recipients of total world FDI outflows have, in most cases, seen high inflows in relation to the size of their economies.

Some countries that are known for their huge FDI inflows, such as Singapore or Bermuda, have high FDI-to-GDP ratios (Table II.6). However, other countries' success in attracting FDI is somewhat tempered when measured against the size of the domestic economy. One case in point is China, whose inward FDI stock as a share of GDP (30%) is close to the average for all Asia. Countries such as Indonesia (46.2%), Malaysia (65.3%), Chile (55.2%), Nigeria (44.5%) and Vietnam (55.6%) have ratios that far exceed world averages, as well as those of the EU (22.2%), the United States (11.1%) and Japan (1.0%).

The joint sectoral and national distribution of these inflows is presented in Table II.7, which shows the three main sectors of destination and the three main home countries of the enterprises investing into these economies. From this table one can conclude that, for most developing countries, FDI is concentrated in only a few industries and originates in only a few countries.³ On average, almost 60% of inward FDI in the countries listed in the table originates from only three source

Table II.6. **Top 20 non-OECD recipients of total inward FDI stock**
% of GDP

	1980	1985	1990	1995	1999
1 China	3.1	3.4	7.0	19.6	30.9
2 Brazil	7.4	11.5	8.0	6.0	21.6
3 Hong Kong, China	487.0	413.6	217.5	135.4	255.5
4 Singapore	52.9	73.6	76.3	70.0	97.5
5 Indonesia	14.2	28.6	34.0	25.0	46.2
6 Argentina	6.9	7.4	6.4	9.9	22.1
7 Malaysia	21.1	23.7	24.1	32.9	65.3
8 Bermuda	837.1	774.2	871.0	1 176.3	1 936.2
9 Chile	3.2	14.1	33.2	26.2	55.2
10 Saudi Arabia	—	25.2	21.5	17.8	20.0
11 Chinese Taipei	5.8	4.7	6.1	6.0	8.0
12 Thailand	3.0	5.1	9.6	10.4	17.5
13 South Africa	21.3	16.3	8.6	11.2	39.5
14 Nigeria	2.6	5.5	28.3	50.0	44.5
15 Venezuela	2.7	2.6	4.7	9.0	20.9
16 Egypt	9.9	16.4	25.6	23.9	19.2
17 Colombia	3.2	6.4	8.7	8.0	21.9
18 India	0.7	0.5	0.6	1.7	3.6
19 Vietnam	0.2	0.6	3.6	31.1	55.6
20 Philippines	3.9	8.5	7.4	8.2	14.9

Note: For certain Asian countries, the large increase in FDI-to-GDP ratio from 1995 to 1999 is caused by the effects of the Asian crisis, which caused GDP to decline.

Source: UNCTAD (2001d).

countries, and in Hong Kong (China), the Philippines, Vietnam and Argentina this reaches 70%. The concentration of inflows into these countries, in combination with the relative importance of these inflows to their economies, helps explain the policies of certain host country governments (*e.g.* Malaysia) to diversify origin and sectoral destinations of FDI flows. Diversification of investment flows spreads the risks related to a large dependency on a few countries or sectors.

Finally, not only is foreign direct investment becoming more important for developing countries in relation to GDP, it is overshadowing other capital flows such as official development assistance (ODA) and export credits. FDI flows to developing countries have tripled in the past decade (Figure II.4). While ODA in real terms has declined in recent years from its peak in 1992, it has remained relatively stable in comparison to private flows. Non-FDI private flows have been rather volatile, but overall have played an increasing role since the early 1990s in the total financial flows towards developing countries.

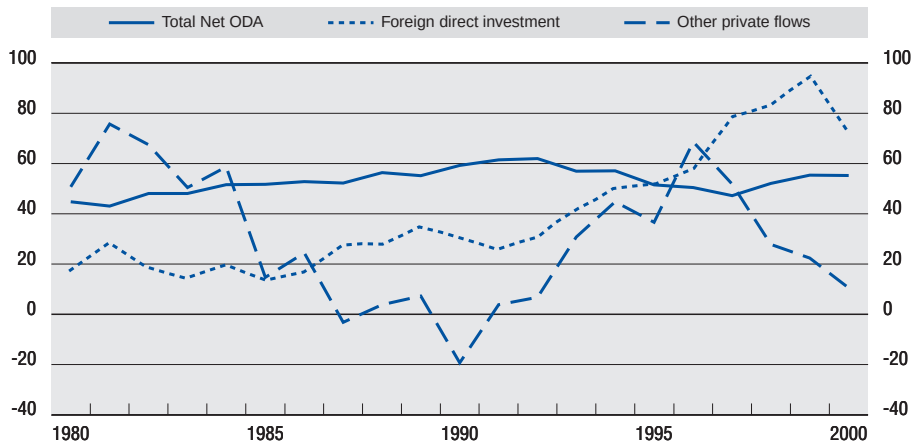
Table II.7. Distribution of FDI in selected developing countries

	Top three sectors (% of total)	Top three originating countries (% of total)
China (1998-2000 accumulated flows)	Manufacturing (46%) Real estate management (16%) Utilities (6%)	Hong Kong, China (41%) United States (10%) Virgin Islands (9%)
Hong Kong, China (2000 year-end stock)	Investment holding/real estate (60%) Wholesale/retail (11%) Banking (9%)	Virgin Islands (32%) Mainland China (31%) Bermuda (10%)
Singapore (2000 inflows)	Electronic products and components (48%) Chemicals and chemical products (30%) Transport equipment (5%)	United States (40%) Japan (16%) France (4%)
Indonesia (cumulative 1967-mid 2000)	Chemicals and pharmacy (30%) Paper (11%) Electronics, trading and other services (10%)	Japan (16%) United Kingdom (9%) Singapore (8%)
Malaysia (flows 2000-01)	Electrical and electronics (51%) Paper, printing, publishing (9%) Non-metallic mineral products (8%)	United States (28%) Japan (16%) Netherlands (11%)
Chinese Taipei (total approved flows 1952-2000)	Electronics and electrical (24%) Banking and insurance (15%) Services (11%)	United States (24%) Japan (21%) Hong Kong, China (8%)
Thailand (total net inflows 1995-99)	Trade (25%) Machinery and transport (11%) Electrical Appliances (10%)	Japan (27%) United States (17%) Singapore (13%)
India (approved flows 1991-Feb. 2001)	Fuels (28%) Telecommunications (19%) Electrical equipment (10%)	United States (22%) Mauritius (11%) United Kingdom (8%)
Vietnam (flows 2000)	Oil and gas (59%) Light industry (18%) Heavy industry (9%)	United Kingdom (30%) India (25%) Chinese Taipei (15%)
Philippines (flows 2000)	Manufacturing (46%) Energy-related (32%) Service export (13%)	United States (36%) Japan (27%) Hong Kong, China (11%)
Brazil (2000 flows/2001 April stock)	Mail/telecom (36%) Banking (21%) Energy (10%)	United States (24%) Spain (15%) Fiscal havens (12%)
Argentina (flows 1994-2000)	Gas and petroleum (25%) Telecommunications (13%) Construction and infrastructure (9%)	United States (32%) Spain (29%) France (9%)
Chile (materialised flows 1974-Oct. 2001)	Mining (33%) Services (23%) Electricity, gas, water (18%)	United States (31%) Spain (20%) Canada (14%)
Venezuela (flows 1997 – Oct. 2001)	Manufacture (60%) Transport (13%) Financial services (9%)	Cayman Islands (35%) United States (15%) Netherlands (13%)
Colombia (FDI inward stock Sept. 2001)	Manufacturing (27%) Financial services (25%) Public services (19%)	United States (26%)* Spain (13%)* Panama (10%)*
South Africa (stock end 2000)	Finance, insurance (39%) Mining and quarrying (28%) Manufacturing (26%)	United Kingdom (74%) United States (6%) Germany (6%)

* Data exclude oil (which is 3% of total inward stock).

Source: National statistics offices, central banks and investment promotion agencies.

Figure II.4. **Selected long-term flows from OECD¹ to developing countries, 1980-2000**
USD billion



1. The data in this figure represent flows from DAC countries to developing countries and not all aid recipients.
Source: OECD, *DAC Statistics*.

Notes

1. See UNCTAD (1999).
2. Most recent UNCTAD estimates (September 2001) reveal a sharp decline in FID as well as M&A activity, caused by the deteriorating economic performance of developed countries. This development is likely to be complemented and aggravated by the impact of the events of September 11, 2001.
3. While Table 6 shows the concentration for each country, these are not comparable across countries, since they are based on different definitions used by national governments.

Chapter III

FDI and Growth

Amid the impressive surge in capital flows of the last decade, many developing countries embraced foreign investors as a potential source of economic growth. Attitudes differ, however, between the forms of FDI that produce an immediate and visible impact on domestic value added, and those that, at first, take the form of a transfer of the ownership of well-run enterprises. The first category notably includes greenfield investment (Table I.1 in Chapter I). However, the potential benefits of FDI for growth apply to all modes of entry. At its most general, FDI affects host-country growth by raising factor productivity. This effect works through two channels that, while observationally equivalent, deserve separate mention, namely, an impact on the quality and quantity of production factors and a changing efficiency in the use of the production factors (the proximity to the efficiency frontier, in the jargon of economic theorists).

The *efficiency* in the use of productive resources depends on factors such as the degree of integration of the host country into the world economy (*e.g.* openness to trade), competitive pressures and the ease with which enterprise development and restructuring is undertaken. FDI may contribute to all of this by providing access to MNEs' international networks, overcoming barriers to entry and bringing foreign expertise and corporate governance practices. Chapters IV, VII and VIII survey the evidence of these channels in detail.

The *quality and quantity of production factors* may respond to changes in inward FDI in two distinct ways, namely *a*) if FDI helps to ease quantitative constraints that impede the host country from realising an economically optimal level of capital formation; and *b*) when foreign FDI has effects in the host country (so-called spillovers) on competences and skills beyond the investing enterprise. The first of these approaches is essentially consistent with the so-called resource-gap model. In this model, developing countries find themselves trapped in a low-growth path due to the lack of financial resources, which prevents the attainment of optimal growth rates. The inflow of foreign capital fosters growth in the host economy by easing shortages of capital, foreign exchange and skills. To host countries it includes the additional benefit that (perhaps most visibly with greenfield

investment), it includes up-front value creation and direct increases in employment. The growth process can become self-sustained if backward and forward linkages emerge from MNEs to the host economy and if FDI helps raise the profitability of domestic investment.

As regards the financing of growth, the resource gap model does not, however, imply that FDI contributes relatively more to growth than domestic investment (or such investment as is feasible given the available resources). However, a body of literature, especially following the financial crises in emerging-market economies in the 1990s, has stressed the importance of FDI relative to other sources of finance. Above all, FDI tends to be less volatile than other capital flows, thereby exerting durable positive effects on growth (see Lipsey, 1999, and Reisen and Soto, 2000). Moreover, FDI is mostly equity investment, while excessive reliance on borrowed funds and other debt-creating investment, domestic or foreign, may lead to excessive leverage of the corporate sector. This in turn significantly raises risks in the case of an adverse shock to the economy (Box III.1).

Even in resource-constrained economies, however, literature identifies cases in which certain drawbacks can mitigate the benefits of FDI. First, some economists have stressed the potential negative effects of FDI on the host economy by “crowding out” domestic investment and suppressing local entrepreneurship. This point is briefly discussed below. A second concern is the risk that increased imports to host countries could cause a deterioration in their balance of payments. Further strains on the balance of payments could emanate from profit repatriation and reduced tax revenues as a result of transfer-pricing practices, tax allowances and other financial incentives granted to foreign firms.

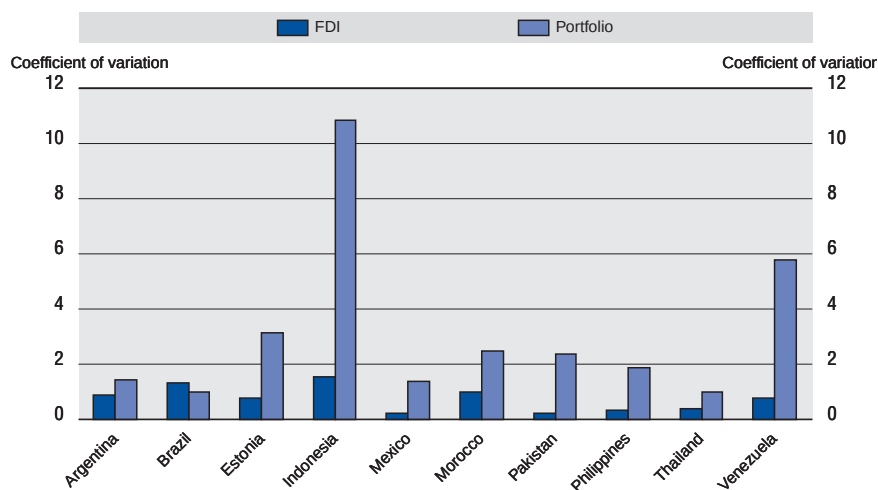
As regards possible spillovers from FDI (as discussed in detail in Chapters V and VI), they have been the focus of considerable interest in recent empirical studies, spurred not least by new developments in the theories of economic growth. The so-called endogenous growth model identifies knowledge accumulation as the driving force behind long-term growth of the economy (OECD, 2001d). FDI, which provides a channel for knowledge acquisition and dissemination, can therefore act as an engine of growth for the recipient economy.

According to endogenous growth models, the impact of FDI on growth depends crucially upon the existence of production and knowledge externalities. In the standard neo-classical model, production is represented by a constant-return-to-scale technology, relating the level of output to input bundles. FDI enters this model as an additional input to production. More precisely, FDI is treated as additional investment that increases domestic capital stock. This is not the only channel, however, through which FDI can affect growth. Industrial

Box III.1. FDI as a stable source of external finance?

After the financial crisis in developing and emerging economies in the second half of the 1990s, the question of the relative volatility of different sources of external finance resurfaced in economic debate. The consensus emanating from this debate is that FDI tends to be a more stable source of finance for several reasons (see Reisen, 2000). One is that the specificity (or so-called hold-up) of FDI makes it difficult to reverse such capital flows in times of crisis; another is that most of the factors that motivate FDI remain unchanged in the short term, making investors unlikely to eliminate their positions in response to financial pressures. A simple empirical illustration of FDI's generally lower volatility is provided by the figure below.

Figure 1. The relative volatility of FDI and portfolio investment, 1990-99



Source: IMF International Financial Statistics.

Empirical studies support the argument that FDI is the most stable source of capital inflows. Researchers have examined four alternative measures of volatility, namely the number of times a given type of capital-account transaction changes direction; the magnitude of inflows and outflows of alternative types of external finance at times of economic instability; the variance and standard deviation of alternative types of inflows (a methodology akin to the figure above); and econometric decomposition of the trend of each flow into permanent and transitory parts.

Box III.1. **FDI as a stable source of external finance?** (*cont.*)

The first of these methodologies produces evidence to firmly support the relative stability of the FDI. Lipsey (1999) examines the reversibility of financial flows in 52 countries in 1980-95 and finds that net FDI changed directions only 2.5 times on average, compared with 3.6 times for net portfolio investment and 4.2 times for net other investment. The analysis of overall flows lends itself to similar conclusions. Dadusch *et al.* (2000) observe that developing countries as a whole saw their net inflows of short-term capital during the Asian crises reversed from plus USD 43.5 billion in 1997 to minus USD 85 billion in 1998. Chuhan *et al.* (1996) demonstrate, drawing on Granger causality tests, that short-term capital flows respond more pro-cyclically to financial disturbances than do FDI flows. Hausmann and Fernández-Arias (2000), while principally arguing that excessive reliance on FDI for financing may reflect structural weaknesses in the host economy, nevertheless report evidence that FDI holds out stronger in times of crisis than do other sources of private finance.

Most empirical analysis has focused on the direct measurement of variability of capital flows. For example, the World Bank (1999) compares the coefficients of variation of net private non-FDI and FDI capital flows into 21 developing countries from 1978-1997. It finds that in two-thirds of the sample, the coefficient of variation of FDI inflows is significantly the lower. Lipsey (1999), comparing the ratios of standard deviations to means for various types of international flows during 1969-93, concludes that net FDI is less volatile than, for example, portfolio investment. Nunnenkamp (2001), employing coefficients of variation as a measure of volatility, finds that FDI is a more reliable source of capital than portfolio investment, bank loans, trade credits, etc.

More econometrically advanced methods such as decomposing various types of capital flows into permanent (trend) and transitory (cyclical) components underpin the finding that FDI is relatively stable. Sarno and Taylor (1999) conclude that, compared with other flows, FDI has a high “permanent” trend component relative to its “transitory” cyclical components.*

* This study also finds evidence that official funding, such as loans from international institutions and sovereign lenders, tends to be more volatile than FDI. This is, however, largely related to the role of official finance as a means of offsetting the fluctuations of other sources of capital.

organisation studies point to the peculiar nature of FDI, which is better described as a “combination of capital stock, know-how and technology” (De Mello, 1997), whereby it may affect both labour and capital productivity.

The central question in the empirical analysis of the FDI-growth nexus is thus to investigate whether FDI significantly affects the rate of growth of income, and, if it does, whether this effect works via increases in factor productivity. One can address this question by using various econometric techniques. Standard growth-accounting exercises have been widely applied in the early literature to break down the growth rate of aggregate output into contributions from the growth of capital and labour inputs and changes in technology. These analyses, however, provide only a mechanical decomposition of output growth into its sources, without explaining how economic fundamentals affect these changes. Such limitations can be overcome by estimating growth equations based on the neo-classical production theory (Barro and Sala-i-Martin, 1995, Chapter 10).

A crucial question is to what extent FDI may crowd out domestic investment (Box III.2). This question has been tackled by including domestic investment directly in the growth equations (Borenstein, De Gregorio and Lee, 1998) or estimating investment equations that incorporate FDI (Agosin and Mayer, 2000; McMillan, 1999). Second, since predictions of the long-term effects of FDI on growth are based on technology and knowledge externalities being extended to domestic firms in the host country, one should question whether these externalities indeed take place. Empirical studies addressing this question are more microeconomic in nature and will be discussed in Chapters V and VI. However, few attempts have been made in the macroeconomic context to take into explicit account such spillover effects (Bende-Nabende *et al.*, 2000). Finally, it has been argued that local conditions such as technological capabilities, human capital and the development of domestic financial markets are likely to play an important part in the location of FDI flows. Therefore, one should examine empirically whether any necessary precondition (or threshold) has to be met in the host economy for FDI-driven growth to materialise.¹

As noted above, knowledge accumulation and diffusion play the key role in endogenous growth models. Technological and knowledge externalities counterbalance the effects of diminishing returns to capital accumulation and keep the economy on a sustained long-term growth path. FDI can contribute significantly to the increase of the knowledge stock in the host economy, not only by introducing new capital goods and production processes (embodied technical change), but by providing new managerial know-how and skills improvement that can spread to domestic firms (disembodied technical change). Skills improvements may take place through formal training or learning-by-doing within foreign affiliates. FDI, by improving the stock of knowledge of the host country, will therefore have both short-term and long-term impacts on its economy and boost long-term growth.

Box III.2. The risk of crowding out

It should be recognised that crowding out of domestic investment through FDI may not necessarily be a problem, and can even be a healthy sign. For instance, where incumbent enterprises are not competitive with world markets, their replacement through foreign entry serves to increase the overall efficiency of the domestic economy. This is put to the point where policies of outright protectionism in the host country weaken incentives for domestic enterprises to strive toward greater competitiveness.

Economic theory does, however, identify some cases in which crowding out through FDI may have a more adverse effect on domestic capital formation. The effect could work through two separate channels: that of product markets, by adversely affecting knowledge accumulation and growth by local firms in competing activities; and that of factor markets, by reducing access for local firms to factor inputs and finance.

The first issue reflects “infant industry” considerations (Bruton, 1998), in this case by protecting incipient learning in domestic *versus* foreign firms. FDI can hamper or distort the growth of domestic capabilities in competing industries when direct exposure to foreign competition prevents local enterprises from undertaking lengthy and costly learning processes. Insofar as host country competences would, in a counterfactual scenario, have developed, one may say that crowding out occurs if potentially competitive local firms cannot compete with the affiliates of MNEs at a given time.

Crowding out can impose long-term costs on the host economy if it holds back the development of domestic capabilities and retards the growth of an innovative local base. In extreme cases, this can make technological upgrading and deepening dependent on decisions by MNEs, and it could even lower the host economy's technological level. However, it is important to note that overall economic losses occur only if the enterprises being crowded out are potentially efficient. In addition, MNEs may crowd in local firms, by creating linkages with domestic suppliers, subcontractors and institutions.

The second form of crowding out reflects an uneven playing field for domestic firms because of segmentation in local factor markets. MNEs may gain privileged access to such inputs as finance and skilled personnel because of their reputation and size. This may raise entry costs for local firms, or deprive them altogether of the most productive factors. MNEs may also have stronger bargaining positions *vis-à-vis* host-country institutions and governments. Similar arguments may apply where MNEs have better access to foreign factor markets than their domestic competitors, for instance if they can raise capital in world markets at lower rates.

One of the most elaborate recent studies focusing on the relationship between FDI and domestic investment is Agosin and Mayer (2000). It undertakes an econometric analysis of the effects of FDI on domestic investments in 32 developing countries in 1970-96. In Asia, FDI seems to stimulate domestic investment, whereas in Latin America, crowding out effects predominate. The overall effect for Africa appears to be neutral. Other studies have yielded ambiguous

Box III.2. The risk of crowding out (*cont.*)

results regarding the impact of FDI on local firms. Regression analyses by Borensztein *et al.* (1998) show a positive but weak impact of FDI on domestic investment, and Toutain (1998) finds a small, unstable positive impact on domestic investment. These empirical studies generally do not, however, attempt to separate cases of “benign” crowding from those thought to emanate from an unlevel playing field between MNEs and domestic enterprises.

III.1. FDI and growth: evidence from macroeconomic data

When reviewing the empirical linkages between FDI and growth, some caveats need to be kept in mind. In particular, the inclusion of FDI in neo-classical growth equations (which in their original form allowed for no long-term effects from FDI to growth) poses two major methodological problems. One is that of reverse causality. GDP growth by itself, or factors that affect GDP growth (such as well-functioning institutions), may influence FDI as well. If causality runs from growth to FDI, the use of classic estimation techniques would yield biased results. Instead of verifying whether FDI inflows foster GDP growth, econometric analysis may have detected how much the latter influences the former. Another problem relates to the “spurious correlation” caused by omitted variables in growth equations. FDI is likely to be significantly correlated with other explanatory variables that are also expected to affect growth. In this case, omitting some important variables from the right-hand side of the growth equation would result in biased estimation of the growth coefficient of FDI, since this coefficient is most likely to pick up the impact of these omitted variables. As a corollary, one needs to know how and to what extent FDI interacts with other explanatory variables. Many factors that are expected to exert a positive impact on growth (such as domestic capital formation and trade) may be stimulated by FDI as well. To disentangle the full effects of FDI on growth, various spillover effects must therefore be specified and estimated appropriately.²

a) Overview of recent results

This section reviews and discusses the main findings of a number of recent empirical studies conducted on the basis of estimated endogenous growth models. This literature review focuses on four major questions that arise from the above

discussion in the macroeconomic context: 1) Does FDI significantly affect the rate of growth of income or productivity? 2) Does FDI “crowd out” or “crowd in” domestic investment? 3) Do technology and knowledge spillovers take place in the domestic economy? and 4) Are there any necessary preconditions (*e.g.* human capital, technological or financial market development) for these positive effects to materialise? The results of this review are presented in Table III.1 at the end of this chapter, with an indication of which questions are addressed by individual studies. In this section, much of the discussion will be directed to questions 1) and 4), which are the focal points of existing empirical studies in the growth literature.

Perhaps most importantly, 11 of the 14 studies reviewed here indicate that FDI does contribute positively to both income growth and factor productivity in host countries. Using panel data of 16 OECD countries and 17 (mostly Asian) non-OECD countries in 1970-90, De Mello (1999) finds a positive and significant impact of FDI on output growth in both groups, once country-specific characteristics are taken into account.³ FDI tends to increase output growth through higher productivity in OECD countries (technological leaders) and through capital accumulation in non-OECD countries (technological laggards). Similarly, Xu (2000) using United States survey data on manufacturing MNEs, finds strong evidence on the positive effect of FDI on Total Factor Productivity (TFP) growth in recipient countries, but the technology-transfer effect is found to be statistically significant only for developed countries. He argues that the absorption of MNEs' technology may require a certain level of human capital accumulation on the recipient side and that many developing countries cannot meet such a threshold.

On the other hand, Carkovic and Levine (2000), whose panel data include 72 countries in 1960-95, find no significant impact of FDI on growth. The exogenous component of FDI does not exert a significant positive impact on growth or enjoy a strong link with productivity growth. The impact on capital accumulation is found to be statistically significant and positive, but the relationship is not robust (depending on the specification of regressions for other determinants of capital growth). Discrepancies in estimation results may be explained at least partly by the choice of sample countries and periods.

Reisen and Soto (2000) investigate the growth impact of short- and long-term capital flows using a panel of 44 developing countries in 1986-97. Their estimation results find a robust and positive correlation between FDI and both portfolio equity flows and GDP growth. The superiority of equity over debt flows in stimulating growth is also established for those economies with underdeveloped banking systems. Since high volatility in capital flows may wreak havoc on the economic performance of a country, the apparent lower volatility of FDI relative to other kinds of capital flows is another possible growth-enhancing feature.⁴ It should, however, be noted that the generality of this study's findings has been

contested; the data cover mainly middle- and low-income countries over a relatively short period during which significant changes in capital flows took place.

b) Threshold externalities

One explanation of the disparities between empirical studies could be the presence of threshold externalities. Recent literature shows that developing countries need to have reached a certain threshold of development, in education or infrastructure terms, before they can capture the benefits associated with FDI (Saggi, 2000). A useful survey by De Mello (1997) points to the different roles played by FDI in fostering growth, as recipient countries' technological capabilities are likely to determine the scope for spillovers from foreign to domestic firms. Hence, FDI would tend to have far more limited growth in impact in technologically less advanced countries.

Borenzstein *et al.* (1998) address the technology-gap question by developing a model of economic growth whereby FDI contributes to technological progress through capital deepening, *i.e.* by introducing new varieties of capital goods. Acknowledging that such beneficial effects are likely to depend on the skills of the domestic labour force, FDI is interacted with a measure of human capital development (*i.e.* secondary school attainment). The authors find that FDI contributes to growth, though the magnitude of this effect depends on the stock of human capital available in the host economy. In particular, they argue that FDI raises growth only in those countries where the labour force has achieved a minimum threshold of education. They also find that FDI tends to "crowd in" domestic investment, suggesting that the attraction of complementary activities dominates the displacement of domestic competitors.⁵

Similar results are obtained by Blomström *et al.* (1994). The authors find that the positive impact of FDI on growth (while robust to different sample specifications) vanishes when limited to lower-income developing countries. They argue that FDI is a source of growth only for those countries already at a relatively high level of development and that low-income countries lack the capabilities needed to absorb the FDI-related technology transfer. (This issue is reviewed and discussed further in Chapter V.)

c) Local financial markets

The development of domestic capital markets can be seen as another possible requirement for realising the potential benefits of FDI in the host country. The impact of financial market development on growth has been widely studied, both theoretically (among others, Acemoglu and Zilibotti, 1997) and empirically (Beck, Levine and Loayza, 2000). Imperfect and underdeveloped financial markets are likely to penalise domestic firms more than foreign affiliates of MNEs. Alfaro *et al.*

(2001) developed a model wherein FDI induces higher growth through direct increase of production in the MNEs' sector and through indirect increase in the domestic sector via spillovers. In this model, financial market constraints hinder the capability of domestic firms to benefit from the spillover effects of FDI. This model was tested empirically by introducing both the measure of FDI inflows and of financial market development, as well as an interactive term of the two in the augmented growth regression. The interactive term is found to have a positive and significant impact on GDP growth, while the FDI term is negatively significant.⁶ The authors interpret these results in such a way that "there is a threshold level of the development of financial markets below which FDI will not have any beneficial effect on growth" (*ibid.*, p. 12).⁷

Similarly, Hermes and Lensink (2000) argue that the development of the financial system in the recipient economy is an important precondition for FDI to have a positive impact on economic growth. Many of the growth-enhancing effects of FDI work through the adoption of new technologies and skills, which, in turn, rest upon the availability of financial resources. The existence of well-developed financial systems, by mobilising savings efficiently and screening investment projects, is therefore an important precondition for the FDI-growth nexus to materialise. The empirical investigation lends support to this claim. Only in those countries with a sufficiently developed financial system (as proxied by the ratio of private sector bank loans to GDP), did FDI boost the growth of GDP per capita.

III.2. *Summing up*

Beyond the initial macroeconomic stimulus from the actual investment, FDI may influence growth by raising total factor productivity or the efficiency in the usage of resources in the recipient economy. This works through three channels, namely: the linkages between FDI and foreign trade flows; the spillovers and other externalities *vis-à-vis* the host country's business sector; and the direct impact on structural factors in the host economy. The overall evidence of an effect of FDI on growth can thus be summarised:

- Most empirical studies conclude that FDI generally does make a positive contribution to both factor productivity and income growth in host countries, beyond what domestic investment normally would trigger. It is, however, more difficult to assess the magnitude of this impact, not least since large FDI inflows to developing countries often concur with unusually high growth rates triggered by unrelated factors. As to whether FDI tends to crowd out domestic investment, the evidence is generally mixed. Some studies find evidence of crowding out, while others conclude that FDI may actually serve to increase domestic investment. Even where crowding out does

take place, the overall effect could be beneficial, for instance if this results in the release of scarce domestic funds for other investment purposes.

- In the least developed economies, FDI seems to have a markedly less favourable effect on growth. This has been attributed to the presence of “threshold externalities”. Apparently, developing countries need to have reached a certain level of educational, technological and infrastructure development before being able to benefit from a foreign presence in their markets. An additional factor that may prevent a country from reaping the full benefits of FDI is imperfect and underdeveloped financial markets. Weak financial intermediation hits domestic enterprises harder than MNEs, and may in some cases lead to a scarcity of financial resources, effectively precluding these enterprises from seizing the business opportunities that arise from the foreign presence. Foreign investors’ participation in physical infrastructure and, subject to adequate regulatory frameworks, in the financial sectors can help on these two grounds.

Table III.1. Findings of macro-empirical studies

Study	Data/Coverage	Questions addressed	Estimation technique	Major findings
Agosin and Mayer (2000)	UNCTAD. 32 developing countries over the period 1970-96.	(2)	Three investment equations (one for each region) on pooled data using SUR.	Crowding-in has been strong in Asia, while crowding-out has been the norm in Latin America. In Africa, FDI has increased overall investment one-to-one. The positive impacts of FDI on domestic investment are not assured.
Alfaro, Chanda, Ozcan and Sayek (2001)	Net FDI inflows from IMF – IFS. Three samples (39 to 41 countries). Data averages over the period 1981-97.	(1), (4)	Cross-country OLS and IV regression.	FDI contributes significantly to economic growth, but the level of development of local financial markets is crucial for the positive effects to materialise.
Bende-Nabende, Ford and Slater (2000)	WB data on FDI inflows as a percentage of GDP – 5 ASEAN countries over the period 1970-94.	(1), (3)	System of equations estimated through 3SLS. A specific equation is estimated for each endogenous dependent variable in the growth regression (six channel equations). The model is estimated separately for each one of the five countries.	FDI has a positive and significant coefficient in the growth equation for three of five countries. The negative sign of FDI in Singapore and Thailand is deemed to the specific characteristics of capital formation in these countries. Authors claim that FDI boosts growth in countries with a fair balance of domestic private capital and FDI. Furthermore, FDI is positively associated with positive spillover effects that lead to human resources development, transfer of technology, expansion of trade and learning by doing. The spillover process is positively related to the level of economic development.

Table III. I. Findings of macro-empirical studies (*cont.*)

Study	Data/Coverage	Questions addressed	Estimation technique	Major findings
Blomstrom, Lipsey, Zejan (1994)	FDI inflows from IMF. 78 developing countries over the period 1960-85.	(1)	Granger causality.	FDI Granger-causes economic growth.
Borenszstein, de Gregorio and Lee (1998)	FDI gross outflows from OECD countries. 69 countries, two periods: 1970-79 and 1980-89.	(1), (2), (4)	Two equation (one per each decade) system estimated using SUR and IV (three stage least squares).	FDI and growth: FDI exerts a positive effect on growth only when a minimum level of human capital exists. FDI and domestic investment: the complementarity between foreign and domestic investment is not robust to different specifications.
Crankovic and Levine (2000)	Gross FDI inflows from new WB database and IMF. Period: 1960-95.	(1), (2), (4)	Dynamic panel data estimator (GMM).	The exogenous component of FDI does not exert a significantly different from zero impact on GDP growth. Nor does FDI enjoy a strong link with productivity (TFP) growth. These results are robust after controlling for the level of human capital and financial development.
De Mello (1999)	Net FDI inflows from IMF's Balance of Payments Statistics. 16 OECD and 17 non-OECD countries over the period 1970-90.	(1), (4)	Stationarity and co-integration analysis plus dynamic panel estimation (fixed effect and mean group estimators).	The FDI-growth nexus is not robust in all countries. Where the positive relationship holds, it depends on country-specific factors. FDI enhance output growth through higher productivity in OECD countries, and thorough capital accumulation in non-OECD countries. The impact of FDI on growth tends to be lower in technological leaders and higher in laggards.

Table III.1. Findings of macro-empirical studies (*cont.*)

Study	Data/Coverage	Questions addressed	Estimation technique	Major findings
Hermes and Lensink (2000)	WB data on FDI as a percentage of GDP. 67 least developed countries, average of 1970-95 data.	(1), (4)	Cross-country OLS with stability tests.	FDI enhances growth once a country has reached a given threshold of human capital and financial market development. For most developing countries (30 of 67, almost all SSA countries) this threshold has yet to be attained.
Lensink and Morrisey (2001)	WB data on gross FDI for 90 countries over the 1975-97 period.	(1)	OLS fixed effect panel and IV cross-section.	FDI has a positive effect on growth whereas volatility of FDI inflows has a negative one.
McMillan (1999)	IMF and UNCTAD. 1970-96.	(2)	Dynamic panel data on investment equations.	FDI is a strong catalyst for domestic investment in developing countries. Lagged FDI has a stronger effect on private domestic investment than lagged private domestic investment itself.
Reisen and Soto (2001)	WB data on net FDI inflows. 44 non-OECD countries over the period 1986-97.	(1)	Dynamic panel data.	Different types of capital inflows have a different impact on growth. FDI and portfolio equity flows exert a positive and significant correlation with growth, debt inflows display a negative one.
Morrisey and Lensink (2001)	WB data on FDI/GDP over the 1975-98 period for 115 countries.	(1) (4)	OLS and IV for cross section using the 1975-98 average values. Fixed effect panel using three ten-year periods.	FDI exert a robust positive impact on growth. This result is not conditional on the level of human capital. Volatility of FDI has a negative impact on growth, but it probably captures the growth-retarding effects of unobserved variables such as political uncertainty.

Table III. I. **Findings of macro-empirical studies** (*cont.*)

Study	Data/Coverage	Questions addressed	Estimation technique	Major findings
UNCTAD (2000b)	UNCTAD data on FDI inflows. Five-year periods over 1970-1995 for more than 100 LDCs.	(1)	Granger causality and OLS.	Results from analysis of times series characteristics of the explanatory variables show that: 1. FDI is always positively related to contemporaneous growth in per capita income. Correlation with past growth rates is not robust. 2. FDI is not related to past investment, while it is correlated with past trade. Growth regressions including lagged FDI and investment and other controls over individual and pooled periods have poor explanatory power. Lagged FDI is found to exert a positive but not statistically significant impact on growth. It turns out to be significant only when interacted with the level of schooling.
Nair and Weinhold (2000)	WB data on net FDI inflows as percentage of GDP for 24 developing countries over the 1971-95 period.	(1), (4)	Non-dynamic fixed effects panel, first-differenced instrumented panel and mixed (fixed and random) effect model (heterogeneous panel).	Standard fixed effects estimation points to a significant and positive impact of FDI growth on GDP growth. Results from the dynamic model with heterogeneity reinforce this claim and show how the indirect impact of FDI on growth works differently across countries.

Table III.1. Findings of macro-empirical studies (*cont.*)

Study	Data/Coverage	Questions addressed	Estimation technique	Major findings
Xu (2000)	Share of MNEs affiliates' value-added in host country GDP. 40 countries over the period 1966-94. Data from the United States Direct Investment Abroad Benchmark Survey.	(1), (4)	Instrumental variables panel data estimation with country and time-specific effect.	FDI boosts total factor productivity growth. Strong evidence of technology diffusion from United States affiliates to developed countries, but only weak evidence for developing countries.
Zhang (2000)	Inward FDI stock from WB and UNCTAD/TNC for 11 Latin American and East Asian countries. Period: 1970-95.	(1), (4)	Stationarity and co-integration.	FDI is found to promote growth in 5 of eleven countries, among which four are Asian. The impact of FDI on growth is country specific and tends to be positive where pro-free trade and pro-education policies are adopted, so to encourage export-oriented FDI.

Notes

1. This argument is related to a large body of literature on threshold externalities (see Azariadis and Drazen, 1990), according to which the attainment of certain minimum critical thresholds in the host economy is required to trigger the development process.
2. To address these methodological problems, researchers have taken different approaches, such as the application of “Granger-causality” tests and co-integration analysis to time-series data (*e.g.* De Mello 1999; UNCTAD 2000), the use of instrumental variable techniques to identify the autonomous impact of FDI on growth (*e.g.* Carkovic and Levine, 2000; Reisen and Soto, 2000; Lensink and Morrisey, 2001), and the construction and estimation of a full structural model based on three-stage least squares (3SLS) or full-information maximum-likelihood methods (Bende-Nabende *et al.*, 2000).
3. Such characteristics are dealt with by introducing country-specific and group-specific dummies and applying a standard fixed-effect estimation technique.
4. To be sure, there are divergent views among academic researchers on the growth impact of volatility in capital flows. Nonetheless, one point on which most economists agree is that shocks from short-term capital flows are transmitted more quickly between countries than those from FDI and other long-term flows. Furthermore, as regards volatility of FDI, Lensink and Morrisey (2001) argue that while volatility is found to have a consistent negative effect on growth, it is not volatility of FDI *per se* that retards growth but that such volatility captures the growth-retarding effects of unobserved variables. The swings in FDI might reflect political and economic uncertainty in the host country, a factor that is widely acknowledged as hampering economic growth.
5. McMillan (1999) also argues that FDI can play a strong catalyst role for domestic investment in developing countries. According to Agosin and Mayer (2000), such “crowding in” effect of FDI can be found in the case of Asian countries but not necessarily for other developing regions.
6. The result is robust to the use of different measures of financial market development.
7. Since both the volume of FDI and the efficiency of financial markets are likely to be higher in faster growing economies, reverse causality could yield a biased result on the interactive term. Instrumental variable estimation of the cross-country growth regression, however, does confirm previous findings, pointing to a positive and significant contribution of FDI to growth in countries where financial markets are sufficiently developed.

Chapter IV

FDI and Foreign Trade Linkages

The linkages between FDI and foreign trade, especially as regards the closer integration with international trade flows, are among the main factors affecting long-term growth trends and economic development of host countries. Analysts and policy makers have long recognised that FDI and foreign trade represent alternative ways for MNEs to connect with consumers and economic activities in host countries. Recent studies, moreover, have stressed the point that an important (and perhaps increasingly important) share of international trade flows relates to transactions between related enterprises, further highlighting the apparent dichotomy between international trade and investment. This observation lends itself to two conclusions: trade and investment are cross-linked in the sense that efforts that boost foreign trade are likely to positively affect FDI, and *vice versa* ; and the well-known findings about the positive effects of international trade on economic growth apply equally to FDI.

FDI has the potential to enhance the long-term growth prospects of the host economy through foreign trade flows irrespective of short and long-term impacts on the balances of trade and current account. However, where major imbalances *vis-à-vis* the rest of the world curtail host countries' access to finance, or otherwise threaten macroeconomic stability, the direct effects of FDI on import and export become an important intermediate concern. Policy makers in developing countries traditionally have looked to FDI as a potential tool for boosting export performance and encouraging import-competing production in the host economy.

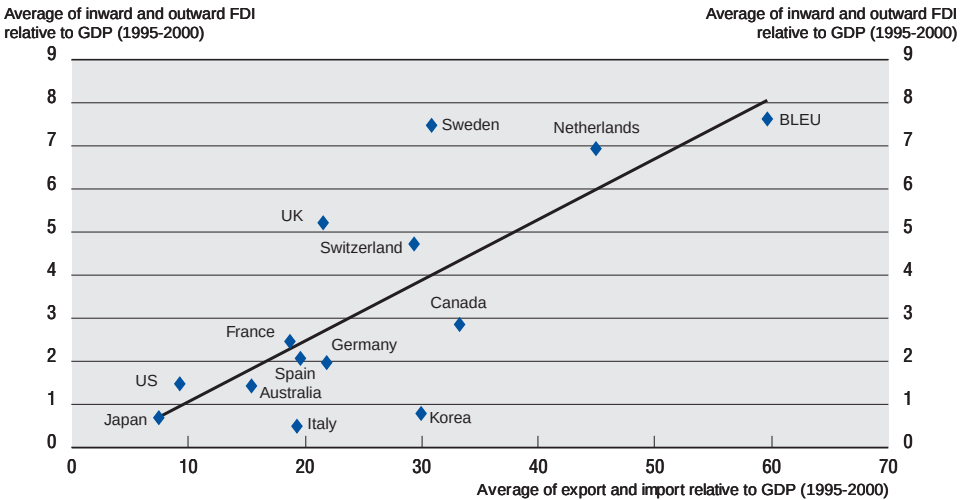
Finally, the presence of MNEs may have impacts on the host economy's international liquidity that go beyond trade effects. Thus, straightforward corporate transactions between affiliates and their mother companies, such as profit remittances and the payment of royalties, have a direct effect on the host country's balance of payments. Such transactions should, however, properly be considered as trade-related, insofar as they regard payment for the usage of capital goods and intellectual property. A separate issue, sometimes raised by host countries with limits on profit remittance, relates to loans between related enterprises.

IV.1. The linkages between FDI and foreign trade

The degree to which FDI and inward and outward foreign trade is interlinked in a network of increasingly internationalised production (whether intra-MNE or not), may depend on the motivation for FDI, sectoral specifics, and the macro-economic characteristics of the home and host economies. As countries ascend to higher levels of economic development, the linkages between FDI and trade generally become tighter (Figure IV.1). This could reflect a tendency for more developed countries to attract a large share of their FDI in connection with the vertical integration strategies of MNEs. However, the observation could also indicate that MNEs' strategies for servicing clients in the most developed economies have come increasingly to include the establishment of a corporate presence in a growing number of these economies. Moreover, more developed countries have significant gross FDI outflows, and their business sectors attract a larger absolute number of MNEs, which reduces the likelihood of a few investment projects exerting a singularly large impact on either imports or exports.

The empirical evidence relates almost exclusively to the developed country case. It is, however, still relevant for developing and emerging countries, in that it describes the “steady state” toward which most of these countries aspire as they take measures to integrate their national economies more closely into the network

Figure IV.1. The linkage between openness to FDI and foreign trade



of international division of labour. Analysts have coined the phrase “FDI maturity” to describe the situation where an emerging economy becomes sufficiently well integrated in the world (or regional) economy to start acting as a significant provider of gross outward FDI.

a) *The empirical evidence of trade-FDI linkages*

Numerous recent studies of FDI and foreign trade linkages, many of them building on a seminal work by Markusen and Venables (1998), have focused on explaining FDI in terms of the investors’ choice between accessing the host economy through conventional foreign trade and doing so by establishing subsidiaries with which to engage subsequently in intracompany trade.¹ A possible indication of the evolution of mutually dependent trade and investment patterns may be derived from the concurrent growth in foreign trade and FDI in recent decades. FDI rose about four times as rapidly as exports in that period. Supporting the argument that the increases partly reflect industrial integration among countries, most of the rise in trade and investment was concentrated in economies with comparable factor endowments and a generally high level of economic development.

While the possible linkages between trade in finished goods and FDI have received considerable attention – *inter alia* in connection with the import substitution literature surveyed in previous sections – a recent spate of “integrated approach” studies focuses strongly on trade in input and intermediate goods. Views differ, however, on how much importance intra-firm trade has gained in recent decades. For example, UNCTAD (2000a) suggests that the production structures of firms pursuing “deep integration” strategies become increasingly important for FDI. Hanson (2000) also suggests that MNEs are increasingly vertically integrated. However, he finds that this often takes the form of downstream distribution activities aimed at domestic and other regional markets rather than actual manufacturing activity. Goldberg (1997) finds a growing dependence on imported inputs in the production of almost all manufacturing sectors in the United States, United Kingdom and Canada (but, interestingly, not in Japan).

Other studies have found that the extent to which MNEs have integrated their international operations vertically might not be as high as commonly assumed and might not be moving toward greater integrated international production. For example, Rangan (2000) observes that in the period 1966-97, the share of US MNEs’ intrafirm exports in total US manufacturing exports has remained relatively stable. Another indication that much FDI is horizontal rather than vertical relates to the finding that the sales of foreign affiliates are higher in countries with higher tariffs and transport costs (Brainard, 1997, and Ekholm, 1998).

To the extent that the importance of imported inputs is growing, this may be attributed to three not mutually exclusive factors: outsourcing, an increasing

importance of MNE networks, and global sourcing. According to the *outsourcing* hypothesis (Feenstra and Hanson, 1996), rising imports of intermediate goods result from companies' strategies to relocate a part of their production to foreign countries with the relevant comparative advantages. For example, companies in industrialised countries shift labour-intensive stages of their production process to labour-abundant countries with lower wages, which often necessitates additional FDI in the low-wage countries. Increasing imported inputs use is, according to this hypothesis, related to growing outward FDI stocks of companies in industrialised countries. The MNE *network* hypothesis argues that the increasing imported input use is due to trading networks of MNEs. Intense trading between MNEs' affiliates in foreign countries and companies of the home country lead to higher input imports. Increasing imported inputs are, therefore, related to growing inward FDI stocks. Finally, the *global sourcing* hypothesis stands for an influence of neither the outward nor the inward FDI stock on imported inputs. According to this hypothesis, companies buy their inputs case by case, where the best conditions are offered. Increasing use of imported inputs is, therefore, due to a naturally growing propensity to import against the backdrop of globalisation.

Several recent empirical studies have investigated the linkages between MNEs' trade and investment. Their results have been mixed: the relative importance of the competing factors varies according to location and economic sectors. Hummels *et al.* (1998), while not expressly addressing the issue of intra-MNE *versus* other kinds of trade, find that a large and increasing share of world trade can be attributed to vertical specialisation, which lends some support to the MNE network hypothesis. The study also finds a difference among countries, with small economies being more prone to vertical specialisation, and among economic sectors, with machinery and chemicals making the largest contribution to the increase of vertical specialisation. Andersson and Fredriksson (2000), analysing the intrafirm trade of Swedish MNEs in the 1970s and 1980s, find evidence of a shift in the composition in favour of intermediate goods. Attempting to link the trade in intermediates to macroeconomic variables, the study finds no influence from traditional indicators of income and value added. Against this background it rejects the traditional factor proportion models in the case of intra-firm trade in intermediate goods.

Kleinert (2000), using panel data, investigates the factors that influence intermediate imports into 24 industrial sectors in six OECD countries. The study concludes that, while the strength of results varies across host countries and sectors, empirical evidence mainly favours the MNE network hypothesis. The evidence of a linkage between outward FDI and imported inputs is much weaker, and on this background the outsourcing hypothesis is rejected. Global sourcing cannot be rejected as a supplementary factor, since a significant part of the pick-up in imported intermediate inputs seems unrelated to FDI flows.

Fukasaku and Kimura (2001), analysing the foreign trade of MNEs in the United States and Japan, confirm that the pattern is mixed across sectors, with high-tech and competitive sectors generally displaying a high degree of intrafirm trade. The study attributes this to a high degree of upstream-downstream fragmentation across locations in the relevant sectors, which is essentially consistent with the findings of Hummels *et al.* (*op. cit.*). Markusen and Maskus (2001) analyse the intrafirm trade between US-based MNEs and their subsidiaries in 10 regions of the world. They conclude that increased incomes and increased similarity in size and relative factor endowments increase both the level of intrafirm sales and the balance of trade flows between home and host countries. Barrios *et al.* (1999) examine bilateral MNE activities in manufacturing across 16 OECD countries. They find that overall market size tends to increase, and differences in market size tend to reduce, bilateral MNE imports and exports. Other factors found to increase activity are R&D intensity and a common language in the home and host economies, whereby the relative endowments of human and physical capital is not clear from the empirical results.

As mentioned above, few studies have addressed (owing largely to a shortage of data) the importance of integrated FDI, and export and import flows in developing and emerging economies. However, Chen (1997) finds an important positive effect from FDI on both imports and exports in China, and concludes that the main advantage to the country of direct investment is that the increased gross trade flows allow it to better utilise its comparative advantages. Hoekman and Djankov (1997), examining MNE activities and exports in five Eastern European countries, conclude that there is little evidence that FDI has been “driving” exports in these economies. FDI is, however, found to be strongly correlated with the subsequent intraindustry trade between home and host countries.

IV.2. Goods exports

Policy makers in some emerging economies – especially in those that are comparatively less developed and only loosely integrated into international trade systems – tend to see FDI as a possible vehicle for raising exports. The prevailing reasoning is that MNEs may increase the export orientation of the domestic economy through channels that include: their higher degree of “sophistication” in product quality, brand recognition and access to world markets; their potential for alleviating constraints on the use of the host economy’s factor endowment; and their longer-term impact on the international competitiveness of the host country business sector.

Among these factors, policy makers focus largely on the first two, which have the potential to generate speedier results than the general competitiveness channel. It should, however, be noted that only certain economic sectors and certain

motivations for FDI are likely to contribute to near-term export growth. Based on the motivation factors outlined in Chapter I, the MNEs that are the most likely to generate immediate exports are the ones that enter the host economy motivated by the availability of natural or human resources. Conversely, FDI motivated by market-seeking behaviour is unlikely to spur host-country exports, except where the host economy is used as a platform for the regional activities of certain MNEs. Finally, FDI in the context of trade linkages (as surveyed in the previous section) is likely to boost gross exports, while having an uncertain effect on the trade balance.

a) FDI and exports: the empirical evidence

As would be expected, based on the above observations, the empirical evidence of short and medium-term impact of FDI on exports is mixed. For example, in the case of certain newly industrialised Asian economies such as Chinese Taipei, Singapore, Hong Kong (China) and Malaysia, the consensus seems to be that MNEs have played an important role in exports growth (*e.g.* Kumar, 1996). Moreover, studies of the determinants of FDI location in developing countries indicate that a main driving factor is the ease with which enterprises located in the host country can participate in international trade (Sing and Jun, 1995, and Kokko *et al.*, 2001). However, broader-based empirical studies generally yield mixed results regarding the role of MNEs in expanding the exports of developing countries (Dunning, 1993, and Sharma, 2000).

A segregation of the evidence by sectoral, national and investor characteristics yields additional insights. First, certain economic sectors appear to have consistently attracted FDI. UNCTAD (1999) notes that MNEs from developed countries have played a critical role in the initial stages of stimulating labour-intensive exports from developing countries. The study cites the example of the internationally diversified production of textiles that started in the 1960s. The process was spurred partly by developed countries' increasing openness to trade, and partly by the liberalisation of FDI regimes in developing countries. Most studies conclude that such inward FDI is complementary to the availability of production factors such as skilled labour, but that it tends to be substitutional to the quality of the local business environment.

Ernst *et al.* (1998), examining the experiences of Asian host countries, conclude that the role of FDI was low in countries where local firms had good capabilities and were capable of undertaking subcontracting at low costs. The role for MNE in the export of low-tech products was found to be greater in developing countries with weak domestic business sectors. China provides one of the more widely publicised examples of FDI boosting exports. Chen (1997) finds a positive and statistically significant impact of FDI on China's goods exports, and on

intraprovincial trade flows. The study links this finding with the fact that FDI in China is concentrated in labour-intensive and export-oriented manufacturing activities.

Anecdotal evidence abounds of cases where inward FDI flows have boosted the export capacity of individual developing countries in certain market segments. A frequently quoted example is the use by MNEs of specific locations as “bridge-heads” for their regional expansion strategies. An important special case relates to the situation where a low-cost production site is situated in proximity (geographically, but in some instances also linguistically and culturally) to a nation that is already home or host to major international enterprises. For example, OECD (2001b) finds this to be the case in Estonia, where FDI by Finnish and Swedish MNEs has been a primary factor boosting export capacity over the past decade. Hooley *et al.* (1996) find a more general positive impact of FDI on exports from Hungary, especially to markets not traditional for Hungarian exports. This is attributed to a superior marketing effort by foreign-owned enterprises.

Finally, likely longer-term impacts of FDI on host-country exports emanate from the generic benefits to the host economy, as demonstrated in the following chapters. The effects of FDI on competition, enterprise restructuring, human capital formation and technology transfer are instrumental in boosting export competitiveness.

b) Export processing zones

The linkage between trade integration and FDI lends itself to the conclusion that developing countries may best harness FDI as a means of boosting exports by pursuing generic policies aimed at improving economic structures, and by increasing their economic openness to foreign trade. However, authorities in many developing countries consider that a full range of such policies, even if they would be instrumental in attaining economic objectives unrelated to FDI and foreign trade, would be infeasible in the near term. Many countries, developing and other, have chosen to promote export-oriented FDI by establishing export-processing zones (EPZs), which could arguably serve as a way to combine the objectives of creating better framework conditions for business, albeit in a limited area, and attracting particularly export-oriented FDI.²

EPZs, while formally an expression of trade rather than FDI policies, nevertheless represent one of the more visible efforts to attract foreign direct investment by many developing countries. Following Madani (1999), EPZs generally display the following five groups of features:

- Unlimited duty-free imports of raw materials, intermediate inputs and capital goods necessary to produce exports.

- Reduced administrative and regulatory burdens. Flexibility regarding labour laws for firms in the zone, sometimes to the point of conflicting with core labour standards. This, however, is a point of some controversy: studies have found that companies in EPZs, with few exceptions, generally follow national labour laws.³
- Generous tax holidays and other tax concessions to the firms in the zone, at least in some cases.
- Better communication services and infrastructure than in the rest of the host country; and in some poorer countries, subsidised utilities services and rental rates.⁴
- Openness, in most cases, to domestic and foreign-owned enterprises, as well as to joint ventures.

Many of the early studies of EPZ impact found a considerable potential for such zones to boost host-country exports. A widely cited example was Mauritius, where EPZ export earnings amounted to 71% of the nation's gross exports in 1994, and the zones employed 16.6% of the total workforce.

However, and notwithstanding EPZs' significant impact on export performance, it would be unrealistic to expect them to greatly improve host countries' trade balances – not least as a heavy dependence on imported components is the formal justification for their duty-free treatment. For instance, Amirahmadi and Wu (1995) found that among Asian host countries “net export growth generated by EPZs has neither been consistent nor impressive”. While most of the EPZs in the region generated large amounts of gross exports, only Indonesia, Korea and Chinese Taipei were found by this study to have high ratios of net to gross exports. In countries such as Malaysia, the Philippines and Sri Lanka, the net to gross export ratios of EPZs have been low, and in some cases erratic. OECD (1998) likewise observes that many of the more export-oriented foreign investors in EPZs in Southeast Asia and elsewhere depend heavily on imported inputs. On average, in the electronics sectors in three Southeast Asian countries, imports totaled 80% of exports, suggesting a very low level of local content in this sector. Jenkins *et al.* (1998) found similar results in the case of Latin American EPZs.

It should be noted that a low local content of material inputs does not necessarily imply low domestic levels of value added. Some small economies have received a considerable boost to domestic value added and employment through EPZs (Alter, 1991). Moreover, as discussed by Madani (1999), linkages between companies located in EPZs and the rest of the host country develop over time, eventually facilitating the transfer of skills and technology discussed elsewhere in this study.

The policy implications to be drawn from developing countries' experience with EPZs are far from obvious. Even in cases where zones generate significant

benefits (to net exports or otherwise), these benefits come at a cost to the host economy. First, to the extent that some investment would have taken place anyway, concessions to enterprises in EPZs imply a fiscal burden to the host authorities. Second, in the case where host-country enterprises are not allowed to establish themselves in EPZs, an uneven playing field is created between foreign entrants and domestic incumbents. If domestic enterprises, on the other hand, are allowed in the EPZs, the competition within the host economy between EPZ and non-EPZ companies is distorted. Third, the investors most likely to be attracted to EPZs are considered as the most “footloose” undertakers of FDI (albeit arguably less footloose than many domestic sources of production and employment), so the longer-term benefits of attracting them may not be obvious. Fourth, although Oman (2001) found little concrete evidence of this, developing countries risk finding themselves competing for FDI by means of offering the most preferential EPZs. In extreme cases, this may allow would-be investors to appropriate much of the FDI benefits that would otherwise have accrued to the host economy. When assessing the usefulness of EPZs as a tool for attracting FDI, such drawbacks need to be carefully weighed against the potential benefits.

IV.3. Goods import

The impact of FDI on goods import is twofold, insofar as there is a direct effect that may in most cases be clearly monitored, and a longer-term influence that works via the subsequent import and import substituting activities of the host country's business sector. The precise magnitude of the latter has been the subject of numerous empirical studies, some of which are surveyed in subsection *b*) below.

a) Direct impact of FDI on imports

The direct impact falls into two parts, namely an immediate effect emanating from the actual investment and the effects on the import pattern of the targeted enterprises. The former channel is generally limited to the imports of initial inputs of imported machinery and equipment (especially in greenfield investment), or, where FDI is large compared with the size of the host economy, it may include the knock-on effect on aggregate imports from rising total domestic demand. The second channel, which essentially depends on the investors' choice between imported and local inputs, has been studied extensively.

Based on a case study of 18 of the largest foreign affiliates in the electric and electronics industry in Malaysia, Arif and Yong (1996) find that the value of imported materials and components accounted for close to 80% of these companies' total inputs, which is much higher than the industrial average. In commenting on this study, UNCTAD (1997a) warns against drawing overly broad inferences from

affiliates' behaviour in an industry considered particularly global and competitive, and which depends on specialised high-quality inputs. In contrast, Sivalinghan and Yong (1993) find evidence that FDI into the extractive industries in Malaysia requires relatively fewer imported inputs and produces comparatively high domestic value added per unit of output.

Some studies have broadened the analysis to cover the direct impact of FDI on the balance of trade as a whole. UNCTAD (1997b), for example, investigates the trade flows associated with FDI in China and Malaysia in the first half of the 1990s. It finds that in China, FDI contributed to large trade deficits during the period, but that exports attributed to FDI tended to grow more quickly than imports. In Malaysia, exports and imports attributed to FDI were more equally matched, producing net trade deficits in three of the five years covered.

Finally, while empirical evidence suggests that the direct and immediate impact of inward FDI is an increase in goods import, studies suggest that this effect tends to weaken over time. Hill and Athukrorala (1998) argue that newly established (or acquired) enterprises need time to forge linkages with local suppliers. The study cites evidence of companies located in EPZs increasing their local purchases over time and shifting to more sophisticated production processes as their operations mature – provided, crucially, that the host-country business environment is conducive to such strategies. UNCTAD *op. cit.* found in the case of China that the import intensity of foreign-owned enterprises declines significantly over time. In a comprehensive study of FDI into developing countries in the late 1980s and early 1990s, Fry (1996) finds that FDI initially boosts imports, but that imports decline during the subsequent five years while exports pick up. This study also concludes that the host-country policy environment is the single most important factor bearing on the eventual (beneficial) impact of FDI on foreign trade.

b) The longer-term effects of FDI

Whether inward FDI leaves the host country with a permanently higher import level (or, alternatively, induced a real depreciation of its currency) depends, as mentioned, on the sectoral, localisation and strategic specifics of each case. This makes it difficult to draw general conclusions, not least since many of the theoretical and empirical studies have treated FDI and imports as relatively homogenous flows, focusing implicitly on the strategic choices by investors.

The standard theory of the MNE conventionally regards exports and FDI as alternative strategies for a profit-maximising firm. A simple model presented by Caves (1996) defines the MNE as an enterprise that controls and manages production plants located in (at least two) different countries and maximises total revenues accruing from intangible assets belonging to it. Such a firm supplies a foreign

market either through affiliate production (or a licensing agreement of such production with another firm in the host country) or by exporting from the home country.⁵ Caves calls this the “intangible-assets model” of the horizontal MNE – a multi-plant firm producing the same line of goods from plants located in different countries. This model explains the existence of such an MNE from three aspects: it must possess some intangible assets; there must be locational forces that justify the dispersion of plants in different countries; and there must be some transactional advantage to placing these plants under common administrative control.⁶

1) *Reviewing the empirical evidence*

The question of FDI-trade linkages has also attracted considerable attention in international business literature, where the sequence and pattern of internationalisation of the firm are analysed from the viewpoints of both the historical and industrial organisation. UNCTAD (1996) highlights the idea that the dominant characteristic of internationalisation is the precedence of exporting over outward FDI as a way of entering foreign markets. It has been argued that most firms, particularly in manufacturing, tend to build up overseas activities step by step, typically starting from exporting, setting up representative offices, establishing marketing, distribution and after-sales facilities, and finally building up local production facilities in some host countries.⁷ Such a gradual and linear sequence of development of the firm may best be explained by the transactional approach to the MNE: “[A] successful firm runs out its successes in the domestic market before incurring the transactions costs of going abroad” (Caves 1996). Thus, the business literature again points to substitution between FDI and trade as the dominant pattern of internationalisation.⁸ Perhaps most noteworthy is a detailed study by Blonigen (1999) at the *product* level. His empirical results regarding 21 specific products show substitution of affiliate production for host-country imports in most cases. Such substitutions are often large one-time shifts rather than gradual changes over time.

An abundance of broader-based studies have assessed the linkage between FDI and subsequent imports into the host country, albeit most of them from the viewpoint of FDI's impact on home-country bilateral exports. As predicted by the standard theory of the MNE, trade policy can play an important role in enterprises' decision on whether to export or invest abroad. Belderbos and Sleuwaegen (1998) present an interesting case based on the experience of Japanese electronics firms in the late 1980s. They find that a substantial part of these companies' FDI in Europe was induced by EC anti-dumping and other trade measures targeting Japanese firms – an example of the so-called tariff-jumping FDI that substitutes for exports from the home country. At the same time, subcontractor firms supplying parts and components to their parent firms in a vertical production (the so-called *keiretsu*) system are found to export more to Europe.

Another important case study by Gopinath *et al.* (1999) examines the US food-processing industry. Keeping close to the standard theory of the MNE, the authors develop a four-equation model in which foreign affiliate sales, exports, foreign affiliate employment and the demand for FDI are jointly determined. Their regression results point to small substitution between foreign affiliate sales and home-country exports: a 10% rise in the price of exports leads to a 1.1% drop in foreign affiliate sales and a 0.6% increase in exports. Moreover, a rise in agricultural protection in foreign countries tends to reduce US exports and increase foreign sales by affiliates, though the net impact of protection is small.

2) FDI and home country imports: substitution or complementarity?

Consistent with the above findings of trade-FDI linkages, most econometric studies of host-country imports and FDI, regardless of differences in data sets and estimation techniques, indicate a strong *complementary* relationship between FDI and trade. Three cases may deserve special attention.

First, the production of foreign-owned enterprises may have important demand-enhancing effects in host countries by creating local goodwill and customer loyalty (especially for brand names), facilitating marketing and distribution (at lower costs and more reliable delivery) and generating spillover effects on other export goods (for multi-product firms). This is what Brainard (1997) terms the “proximity advantage” of establishing local production in host countries. In this way “horizontal FDI” is likely to increase overall demand, resulting in higher exports from the home country (demand complementarity).

Second, if the production process is fragmented into stages, upstream (parts and components) and downstream (assembly), and only the latter is transferred to the host country, then the demand for parts and components by the new assembly plant can be met by exports from suppliers in the home country. This is what Lipsey and Weiss (1981, 1984) and other researchers describe as “vertical FDI” aimed at exploiting scale economies at different stages of production arising from a vertically integrated production relationship. In this way, too, FDI is likely to increase imports (of parts and components) into the host country, partly offsetting substitution for imports of final products.

The importance of “vertical FDI” is further confirmed by Head and Ries (2001) using micro data on Japanese manufacturing firms over 1966-90. They confirm that more vertically integrated firms show greater complementarity between manufacturing FDI and host-country imports. Wholesale FDI is also found to exert a statistically significant positive effect on exports from the home country, supporting earlier findings by Yamawaki (1991). The results of separate regression analyses conducted only for assembly firms in automobile and electronics, however, show that manufacturing FDI and exports exhibit a substitution relationship.

IV.4. Implications of FDI for service trade and current accounts

The import and export of services is an area of potentially great importance for the interaction between FDI and foreign trade. Services are tradable only to a limited degree on a purely cross-border basis, although the emergence of e-commerce and other electronic means of conducting business has improved the scope for such activity. The exchange of services that are of a complicated nature, infrequent or advice-intensive, however, continues to involve an element of physical presence and buyer-seller contact. Services in the latter categories are therefore traded internationally in connection with a temporary presence of the buyer in the home economy, a temporary presence of the seller in the host economy, or where the seller operates via a corporate presence in the host economy. The latter mode of delivery – referred to, in the General Agreement on Trade in Services (GATS), as “mode 3” – generally depends upon (with some sectoral exceptions) a degree of FDI into the host economy by the vendor. Developing countries aiming to reap benefits from the growing international trade in services thus have a direct interest in facilitating FDI – not least since alternative modes of delivery, notably e-commerce, are generally less freely available there than in highly developed economies.

Mode 3 delivery is the area in which WTO members undertook by far the largest number of liberalisation commitments in the Uruguay Round. This suggests the importance that countries attach to reaping the benefits – high-paying jobs, human resource training, technology transfers, quality upgrading – typically associated with foreign corporate presence, whilst retaining the freedom to regulate such activity. Change in host-country FDI regimes has been strongly liberalising during the last decade. Such policy changes were enacted largely in a unilateral manner (Sauvé and Wilkie, 2000).

A frequently heard argument against increased openness to mode 3 delivery is that the GATS is principally an investment agreement, designed to promote the interests of large multinationals. However, governments can use the GATS selectively to encourage investment in sectors of their choice, subject to the conditions they wish to impose or retain, including with respect to technology transfers and the employment of local workers. GATS promotes greater predictability through the permanency of commitments, an important element in attracting investment for developing countries. The GATS framework also allows governments to impose conditions that may be important to national development objectives, including with respect to technology transfers and the employment of nationals.

The flexibility described above helps explain why the GATS tends to be viewed as the most development-friendly agreement brokered in the Uruguay Round, and why many WTO members believe that the GATS offers the greatest scope for incrementally beefing up WTO treatment of investment. Two important

factual considerations are that services (including utilities) make up close to 70% of global annual FDI flows, and that they account for an even greater proportion of discriminatory measures affecting cross-border investment activity (Chapter II. See also Sauvé, 2001).

a) *The risk of outflows of funds*

A frequently quoted concern of host-country authorities regarding MNE activities is the possibility of transfer pricing in connection with intra-enterprise foreign trade. Little empirical information is available on this subject, but UNCTAD (1996) cites evidence of abusive transfer pricing in the context of tax evasion. Whereas mature economies covered by double taxation treaties are not particularly vulnerable to such practices, transfer pricing remains a potential problem for developing countries. The risk is exacerbated in the cases where host countries erect barriers to profit remittance by MNEs.

Another issue for policy makers is the long-term current account position of countries that attract large amounts of FDI. Profitable investment eventually gives rise to a degree of repatriation of profits and dividends, and in some cases to the payment of royalties. Empirical evidence of the financial flows associated with FDI is notoriously hard to find. UNCTAD (1997b) estimates that in Malaysia, profit remittances and other direct investment income payments rose from USD 2 billion in 1990 to more than USD 5 billion in 1995, by which time they were exceeding new capital inflows of FDI. In China, by contrast, direct profit remittances and direct investment income payments stood at USD 10 billion in 1995, compared with USD 36 billion of new FDI inflows.

UNCTAD *op. cit.* argues that:

"the issue evolves around the comparison between the inflow of foreign exchange associated with an investment project and the present value of future profits. Normally one can expect that discounted future outflows will be larger than the capital originally invested, since profit rates, particularly in developing countries, tend to be well above international interest rates."

However, this argument assumes that the level of reinvested profits is low, which, if the profitability of investment in the host country is indeed high, may be cast in doubt. More generally, the share of reinvested profits must depend on the general investment climate in the host country, which the national authorities have the power to influence through structural policies.⁹

Developing countries with weak legal structures or a low degree of compliance may, however, encounter problems, especially if their national investment climate is perceived as lacklustre.¹⁰ There is anecdotal evidence in such cases of FDI proceeds having been instantly transferred to overseas investment (sometimes circumventing capital transaction rules), thereby weakening the net foreign asset position of the host economy relative to a counterfactual scenario.

In more extreme cases, FDI has involved the acquisition of companies at prices far below book values, amid widespread allegations of corporate or governmental impropriety. It must therefore be stressed that to reap the benefits of FDI a host country must, at a minimum, put in place an appropriate legal and regulatory framework and assure a reasonable degree of compliance.

IV.5. Summing up

While the empirical evidence of FDI's effects on host-country foreign trade differs significantly across countries and economic sectors, a consensus is emerging that the FDI-trade linkage must be seen in a broader context than the direct impact of investment on imports and exports. The main potential trade-related benefit of FDI for developing countries lies in its long-term contribution to integrating the host economy more closely into the world economy in a process likely to include higher imports as well as exports. In other words, trade and investment are increasingly recognised as mutually reinforcing channels for cross-border activities. However, host country authorities need to consider the short and medium-term impacts of FDI on foreign trade as well, particularly when faced with current account pressures. They sometimes have had to face the question of whether FDI could have adverse impacts on international liquidity beyond the mere trade effects. The evidence from empirical studies would seem to support the following observations:

- As countries develop and approach industrialised-nation status, inward FDI contributes to their further integration into the global economy by engendering and boosting foreign trade flows. While the evidence is mixed, most analysts tend to argue that two factors are at play: the development and strengthening of international networks of related enterprises, and an increasing importance of foreign subsidiaries in MNE strategies for distribution, sales and marketing. In both cases, this gives rise to an important policy conclusion, namely that a developing country's ability to attract FDI is significantly influenced by the entrants' subsequent access to engage in importing and exporting activities. This, in turn, implies that would-be host countries should consider a policy of openness to international trade as central in their strategies to benefit from FDI, and that, by imposing restrictive practices towards imports from developing countries, home countries effectively curtail these countries' ability to attract foreign direct investment. Moreover, host countries could consider a strategy of attracting FDI through raising the size of the relevant market by pursuing policies of regional trade liberalisation and integration.
- Host countries' ability to use FDI as a means of increasing exports in the short and medium term depends on the context. The clearest examples of

FDI boosting exports are found where inward investment helps previously financially constrained host countries make use of either their resource endowment (*e.g.* foreign investment in mineral extraction) or their geographical location (*e.g.* the investment in some transition economies).

- Empirical studies suggest that EPZs have in some cases been instrumental in harnessing the benefits of FDI for integrating host economies more closely into international trade flows, by contributing to raising imports as well as exports. However, it is not clear whether drawbacks such as the cost to the public purse of maintaining EPZs, the risk of creating an uneven playing field between domestic and foreign enterprises, and that of triggering international bidding wars, are justified by the benefits to the domestic economy.
- Recent studies do not support the presumption that less-developed countries may use inward FDI as a substitute for imports. Rather, FDI tends to lead to an upsurge in imports, which is often gradually reduced as local companies acquire the skills to serve as subcontractors to the entrant MNEs.

Notes

1. The dichotomy between trade and investment is, however, not complete. Owing to the higher short-term withdrawal costs, FDI is undertaken more cautiously and with a longer time horizon.
2. An additional reason for the pervasiveness of EPZs in developing countries is the use of import quotas by industrialised nations, which has led to a spreading of activity to new locations which had underutilised quotas (Navaretti *et al.*, 1995).
3. The implication of this is that while EPZs generally do not derogate from national labour legislation they may help attract MNEs where labour standards are lower than in the home countries.
4. This practice is prohibited by the WTO agreements for all but the poorest countries, and it is also prohibited by any zone receiving World Bank funding.
5. Caves (1982, pp.3-7) attributes the MNE's apparent preference for direct investment over licensing to the problems of market failure associated with arm's-length transactions in intangible assets.
6. In a similar vein, Dunning (1977) proposes his "eclectic approach", which highlights three key requirements for a firm to undertake direct investment: ownership advantage, location advantage and internalisation advantage. There is a fairly large body of literature on determinants of FDI, and for further discussion, see two survey articles on this topic, Agarwal (1980), Lizondo (1991) and Petri and Plummer (1998).
7. The same UNCTAD report points out that a similar step-by-step sequence can be identified in many natural resource-based industries, except that imports (not exports) induced by home-country demand precede FDI. In the case of service industries, such sequence may be "truncated" because many service companies often go abroad through FDI to support the foreign operation of their customer companies from home countries.
8. Horizontal FDI which takes place responding to actual or threatened import protection in host countries abounds in business history (the so-called tariff jumping FDI). In this case, however, the sequence of internationalisation runs from restrictive trade policy imposed by a host country to reduced exports from a home country and then to foreign production through FDI (see below).
9. OECD (2001f) reviews a number of these policy challenges, citing the case of FDI into the Russian Federation.
10. Governments have in such cases sometimes favoured national over foreign investors on account they were perceived as more "loyal" to the domestic economy.

Chapter V

FDI and Technology Transfer

One of the most important means of generating knowledge in other countries is through the internationalisation of the research and development activities of MNEs. Foreign direct investment can also impact a host economy in indirect, and sometimes unintended, ways. These “spillover effects” may be quite large. They can arise through labour migration of trained workers, through establishing local linkages with buyers and suppliers, and through imitation by, and competition with, local firms in the same industry. Multinational firms play a leading role in the world in creating and controlling technology.¹ Hence, it is not surprising that many countries view investments by those MNEs as a primary means to acquire technology and knowledge to upgrade their own production base. It is difficult, however, to paint an unambiguous picture as to how FDI can transfer technology, and how this technology will contribute to development. It is not *a priori* clear that every type of technology transferred is appropriate; not every investment benefits host-country development.

This chapter reviews existing literature and weighs evidence with regard to FDI and technology transfer in the development context. It compares the effects of FDI to those of other means of technology transfer, such as trade and licensing, and lists the relative costs and benefits of each mode. It then describes the mechanisms at work when technology is transferred and disseminated through FDI. FDI can contribute directly to technology transfer by using processes and knowledge from a firm’s headquarters in foreign subsidiaries. After reviewing the empirical evidence on the spillover effects of FDI, the chapter discusses the contribution of technology to productivity, and the necessary conditions for technology to contribute to growth.

V.1. FDI versus other modes of technology transfer

FDI is only one of the means available for a firm to transfer technology outside its home country, or that a host country can use to acquire technology. There are three basic ways for a firm to exploit its technologies abroad – and consequently three different ways for countries to acquire that technology: a firm may *export* products that embody the technology; a firm may *license* its technology to an

agent abroad who uses it to upgrade its own production; and a firm can set up a *foreign establishment* (i.e. use FDI) to exploit the technology itself.

a) Trade

International technology transfer through trade occurs when a country imports higher-quality (than it can produce itself) intermediary goods to use in its own production processes. Empirical evidence shows that openness to *United States* exports is a particularly important determinant of international technology transfer (Park, 1995). This is because the United States is a disproportionate generator of commercial technologies. A country may acquire knowledge through “reverse engineering” or imitation (Blomström *et al.*, 1999) of imported goods, and openness to imports also stimulates domestic competition (Bayoumi *et al.*, 1997). It should, however, be noted that excessive reliance on such strategies may curtail a country’s access to trade and FDI.

Using data for 87 countries, Hakura and Jaumotte (1999) confirm that trade indeed serves as a channel for international technology transfer to developing countries. However, it appears that intraindustry trade plays a more important role in technology transfer than inter-industry trade. Intraindustry trade is more pervasive among developed countries, and inter-industry is more prominent in trade between developed and developing countries. Hence, an immediate implication of these findings is that developing countries will enjoy relatively less technology transfer from trade than will developed countries.

b) Licensing

Successful penetration of foreign markets can seldom be based on exports alone. Various tariff and non-tariff barriers, government policies and the investment climate can make exporting a costly option. Trade can also be a complicated means to exploit a firm’s superior technology or management capabilities overseas, particularly for services and certain industrial sectors. In those cases, a firm may choose to license its technology to a local firm.

Licensing may be an especially economical way to transfer technology for standardised, relatively simple, and mature technologies to recipients that know how to implement them. It may also be an interesting option for smaller firms that lack the capital to invest overseas (Correa, 1999). The licensee may have better information about the local market and customs, and can use this information to extract higher rents from the market (Horstmann and Markusen, 1996).

However, there is usually a greater risk of “losing” the technology to host-country firms when using the licensing option. Transaction cost theory suggests that the market for knowledge is prone to failure for a number of reasons. In this case, the explicit sale of technology to external agents is a less advantageous alternative than keeping the technology “in-house” (Fors, 1996). For example, the

value of the technology can be dissipated because of increased competition (Ethier and Markusen, 1991; Markusen, 1999; Saggi, 1996, 1999). Therefore, MNEs usually use licensing for their older technologies, and introduce their newer ones only through their own foreign affiliates. It is therefore not surprising that technology tends to be introduced more quickly into host countries when MNEs have the option of doing so through their affiliates rather than through joint ventures or licensing agreements (Mansfield and Romeo, 1980; McFetridge, 1987). Though licensing is usually seen as an *alternative* for FDI, UNCTAD data show that transactions between parent firms and their subsidiaries in royalty and license fees account for more than 80% of international technology transactions. This implies that FDI and licensing often go hand in hand.

MNEs sometimes also use licensing to acquire market knowledge and other information from local partners, before making an investment (and then ending the licensing arrangement). Nicholas *et al.* (1994) found that 60% of Japanese MNEs in Australia used a local agent before making a direct investment, and 39% exported to Australia before making a direct investment of any sort. One can view such temporary licensing as a method of information acquisition by the foreign firms, as opposed to the local firm seeking superior production technology.

c) *Foreign direct investment*

The most important means of transferring technology to developing countries remains FDI. Technology transfer through FDI generates benefits that are unavailable when using other modes of transfer. First, an investment comprises not only the technology itself but an “entire package”. FDI brings needed complementary resources such as management experience and entrepreneurial abilities, which can be transferred by training programmes and learning-by-doing (Baldwin *et al.*, 1999). Unlike trade in goods, where developing countries have to try to imitate and learn from “reverse engineering”, FDI involves the explicit transfer of technology (Saggi, 2000). This may be especially beneficial for countries with underdeveloped local capabilities. Second, by their mere entry and presence, MNEs disturb the existing equilibrium in the market, forcing domestic firms to innovate in order to protect their market shares and profits. This alone is likely to lead to productivity increases in local firms (WTO, 1998).

Third, many technologies and know-how used by MNE affiliates are not always available in the market. Especially newer or higher-tech knowledge is often available only through the MNE itself. For example, Smarzynska (1999) found that a firm’s R&D expenditure is negatively related to the probability of a joint venture (where possibilities for “leakage” are large) and positively related to greenfield entry.² Generally, MNEs are concentrated in industries that exhibit a high ratio of R&D relative to sales and a large share of technical and professional workers

(Markusen, 1995). It is often argued that precisely *because* MNEs rely heavily on intangible assets such as superior technology, they are able to successfully compete with local firms which otherwise would naturally have a comparative advantage because they are better acquainted with the host-country environment.

Fourth, some technologies and know-how, even if available in the market, may be more valuable or less costly when applied by the MNE that developed them than by outsiders (WTO, 1998). This is especially the case when the technology is developed for the specific purposes of the MNE, or when the MNE's workers have specific skills in using the technology. Another benefit of FDI in transferring technology *versus* other modes of transfer is that typical features of MNEs – scale economics, capital reserves, and marketing and sales experience – can contribute significantly to exploiting the technology in a profitable manner. MNEs also offer brand names and access to regional and global markets (UNCTAD, 1999).

The “whole package” that often comes with FDI also has a reverse side, particularly for countries with relatively high local capabilities that are able to exploit the technology themselves. Instead of relying on the MNE's expertise, local firms in these countries may prefer to obtain the technology through licensing, though this option may not always be available. Local firms in this case have to acquire the technology through FDI, which can be an expensive alternative to acquiring the technology through licensing.

V.2. Mechanisms of technology transfer and diffusion

While it is generally accepted that FDI plays an important role in transferring technology, there is less clarity about the channels through which this transfer and consequent spillovers take place. The literature suggests four channels by which technology transfer through FDI occurs, either directly or indirectly through spillovers. Evidence for each channel is discussed below. They include:

- *Vertical linkages.* MNEs may transfer technology to firms that supply them with intermediate goods, or to buyers of their own products;
- *Horizontal linkages.* Local firms in the same industry or phase of the production process may adopt technologies through imitation, or may be forced to improve their own technologies due to increased competition from MNEs;
- *Labour migration.* Workers and managers trained or previously employed by the MNE affiliate may transfer their knowledge to other local firms when switching employers or when setting up their own businesses;
- *Internationalisation of R&D.* The R&D activities of MNEs, when located abroad, may help create a local capacity to generate knowledge, because of the partially public-good characteristics of these activities.

a) *Vertical linkages with buyers and suppliers*

MNEs, it is recognised, may benefit the host country via the backward and forward linkages they generate (backward linkages are relations with suppliers, while forward linkages refer to relations with buyers, either consumers or other firms using the MNE's intermediate products in their own production process, as with machinery). Though linkage creation does not *per se* imply that technology or knowledge is transferred or spilt over, Blomström *et al.* (1999) show that it is unlikely that MNEs can fully appropriate the value of these explicit and implicit transfers with their host-country business partners.

Some evidence exists regarding the factors that promote vertical linkages. First, linkages appear to be more pronounced the larger the size of the host market and the technological capabilities of the local suppliers. Second, according to a model by Rodríguez-Clare (1996), more linkages are created when the production process of an MNE uses intermediate goods intensively. This also applies when there are large costs of communication between headquarters and the affiliate production plant, and when the home and host countries are not too different in terms of the variety of intermediate goods produced.

Nonetheless, linkage creation by foreign affiliates in host countries depends largely on MNEs' decisions on how to source inputs (Chen, 1996). While in some cases local content starts at a low level, vertical linkages with local enterprises generally develop over time, a possible consequence of technology transfer. Studies of the Asian electronics industry have generally shown that linkage creation was negligible at first, but within five years had grown substantially (Rasiah, 1994). However, it should be cautioned that MNEs improve welfare only if they generate linkages *beyond* those that are generated by the local firms they displace. Moreover, in many developing countries MNEs engage largely in low-tech and labour-intensive production oriented towards exports, where the levels of technology transfer or linkages are in most cases found to be low or negligible.

As regards *backward* linkages, MNEs can contribute to raising the productivity of their supplier firms in various ways. MNEs can provide technical assistance or information to raise the quality of the suppliers' products or to facilitate innovations. In fact, McIntyre *et al.* (1996) note that quality seems to be the driving force for technology transfers through backward linkages. When a foreign affiliate wants to export the products it produces, it will have to meet the quality standards of world markets. The suppliers' intermediate products will then have to be high quality as well. Consequently, McIntyre *et al.* found, MNEs usually do not hesitate to train local suppliers. It is possible, however, that negative effects may occur, for example, if suppliers are forced to meet the higher standards of quality, reliability and delivery speed required by the MNE without any training or assistance being

provided by the MNE affiliate. In the short term, this could lead to suppliers failing to meet the necessary requirements, leading to firm failures and job losses.

MNEs can provide or assist suppliers in purchasing raw materials and intermediary goods. MNEs can also help prospective suppliers set up production facilities. They can help in providing training in management and organisation, and assist suppliers to diversify by finding additional customers (Lall, 1980). Empirical evidence of these linkages is found in many studies, including *inter alia* Lall's (1980) study on Indian truck manufacturers, Watanabe (1983), UNCTC (1981) and Behrman and Wallender (1976).

Forward linkages occur with firms' buyers. They can be distributors, which can benefit from the marketing and other knowledge of the MNE, or, in case of intermediate products, downstream firms which can use higher-quality and/or lower-priced intermediate goods in their own production processes. Downstream firms can benefit from lower prices arising from increased competition in their supply markets (Pack and Saggi, 1999), and consumers thus also benefit from lower-priced final products. Aitken and Harrison (1991) find that spillovers from forward linkages are important in most industries – in fact, they argue that the downstream effects of FDI are generally more beneficial than the upstream effects.

b) Horizontal linkages through demonstration and competition

The diffusion of technology through horizontal “linkages” (*i.e.* to competitors of the MNE affiliate in the host country) takes place through demonstration effects or competition effects. The demonstration effect states that exposure to the superior technology of the MNE may lead local firms to update their own production methods (Saggi, 2000). When an MNE starts using a specific technology that has not been used in the host economy, its competitors may start imitating the technology. Often, the introduction of a new technology by an MNE reduces the (subjective) risk for local firms to use the same technology. Local firms may lack the capacity, financial resources or information to acquire the necessary knowledge or to adapt the technology to local circumstances. However, when a certain technology used by an MNE succeeds in the local environment, this may trigger a wider adoption by local firms in the host country. A vital part of this demonstration argument is geographical proximity. The vast majority of developing countries, however, are not well integrated in the world economy, making technology transfer through demonstration effects extremely difficult.

While FDI may expand the set of technologies available to local firms, it also usually increases competition. Moreover, demonstration and competition effects reinforce each other. The entry of an MNE increases competition, in itself an incentive to upgrade local technologies, which in turn further increases competition, thereby stimulating an even faster rate of adaptation of the new technology

(Sjöholm, 1997b). Wang and Blömstrom (1992) also stress that the more competition the MNE affiliate faces from domestic firms, the more technology they have to bring in to retain their competitive advantage, and hence the larger the potential spillovers.

The effects of increased competition are usually seen as beneficial. Increased competition encourages both productive efficiency and a more efficient allocation of resources. This may apply especially when MNEs enter industries where high entry barriers had reduced the degree of domestic competition (*e.g.* utilities). Case studies, however, indicate that it is not so much improvements in resource allocation as a reduction in slack or improved knowledge of the production process (“reduced x-inefficiency”, in economists’ jargon) that substantially contributes to productivity improvements (WTO, 1998). This is the case when efficiency rises because local firms, rather than imitating technology, enforce stricter or more cost-conscious management and motivate employees to work harder.

In theory, competition generally improves efficiency and welfare, but entry by an MNE may not always increase competition. In fact, entry may lead to increased concentration. Economies of scale are important determinants of industrial structure, and when a foreign MNE enters a relatively small national industry and increases average firm size, this may initially improve resource allocation. Concerns have arisen, however, that strong foreign MNEs can out-compete all local firms, or force local firms to merge, and the increased industrial concentration can result in market power. The abuse of market power by the MNE (and possibly local firms) would then result in decreased allocative efficiency. (For a more elaborate discussion, see Chapter VII.)

Empirical evidence for both demonstration and competition effects are difficult to obtain. Relating R&D expenditures by industry with foreign presence is one method of checking whether local adoption efforts are encouraged via FDI. However, these need to be controlled for the effect of FDI on market structure, which is very difficult. Still, some general studies addressing horizontal linkages exist. Blomström *et al.* (1999) find that studies that compare new technology adoption by foreign and domestically owned firms tend to conclude that new technology is frequently introduced sooner by foreign owned affiliates and that competition spurs quicker adoption of innovations by both domestically owned and foreign owned firms. The first statement seems to be confirmed by Haddad and Harrison (1993), who showed that foreign firms exhibit higher levels of TFP growth.

Aitken and Harrison (1999), using plant-level data for Venezuela, found a positive relationship between foreign equity participation and plant performance. This implies that foreign participation does indeed benefit plants that receive such participation. However, this effect was robust for only small plants (fewer than 50 employees). For larger plants, foreign participation resulted in no significant

improvement in productivity relative to domestic plants that received no participation. In general, productivity in domestic plants that received no foreign participation declined when foreign investment in other firms increased. This could result from a crowding out effect: foreign competition may have forced domestic firms to lower output, thereby forgoing economies of scale. On balance, however, the authors found that the effect of FDI on the productivity of the entire industry was weakly positive.

Other papers have also found negative results regarding the spillover effects of FDI on purely domestic enterprises, *e.g.* Djankov and Hoekman (1999) for the Czech Republic. However, such findings need not imply that host countries have nothing to gain from FDI. Positive impacts such as improved resource allocation take time. And when foreign firms bring more efficient production methods in the short run, it is not surprising that local firms suffer.

In general, therefore, the evidence on vertical spillovers is more positive, and more robustly so, than evidence on horizontal spillovers. An important contribution by Kugler (2000) suggests that this may reflect the fact that MNEs choose location and organisation strategies with a view to minimising the risk of profit loss through leakage of technical information to potential competitors. Therefore, host-country firms within the MNE subsidiary's sector will tend to experience limited technological gains from FDI (*i.e.* limited horizontal spillovers). Hence, if technical knowledge leaks from the subsidiary to domestic producers, such spillovers are most likely to generate productive improvements in non-competing and complementary sectors. The diffusion of generic know-how, namely technical information that can be deployed across sectors, probably does not represent a loss of rents to the MNE, and may even be beneficial if potential upstream suppliers become more efficient. Kugler concludes that spillovers could be primarily interindustry and not intraindustry, which, if true, is consistent with the body of evidence discussed above.

c) Labour migration

Another way technology may be transferred and disseminated in a host country is through labour migration. Workers employed by the MNE affiliate acquire knowledge of its superior technology and management practices. By switching employers or setting up their own businesses, they spread the technology (Glass and Saggi, 1999). MNE affiliates usually try to avoid such spillovers by paying an “efficiency wage”, a premium in order to keep employees from switching jobs to domestically owned competitors (Globerman *et al.*, 1994). If disclosing secrets to local managers would create unacceptable risks, *e.g.* due to managers' tendency to switch jobs to competitors, the MNE may consider using expatriate managers rather than local ones.

The effects of labour migration are difficult to establish. Nevertheless, several studies may provide some insights, though they show quite differing results. Katz (1987) found that managers of local firms in Latin America were often trained in MNE affiliates where they started their careers. And for Kenya, Gershenberg (1987) found that for the 72 top and middle managers he followed, MNEs offered more training to their managers than did private local firms. But he also found evidence that only a small portion (16%) of the job shift involved movement from multinationals to host-country firms. For Mexico, Venezuela and the United States, Aitken *et al.* (1995) show that higher levels of FDI are associated with higher wages in each country. In the two developing countries, multinationals paid higher wages than local firms; there was no evidence of increases in wages by local firms.

In Asia, Bloom (1992) found substantial technology transfer in South Korea when production managers switched to local firms. Pack (1997) found similar results for Taiwan where, in the mid-1980s, almost 50% of all engineers and 63% of all skilled workers of MNE affiliates who changed jobs joined local firms. UNCTAD (1999) also examines a Bangladeshi garment firm, Dеш. Daewoo of Korea supplied Dеш with technology and credit, and eventually 115 of Dеш's 130 initial workers left to set up their own firms or to join newly set-up local garment firms.

d) Internationalisation of R&D

Whereas multinational firms are among the world's most important creators of knowledge and technology, developing countries account for only an estimated 6% of global R&D expenditure (Freeman and Hagedoorn, 1992). Even among those developing countries, expenditures are very concentrated. UNCTAD (1999) calculated – taking US firms as a proxy – that the top four developing economies (Brazil, Mexico, Singapore and Taiwan) accounted for 77% of total R&D expenditure in developing countries. The first five positions in the 25 largest R&D players worldwide are taken by governments (led by the United States, Japan, Germany, France and the United Kingdom), but MNEs dominated the top 25 (Van Tulder *et al.*, 2001). Many of these firms concentrate their R&D activities in their home country (Chen, 1996) or in other developed countries (Correa, 1999).

The rationale for this concentration can be found in the need for efficient supervision and scale economies in the R&D process itself (Caves, 1996). Another major advantage arising from R&D concentration, from the firm's perspective, is “agglomeration economics”. This means that it is more efficient to cluster specific R&D expertise in a certain region, using local research institutions and other organisations to form an “innovation system”. Such locational advantages are fairly durable, so that MNEs tend to keep most of their R&D centralised at home headquarters (Globerman, 1997). Many developing countries do not offer the necessary infrastructure and institutions to facilitate a fruitful interaction between academia,

government and industry (Sachs, 1999). Another drawback is the lack of protection of property rights, including of intellectual assets (De Soto, 2000). Bennett *et al.* (2001), in a study of EU-based companies regarding technology transfer to China, cite weak intellectual property rights as the main obstacle for building or expanding the R&D base of these companies in China.

The centralisation of R&D is a major policy concern of developing countries regarding MNEs. Where R&D is transferred to foreign subsidiaries, this has basically been in relation to adaptive tasks, drawing on a few local resources to better serve the local market (Correa, 1999). MNEs often are blamed for failing to adapt technologies designed for industrialised-country wages and capital costs to the factor prices prevailing in developing countries (Caves, 1996). In those cases where R&D is performed in developing countries, the expenditures have generated significant efficiency gains, both within and across industries in the R&D performing country (Bernstein, 1989). It has been argued (WTO, 1998) that R&D by foreign affiliates is better than local R&D expenditures, since MNE affiliates have access to the aggregate knowledge base of the parent company and can use the parent firm's R&D facilities.

V.3. Technology transfer and growth – host-country conditions

As discussed above, FDI may disseminate technology in a host country in various direct and indirect ways. Though some studies have attempted to examine the specific effects of each of the modes of transfer discussed, it is nearly impossible to disentangle the effects of the various channels when assessing how technology transfer through FDI affects productivity and economic growth. When comparing the gap between developed and developing countries, most empirical and technical studies take into account a catch-up variable that is generally rationalised as capturing the effects of international technology transfers.

Many studies have suggested that foreign investment contributes relatively more to domestic productivity than domestic investment. Baldwin *et al.* (1999), for example, found that domestic technological progress is aided by foreign technological progress. They cite a study by Eaton and Kortum (1997), who found that domestic productivity growth is related mainly to foreign, rather than domestic, innovation. As regards the Mexican manufacturing sector, Blomstrom and Wolf (1994) find that the spillovers in the Mexican industry were large enough to help Mexican firms converge towards US productivity levels during 1965-82. Also finding positive results were Caves (1979) for Australia, Globerman (1979) for Canada and Blomström and Persson (1983) for Mexico. Sjöholm (1997) also finds spillovers from FDI to have a positive effect on productivity growth, especially in industries with high degrees of competition.

Other studies, however, suggest that FDI has not always had beneficial effects for local firms. Haddad and Harrison, (1993) find no positive results for Morocco in the late 1980s. Aitken and Harrison (1991), though finding a positive correlation between foreign presence and TFP growth, conclude that this may be wrong if MNEs are attracted by the more productive sectors in the first place. A study by Borensztein et al (1998) found that the positive relation between FDI and TFP growth holds only when a host country has achieved a minimum threshold of human capital development.

The diverse experiences of developing countries suggest that the positive effects of FDI is not automatic, but may be affected by various host industry and country characteristics. Several of these characteristics have been studied and tested. Prominent among them is the “technology gap” between the technologies used by the foreign MNE affiliate and those of local firms. Related to this gap are the levels of local capabilities needed to acquire and work with the technology.

Of critical importance regarding technology transfers is whether, given the level of local firms’ capabilities, these technologies are appropriate for local firms and can enable them to compete effectively in the global market (Basant and Chandra, 1999). Many studies have suggested that this is not always the case, and that firms will have to make a variety of investments to actually benefit from technology inflows. The capability of host-country firms to “absorb” foreign technology appears to be an important determinant of the size of the realised spillovers.

Following this argument, spillovers should be easier to identify empirically when the technological attributes of local firms match those of the MNE affiliates. Kokko (1994) and Kokko *et al.* (1996) provide evidence for this hypothesis. They find that for Mexico and Uruguay, spillovers are difficult to identify in industries where foreign affiliates have much higher productivity levels than local firms. Also, when foreign firms are not “self-contained enclaves”, spillovers can be easily recognised. Kokko (1994) found that a high technology gap combined with low competition prevented spillovers from occurring.

Besides the *relative* difference in the technological capabilities of the host MNE and the local firm, the *absolute* level of absorptive capacity is important. Keller (1996) states that access to foreign technologies alone is not enough to increase growth rates if, for example, the country’s stock of human capital remains unchanged. Evidence for this argument is provided by Xu (1999 and 2000). Using data on outward investment of the United States to 40 countries, Xu finds that technology transfer associated with FDI contributes to productivity growth in developed and middle-developed countries but not in the least developed countries. A possible explanation is that the absorption of MNE technology by host countries requires a relatively high level of human capital. Most LDCs do not meet the human capital threshold required for recipient countries to benefit

from technology spillovers. Haddad and Harrison (1993) find similar evidence. When they divided sectors into high-tech and low-tech, they found that the effect of FDI was more positive in the low-tech sectors than in the higher-tech ones. The authors interpreted this result to be an indication of the lack of absorptive capacity of local firms in the high-tech sector.

Another factor at play, besides relative and absolute technological capabilities, is a successful interaction of firms with one another and with academia, governments and other actors to take advantage of cross-sector synergy effects (Bassant and Chandra, 1999). Ernst (1999) has addressed this issue as well, stating that weak and incomplete local linkages and limited sharing and pooling of resources implies that countries have only limited opportunities to build their own innovation systems. Empirical research has shown that as a developing country industrialises, its reliance on international technology sourcing – *i.e.* on the strategies of MNEs – increases substantially (Lall, 1997). In the long run, technology is valuable for a host country only if it is capable of creating a national stock of know-how, co-ordinated by a policy for science and technology, and if the country has the industrial capacity to use it (Germidis, 1984).

V.4. Summing up

Technology transfers are identified by economic literature as perhaps the most important channel through which foreign corporate presence may produce positive externalities in the host economy. MNEs are the developed world's most important source of corporate R&D activity, and they generally possess a higher level of technology than is available in developing countries, so they have the potential to generate considerable technological spillovers. However, whether and to what extent MNEs facilitate such spillovers varies according to context and sectors. If, at the one extreme, foreign companies were wholly willing to diffuse certain technologies, then the host country would generally be able to acquire them via direct purchases or licensing agreements, rather than relying on the more indirect FDI route. Recent empirical literature supports the following observations:

- Technology transfer and diffusion work via four interrelated channels, namely vertical linkages with suppliers/purchasers in the host countries; horizontal linkages with competing or complementary companies in the same industry; migration of skilled labour; and the internationalisation of R&D.
- The evidence of positive spillovers is strongest and most consistent in the case of vertical linkages, in particular, the “backward” linkages with local suppliers in developing countries. MNEs are generally found to provide technical assistance, training and other information to raise the quality of the suppliers' products. There are also many cases of MNEs assisting local

suppliers in purchasing raw materials and intermediate goods, and in setting up modernised or upgraded production facilities. The only caveat relates to the relevance of the technologies thus transferred. For technology transfer to generate externalities, the technologies need to be relevant to the host-country business sector beyond the company that receives them in first instance.

- Regarding horizontal spillovers, reliable empirical evidence is hard to obtain, since the entry of an MNE into a less-developed economy has effects on the local market structure that researchers cannot easily control for. The relatively few studies conducted on the horizontal dimension of spillovers tend to find mixed results. One reason for this could be foreign enterprises' efforts at avoiding a spillover of know-how to their immediate competition. Some recent evidence seems to indicate that horizontal spillovers are more important between enterprises operating in unrelated sectors.
- The technological level of the host country's business sector is of great importance. The evidence suggests that a positive effect of FDI (relative to domestic investment) on productivity is contingent upon a relatively limited "technology gap" between domestic enterprises and foreign investors. Where important differences prevail, and where the absolute technological level in the host country is low, local enterprises are unlikely to be able to absorb the foreign technologies transferred via MNEs.

Notes

1. This chapter uses the term technology to imply knowledge that is embodied in *products*, *processes* and *practices*. Products comprise the knowledge of how things work, their design, and their interface with other products. Processes comprise knowledge on how a product can be produced or changed. And practices consist of the routines necessary to manage the product-process combination and the knowledge regeneration process.
2. This relationship also held for high technology sectors.

Chapter VI

FDI and Human Capital Enhancement

The main linkages between human capital and economic performance are the following, according to the economic literature: First, human capital enhancement can be expected to lead to higher productivity and profitability as a direct result of the increased capacity of employees to perform their tasks. Second, there is an indirect effect: Companies get a greater payback than would otherwise be the case from investment in new technologies and process innovations, as employees are better equipped to absorb and use both the codified and tacit knowledge through which the benefits of such investment are largely delivered.¹ Third, human capital enhancement may improve not just employees' ability to deliver greater productivity, but also their commitment and motivation to do so (in what is essentially a corollary to the efficiency wage theories).

Moreover, the challenge of fostering economic growth by means of human capital enhancement is linked closely with the issue of technology transfers discussed in Chapter V. For example, developing countries need to have reached a certain threshold of human capital to be able fully to absorb new technologies. Enhancing human capital can therefore have a number of beneficial effects, for the companies concerned and for the wider host economy, that go beyond the mere productivity effects of upgrading individuals' skills.

Host-country authorities as well as MNEs may contribute to maximising the benefits of FDI for human capital formation. While it is the MNEs that may ultimately provide training and conduits for human capital dissemination within the host economy, their ability and willingness to do so depends significantly on the broader enabling environment of the host country. (The relative roles of MNEs and host-country authorities are surveyed in some detail below.)

VI.1. Channels of FDI impact on human capital

This section describes some of the linkages between foreign corporate presence and skill upgrading in the host economy, and some of the concrete channels through which they may operate. The following two sections review recent empirical evidence of the absolute and relative importance of these channels.

a) Selected elements of the enabling environment**1) General education and generic human capital**

The general educational attainment of a country is of great importance in the FDI context, not least because it is a prime factor influencing investors' location decisions (*cf.* Chapter I). Generally, a country is attractive as a host for FDI if and only if a sufficient supply of labour with relevant skills is available, which in turn raises important issues as to the appropriate definitions of "sufficiency" and "relevancy". The level of general educational attainment needed for a country to attract investment logically differs among the economic sectors of would-be investors, and – particularly in the case where the expected benefits of FDI is contingent on the existence of a "knowledge gap" – between domestic and foreign investors. The question of relevancy pertains to the skills sought by investors, but also to the level of economic development of the host economy in terms other than education. For example, an economy that lacks a modern telecommunications infrastructure is unlikely to attract high-tech FDI regardless of its level of educational attainment.

The importance of host-country education levels as a spur to FDI varies according to the motivation for investment, and also the strategies more broadly pursued by foreign entrants. For instance, natural resource-seeking, and to a lesser extent market-seeking, FDI is thought to be little affected by the level of education attainment in the host economy. Human resource-seeking FDI, on the other hand, depends on the relative pricing (between the host country and other would-be loci) of labour with a given level of qualifications. Given national wage levels, this gives countries with a particularly high educational attainment the edge. Finally, strategic asset-seeking FDI is arguably highly sensitive to the availability of high-skilled labour. Where strategic asset-seeking FDI is part of a strategy by MNEs to integrate the comparative advantages of host countries' business sectors into their global networks, local staff with high general levels of education (and, where possible, international experience) is especially sought after.² As for managers in particular, several studies have stressed the importance of the perceived quality of local managers as a factor in MNE location decisions (*e.g.* Genco *et al.*, 1993).

A separate issue, which needs to be addressed empirically, is the degree to which human capital spillovers are subject to the same externality thresholds that were discussed in connection with technology transfers. It is commonly accepted that only economies with a minimum level of educational standards and business-sector competence (the definition of "minimum" again being arguable) have the capacity to process and fully benefit from the human capital spillovers of foreign corporate presence. In this context, the general level of economic and technological development of the host economy is of major additional importance. While

highly developed economies and sectors generally have the level of educational attainment to interact with foreign entrants, economies with a low level of technological sophistication are unlikely to reap significant spinoffs from the presence of skill-based foreign enterprises, regardless of their general educational level.

2) *Labour standards and human capital formation*

It is commonly recognised that in addition to the obvious need for sound employer-employee relationships (as codified in the OECD Guidelines on Multi-national Enterprises), respect for core labour standards is essential for economic activity to produce the maximum impact on human capital formation. While this effect may operate through numerous channels, those most frequently quoted include: allowing children and youths time to reach a sufficient level of formal education, *e.g.* by limiting child labour; avoiding discrimination, so as to provide all members of the labour force with incentives and opportunities to upgrade their skills; and a sufficient degree of freedom of association and collective bargaining to prevent employees from being held back by so-called monopsonistic employers (*i.e.* where an individual company is the sole provider of a given category of jobs). Each of the three channels is reviewed below.

Child labour. Recent research on supplier codes in the apparel industry suggests that elimination of child labour is by far the most often-cited commitment in the codes (OECD, 2001a). Indeed, it is the only core labour standard mentioned by all the 36 supplier codes studied. Child labour is defined as work that impairs the health, disrupts the education and violates other rights of children. The International Labour Organisation (ILO) estimates that 250 million children under the age of 14 are working, 120 million of them full-time. These numbers do not include the millions of children who work as domestics, either for others or in their own households. The incidence of child labour is highest in Africa, where four out of 10 children work. Child labour hinders human capital accumulation in a variety of ways. First, health risks are associated with certain kinds of work (*e.g.* injury, sexually transmitted diseases). Second, child labour reduces school attendance, especially for children with significant workforce involvement. Third, child labour can limit the effectiveness of schooling by lowering time available for study and by reducing retention.

Progress in the elimination of child labour will require action on a broad front. Simple interdiction will not be enough – child labour is already illegal in many places where it is common. In addition, removing children from work environments without the provision of accompanying social services (income support, locating guardians for children not working under the care of family members, educational access) can harm them more than it helps. Since poverty is the driving force behind child labour, economic progress – especially, lifting the incomes of

less well-off families in poor countries – will be of crucial importance. Elimination of child labour will also require the development of child-friendly policies. These include improved access to basic education (especially in rural areas), specialised child protection services (focusing on particular problems), and child-focused social insurance systems (designed to reduce the need to work in the event of the loss of an adult income earner).

Non-discrimination. Multinational enterprises are acutely aware of discrimination as a workplace issue. A recent survey of 246 codes of conduct reveals that 61% of the codes mention it, making anti-discrimination the third most commonly cited labour issue, after “reasonable work environment” and “compliance with law” (OECD, *op. cit.*). Discrimination and human capital accumulation generally interact throughout life. The most telling symptoms of discrimination are the denial of basic services, such as health and education. These influence human capital accumulation from a very young age. Freedom from discrimination is a basic human right that is also a labour right. This right means that access and conditions of access to labour markets should not be a function of such characteristics as race, religion and gender. Discrimination affects both the opportunity and the incentive to participate in adult education and training as well as access to certain professions (and, hence, to opportunities to engage in particular forms of learning by doing).

Freedom of association. In addition to their potential for curbing discrimination and “excessive” economic inequality, labour organisations often play important roles in systems of adult education and training. They can provide workers’ inputs into the design of various types of occupational education and training and thereby form an important part of the institutional framework for adult education and training. If the basic right of freedom of association is not respected, then institutions providing workers’ perspectives on adult training and education will not emerge.

To the extent that multinational enterprises tend to employ workers in the formal sectors of host countries, where labour rights are more likely to be respected, they can be expected to have a generally positive influence on the respect of such rights. However, the OECD study of 36 codes of conduct in the supplier industry suggests that multinational enterprises in this sector are more reluctant to make public commitments to these rights than to the elimination of child labour and workplace discrimination. Fewer than half of the supplier codes mention freedom of association.

b) MNE contribution to human capital formation

MNEs may contribute to human capital enhancement in host countries primarily through direct human capital creation or dissemination of existing competences. As for the former, the main issues here are whether MNEs provide more

training and related efforts at raising their employees' skills than domestic enterprises do and, if so, whether the skills thus acquired are useful and relevant outside the MNE where they were obtained.

1) *Enterprise training*

The degree to which MNEs engage in training and other efforts to enhance human capital – not least in developing countries – depends greatly on sectors and company strategies. The considerations involved on the side of the MNEs are thought to be akin to the general education factors identified above as driving factors behind enterprise localisation. Types of FDI that are not particularly dependent on human capital availability in the host economy are also unlikely to lead to a significant training effort by the foreign entrant. Nor does human – resource-seeking FDI, which generally is motivated by the availability of (reasonably priced) labour in a given skill class, necessarily give rise to training efforts. Except where a given set of skills are in short supply internationally, the foreign entry has the choice of locating to an economy where the sought skills are in ample supply rather than to upgrade the labour force itself.³

Yet, skill upgrading that would be considered as barely significant in MNEs' home countries may represent an important improvement in some developing countries – thus, anecdotal evidence from some developing countries indicates increased job mobility among persons who have obtained basic computer literacy. Some early studies indicate that MNEs offer more training to technical workers and managers than do local firms (Gerschenberg, 1987, Chen, 1983). In early stages, affiliates rely more intensively on expatriates, but subsequently they tend to replace them with (cheaper) local workers who have been properly trained in the meantime (UNLTC, 1993). Hence, as regards FDI into relatively low-tech activities, some asymmetry is possible between the importance of the training efforts, as perceived by the MNE, and the potential benefits to the individuals concerned and to the host-country business sector at large.

As for the effects of more formalised and ambitious training, a demonstration of overall externalities thresholds in human capital formation does not necessarily imply that reaching a given educational level in a particular sector or activity will maximise spillovers. Rather, it could reflect the fact that a high educational attainment increases a country's attractiveness to the kinds of MNEs most prone to invest in human capital. A clear case of MNEs positively affecting the human capital of their locally employed staff comes where the investment is motivated by the seeking of strategic assets, such as host-country skills and competences; the upgrading of human capital is then seen as maintenance of the investment.⁴ Another example relates to the acquisition of enterprises with the purpose of vertical integration, and to other strategies for relying on increased international

labour-sharing. In this case, the acquiring MNE has an incentive to upgrade local skills to a level reasonably close to that prevailing elsewhere in its international network.

The latter point, in turn, raises the question of whether the skills that are relevant to a given MNE are transferable to other enterprises – *i.e.* whether significant spillovers are possible. Evidence on spillovers due to workers' mobility is scarce and far from conclusive. Gerschenberg, *op. cit.*, for example, analyses MNEs' activity in Kenya and concludes that mobility is lower for managers employed by MNEs than for those employed by local firms, and studies of developed economies generally produce similar results (Felstead *et al.*, 1999, le Grand, 2000). If this observation is eventually substantiated by more systematic research, it could reflect the fact that enterprises have an incentive to provide the most firm-specific training possible, with a view to minimising spillovers to their competition. It should be noted that *de facto* mobility is an indirect measure of transferability, and MNEs in many cases offer relatively high wages to retain trained staff (for the cases of Mexico and Venezuela, see Aitken *et al.*, 1996). As for managers, their migration patterns were documented by Katz (*op. cit.*).

While wage differentiation may help discourage trained staff from seeking alternative employment, it is less likely to keep them from seeking the potentially higher gain of setting up own enterprises. In the most technologically advanced OECD countries, a leading source of entrepreneurship is the spinoff from MNEs of managers and technicians opting for self-employment. Through FDI, an equivalent source of human capital spillovers becomes available to developing and emerging countries. One illustration of this is the Taiwanese economy, where Pack (1993) observes that labour mobility from MNEs to local firms is important and that trained managers often leave MNEs to run their own businesses.

2) MNEs and the migration of skilled labour

Foreign corporate presence may effectively allay a human capital-related concern that has plagued many developing-countries: the fear of losing the most educated workers through a "brain drain".⁵ By providing host-country nationals with the opportunity to reap the career opportunities (and in many cases, higher wages) of working for an MNE without leaving the country, inward FDI may help preserve human capital in the domestic economy. This has arguably been the case in Israel, where the FDI-assisted growth of the high-tech sectors in the 1990s helped retain a large number of highly educated recent immigrants. Russia in the 1990s may actually be evidence of the reverse; a sluggish creation of new high-tech enterprises (whether financed through FDI or otherwise) contributed to a massive emigration of skilled labour⁶ (Gokhberg and Nekipelova, 2001).

Insofar as foreign corporate entry brings a significant element of well-qualified foreign staff, inward FDI may even help boost the quantity of human resources, a trend arguably of importance in countries such as China. Guochu and Wenjun (2001) note that not only has the presence of foreign experts helped China “to learn and use the advanced science, technology and management techniques of other countries”, it may also have played a key role in the smooth implementation of increased trade between China and foreign countries. This study observes that of about 84 000 foreign “experts” currently present in the Chinese economy, 40% have come in connection with the market entry of foreign MNEs. Assuming that the skill level of the home country is higher than that of the host country, there will also be a quality effect. However, this point is not uncontroversial; in host countries the feeling has sometimes been that foreign managers in particular substituted for local employees with qualifications at least their equal.

The experience of Chinese Taipei in the 1990s indicates that one advantage of MNE presence is that it makes migration patterns increasingly reversible. Luo and Wang (2001) note that an important part of the high-skilled immigrants employed in the local economy are “transnational workers”, whose employment by MNEs induces them to work in Chinese Taipei and North America in alternation.

3) *Informal competence upgrading*

In addition to the formal channels for knowledge acquisition listed above, competences obtained by working for a non-domestic enterprise may take an unquantifiable form, commonly referred to in literature as “tacit knowledge” (*e.g.* Gertler, 2001). The tacit component of the knowledge required to perform an economic task successfully is that which defies codification and articulation. Since the best way to convey such knowledge is through demonstration and experience (*e.g.* the classic apprenticeship case), this accentuates the need to acquire such skills in a business environment where those skills prevail. Further, tacit knowledge is difficult to exchange over long distances. Thus, the main source for developing countries to acquire knowledge imbedded in the production processes of the most-developed economies may be a foreign corporate presence in the domestic economy.

The potential economic benefits are considerable. In a business environment where everyone has relatively easy access to explicit or codified knowledge, the creation of unique capabilities arguably depends on the successful employment of tacit knowledge.

VI.2. The enabling environment for human capital enhancement: the evidence

An OECD Technical Meeting on “Human Capital and Education in Developing Countries” concluded in December 2001 that “the literature on the interaction

between FDI and human capital is still at a very preliminary stage". The "Summary" of the meeting reports that

The evidence on whether or not FDI creates positive spillovers is quite mixed; FDI can create both a "race to the top" and a "race to the bottom". Moreover, the literature may have a reporting bias, as studies that find positive effects are more likely to get published. It appears that MNEs do engage in more training than domestic firms, and that this may favour management and skilled workers, potentially widening existing skill inequalities. There was a general consensus that the two key determinants seem to be the gap in capabilities or absorptive capacity between MNEs and domestic firms in terms of their technological sophistication or level of skills.⁷

a) Public spending on education

Developing countries and emerging economies have increased their share of public resources spent on education over the past two decades.⁸ Among Asian countries, Singapore and Malaysia are frequently cited as having established successful education and training policies, which they co-ordinated with the needs of investors, through participation and consultation in each country. Their experiences suggest that training policies are essential to creating positive synergies with MNEs, but that they must not be seen as FDI specific.⁹ In Korea, education policy has been used as "a major policy tool to improve the income distribution, even though the primary goals of the educational policy was not to reduce income inequality" (Kang, 2001).

When assessing the impact of FDI on human capital enhancement, a comparison of recent Latin American and Asian experiences may yield interesting insights. Both continents have experienced large FDI inflows over the past 15 years, but Asian countries appear to have more successfully leveraged those inflows into positive spillovers (technological as well as human capital), thereby moving up the value chain. The consensus at the OECD Technical Meeting mentioned above was that investment in infrastructure and appropriate types of human capital (such as science and engineering) in Latin America are still lacking. This problem seems to be exacerbated by the persistence of substantial inequalities in access to quality education, and an overemphasis on general tertiary education. It was also noted that countries with federal political structures (*e.g.* Brazil) may face problems of multiple levels of government and have particular difficulty in co-ordinating training with enterprises on a national level.

Regarding Latin America, empirical studies and policy debate on educational attainment have been comparatively sparse.¹⁰ However, a study of distribution and growth in Latin America supports the notion that education "is one of the keys to the distribution puzzle"; there is a relatively large proportion of university

graduates, yet still a “large stock of unskilled labour relative to the demand for the services that labour can provide” (Morley, 2001). It is commonly perceived that high population growth has outstripped education efforts in recent decades, saddling the region with too much unskilled labour.

Comparing the Latin American experience to that of Asia, the key problem for Latin America appears to have been an underinvestment in basic schooling. In Asia, both the secondary and university component nearly doubled from 1970 to 1985. But in Latin America, the number of university graduates expanded twice as fast as high school graduates. Asia spent a lot to eliminate the bottom part of its educational distribution and to universalise secondary education, while Latin America let most of its youngsters leave school after primary, choosing instead to expand university coverage (Morley, 2001).

Reflecting pervasive poverty in many countries, the African continent has a generally poor record of human capital enhancement. Tsikata (2001) reports that Africa “has made great strides in investing in human capital but still lags behind other parts of the world and shows significant variations from country to country”. Countries fall into three broad groups, according to this study. Those that have made “significant” progress are Ghana, Mauritius and Zimbabwe. The first two started with a better stock of human capital and built on that. Zimbabwe’s progress has been more dramatic, especially in secondary education, given the low levels it inherited at independence in 1980, and it is now one of the best-endowed countries in Africa. Those countries that made “moderate” progress include Nigeria, Uganda and Zambia. In Uganda, despite improvements in the late 1980s, the aftermath of the civil conflict kept secondary enrolment low. “Little” progress was made in the Ivory Coast, Kenya, Senegal and Tanzania.¹¹ In most of these countries, primary enrolment fell, and secondary enrolment grew by less than the average for Africa, and is lower than the continent-wide average.¹²

Some comparative work between countries from all three continents is reported in UNCTAD (2000b), looking at Chile, Costa Rica, the Dominican Republic, Malaysia, Mexico, Morocco, Thailand and Zimbabwe. It is notoriously difficult to quantify country differences in education, since data do not account for all discrepancies in quality factors such as completion rates, the quality of teaching and the curriculum content and relevance. With that proviso, Table VI.2 below shows gross enrolment ratios, as percentages of the relevant age groups, and relative literacy rates for the adult population for the sample countries for 1980 and 1995. As can be seen, all countries except Morocco have virtually universal primary enrolment and levels of literacy exceeding 80%. At the secondary level, the best enrolment ratio is for Chile, at 70% of the age group; the lowest ratios are observed in the Dominican Republic, Thailand and Morocco. At the tertiary level, the highest enrolment is for Costa Rica, with Chile close behind; the lowest is for Zimbabwe,

Table VI.2. **Enrolment and literacy ratios, 1980 and 1995**

Per cent

	Enrolment by education level						
	Primary		Secondary		Tertiary		Literacy
	1980	1995	1980	1995	1980	1995	1995
Chile	109	98	53	70	12	27	95.0
Costa Rica	105	105	48	47	21	30	94.7
Dominican Republic	118	97	42	37	19	..	81.5
Malaysia	93	93	48	59	4	7	83.0
Mexico	115	112	46	58	14	14	89.2
Morocco	83	73	26	35	6	10	42.1
Thailand	99	98	29	37	13	19	93.5
Zimbabwe	85	119	8	45	1	6	84.7

Note: Enrolment rates are expressed as percentages of the relevant age groups. Literacy rates are expressed as percentages of the adult population.

Source: Lall (2000), using UNDP (1995) and UNESCO (1997).

followed by Malaysia. Notably, Mexico is the only country at this level registering a decline in enrolment.

b) The linkage between labour standards, training and earnings: some evidence

While there is common agreement on the importance of labour-market flexibility as a part of the host-country enabling environment, a degree of caution is warranted. Seeing labour-market flexibility in purely quantitative rather than qualitative terms (*e.g.* emphasising “hire and fire” rather than functional flexibility) risks harming long-term economic performance by leading to a neglect or undervaluing of assets and processes such as training, which are vital to development and economic progress. One developed-country example (comes from research using the British Household Panel Survey, 1991-95, which investigated the link between skill acquisition and labour-market flexibility (as measured by employment status, contract type and lack of union coverage). One study found that workers “... on short-term employment contracts, or who are not covered by a union collective agreement, are significantly less likely to be involved in any work-related training to improve or increase their skills” (Arulampalam and Booth, 1997). This study also suggested that there is a trade-off between expanding the more marginal forms of employment and expanding the proportion of the workforce receiving work-related training.

In addition, for firms taking shorter time horizons, the pursuit of so-called efficiency gains may attract greater interest than those gains flowing from innovation and technological progress. This becomes problematic if the pursuit of short-term

efficiency gains reduces the potential for longer-term economic progress. Indeed, recent analyses of the relation between firms' innovative activities and firm growth and employment have found that the use of certain flexible work practices can impair performance, by some measures (Brouwer and Kleinknecht, 1999, Kleinknecht, 1998, Kleinknecht *et al.*, 1997, Michie and Sheehan, 1999a, 1999b). This research suggests that the *type* of labour-market flexibility is important, having different effects on the measures of performance (see Michie and Sheehan-Quinn, 2001, 2002 for further discussion and evidence).

1) *Incomes and income inequality*

Income inequality, except arguably in the richest societies, is a leading factor tending to deprive large segments of the labour market of sufficient education. Empirical studies of wage or income distribution in developing countries are, however, scarce and largely limited to the Asian continent. UNCTAD (1997a) observes that "the crude stereotype of East Asia as a zone of 'low and decreasing inequality' is a misleading description not only because some of the countries have relatively high level of inequality, but also because inequality has increased in many parts of East Asia in the 1980s". This study finds evidence of an increase in inequality in Hong Kong during 1986-91 and a particularly sharp one in Singapore during 1979-83. Inequality appears to have been increasing in Chinese Taipei since 1980, and in the Republic of Korea since the late 1980s. In Thailand the strong trend towards greater inequality that began in the mid-1970s, following the shift towards a more export-oriented strategy, continued in the 1980s.

MNE presence could help in redressing income inequalities, insofar as foreign affiliates in developing countries tend to pay higher wages than local firms, according to several studies. However, Caves (1996) suggests that this is entirely a size effect, since large firms tend to pay higher wages, and multinational enterprise affiliates tend to be larger than the average domestic firm. Such affiliates also tend to be concentrated in higher capital-, skill- and marketing-intensive industries, with concomitantly higher productivity. In a sense, therefore, this difference is a statistical artifact. However, to the extent that these affiliates are in sectors that the host country wants to see developed (or if it welcomes greater concentration in the business sector), it is still to be welcomed.¹³ In addition, the affiliates may have high sunk costs with a concomitant incentive to attract and retain skilled workers.

On the other hand, where low labour costs are the motivation for investing in a particular location, such as in an export-processing zone, foreign affiliates often pay lower wages than the domestic firms (ICFTU, 1999). Moreover, MNEs have little incentive to seek to redress segmentations in host-country labour markets (UNCTAD, 1999). The implication of this is that where wage discrimination takes

place (for example, women being paid less than men) this inequity is often reflected in the pay structure of MNE affiliates (Horton, 1999 and Standing, 1999).

VI.3. Impact of FDI on human capital enhancement: the evidence

a) MNE training and other human capital-related efforts

Human capital enhancement may be related in various ways to the issue of the transfer of technical knowledge. In a sample of 60 developing countries during 1965-87, economic growth rates were found to be especially high in countries with high levels of both education and macroeconomic stability and openness (World Bank, 1991). The impact of trade and investment openness thus depends on how well people are able to absorb and use the information and technology thus acquired. Analysing a sample of 1,265 World Bank projects, Thomas and Wang (1997) found the rate of return to be 3 percentage points higher in countries with both a more educated labour force and a more open economy than in countries that had only one or the other.

Most of the other empirical evidence relates to Asian economies, and it is far from unambiguous. One early study, for example, pointed to the positive role played by FDI in disseminating management skills in the Philippine insurance industry (Wasow and Hill, 1986). In Thailand, on the other hand, evidence suggests a rather low level of transfer of both technical knowledge and management technique, and of training in general, for two main reasons.¹⁴ First, the majority of FDI inflows has been in low to medium-technology industry that does not require much skill, with a concomitantly low requirement for MNEs to invest in human resources. Second, even in the high-technology sectors, the wide technology gap has inhibited the ability of local employees to learn, either because the gap is so great that it is hard to bridge, or because the perceived gap simply deters MNEs from attempting to bridge it – and most likely a combination of the two.

For Hong Kong, China, Chen (1983), focusing on training of operatives in a study of technology transfer, found that the MNEs' training expenditures were significantly higher than for domestic firms in three of four industries studied. This lends itself to the conclusion that "the major contribution of foreign firms in Hong Kong manufacturing is not so much the production of new techniques and products, but the training of workers at various levels".¹⁵

Anecdotal evidence derives from the cases of Intel and Matsushita, which in their Malaysian activities are cited as examples of MNEs that have established training facilities to ensure that their needs for specialised skills be fully met. Moreover, a recent survey in Chile of employee satisfaction found that eight of the top 10 enterprises were MNEs; the employees of the foreign-owned enterprises explicitly quoted better human capital policies as a leading reason for their satisfaction.¹⁶

1) *Linkages between human capital spillovers, technology and basic education*

The relation between FDI, human capital enhancement and development depends upon, or is linked with, the corporate strategy and market orientation of the multinational enterprise. A study of Japanese affiliates in Brazil, for example, found that the introduction of total quality circles and just-in-time production methods required workers with above-average skills. These firms required workers with at least primary level education (eight years). Where they could not find sufficient qualified workers, they invested in adult education and short courses in literacy, numeracy and group work techniques (Humphrey, 1993).

Similar patterns were observed in multinational enterprises in the automotive industries in Thailand, which required at least full primary school education, and undertook training efforts (van Assouw *et al.*, 1999).¹⁷ Tan and Batra (1996) in a study of enterprise training in Colombia, Indonesia, Malaysia, Mexico and Chinese Taipei, found evidence of strong linkages between training, technological levels and productivity. This study further concluded that enterprise training depends positively on enterprise size.

Finally, in the case of Malaysia, Best (2001) argues that the key developments have been the decision to try to attract in MNEs and the attainment of skill levels, and in particular the interaction and dynamics of these two factors. As always with economic and industrial processes, the links are complex. First, there was the need to increase skill levels massively. The direct effect of MNEs on workforce skill levels as a result of the MNEs' own efforts appears to have been rather limited. The major education and training effort came from government – a public policy action that played an important role in the effort to attract companies.

b) *Public-private co-operation and partnership*

In addition to the various public policy measures referred to above, the cases of Singapore and Malaysia provide particularly good examples of how policy around human capital enhancement has been designed explicitly to get the most from the potential of FDI. In high-tech manufacturing operations, FDI is usually attracted by the availability of local capabilities such as skills, technology and, in some cases, R&D centres. Multinational enterprise affiliates in these sectors are likely to be engaged in developing particular skill needs.

The development of skills through foreign R&D in Singapore is a case in point. Sharp started the Sharp Design Centre in the mid-1990s, after realising that Asia was becoming increasingly important in many electronics segments (Sigurdson, 2000, as reproduced in Velde, 2001). Oki founded the Oki Techno Centre in 1996 for research in multimedia for wireless communications. STMicroelectronics, ranked high in the semiconductor industry, has an R&D centre aimed at wireless and wire-line signal processing. Ericsson's R&D centres are located in Sweden, Finland, Germany,

Hungary, Singapore and Berkeley, while Ericsson Cyberlab established a PhD programme in Singapore (at a cost of SEK 20-25 million). Philips has a Centre for Industrial Technology, with one of only two regional centres in Singapore.

Malaysia's Penang Skills Development Centre (PSDS) is sometimes considered best practice in public-private partnership in training. The PSDS was set up in 1989 in response to a growing shortage of skilled labour in the skill-intensive operations of multinational enterprise in the free trade zones and industrial estates. It was financed by a pooling of resources by the public sector (grants, training materials, equipment and trainers) and the private sector (donations, loan of equipment, furniture, private training facilities), but is now self-financing. It offers courses at competitive rates and is officially recognised to offer technical and managerial skill training and higher education. The centre is uniquely able to obtain immediate feedback from the private sector about course content and future training needs. Unlike some public training centres, however, the PSDS has no social objective (Velde, 2001).

The experience of Malaysia's Human Resource Development Fund (HRDF) is analysed by Tan (2001) who finds "strong panel evidence that enactment of HRDF in 1983 was instrumental in promoting increased enterprise training in Malaysia". According to this study, technological change also had a role in inducing enterprise training, but the overall contribution of HRDF was much larger, especially among medium-size companies. Smaller companies continue to lag behind in training, and more proactive training strategies may be needed to reach this group of enterprises. The resulting increase in training investments, whether induced by HRDF or by adoption of new technology, has had strong demonstrated impact on productivity growth, especially when training is continuous and not episodic.

In Thailand, training programmes are being run jointly by international chambers of commerce from various countries and the Thai government, organised in a consultative working group (Brimble *et al.*, 1998).¹⁸ Singapore has pursued national investment in education and training with a view to attracting FDI while inducing that FDI to upgrade (Lall, 1996); for example, Wong (1997) reports on how the government used skill creation to induce upgrading by multinational enterprise in the computer hard-drive industry.

VI.4. Summing up

The major impact of FDI on human capital appears to have occurred not so much through the efforts of individual MNEs as from government policies designed to attract FDI via enhanced human capital. Once individuals are employed by MNE subsidiaries, their human capital may be further enhanced through training and on-the-job learning. Those subsidiaries may also have a positive role on human capital enhancement in other enterprises with which they

develop links, including suppliers. To the extent that human capital is thereby enhanced, this can have further knock-on effects both as that labour moves to other firms and as it leads to employees becoming entrepreneurs. Thus, the issue of human capital development is intimately related with broader development issues. The following general observations suggest themselves:

- Investment in general education and other generic human capital is of the utmost importance in creating an enabling environment for FDI. Achieving a certain minimum level of educational attainment is paramount to a country's ability both to attract FDI and to maximise the human capital spillovers from foreign enterprise presence. The minimum level differs between industries and according to other characteristics of the host country's enabling environment; education in itself is unlikely to make a country attractive for FDI. However, where a significant "knowledge gap" is allowed to persist between foreign entry and the rest of the host economy, no significant spillovers are likely.
- A host-country's labour-market standards are important elements of the enabling environment. By taking steps against discrimination and abuse, the authorities bolster employees' opportunities to invest in human capital, and strengthen their incentives for doing so. Also, a labour market where each participant has access to a certain degree of security and social acceptance lends itself more readily to the flexibility that is key to the success of human capital-based economic strategies. It provides an environment in which MNEs based in OECD countries can more easily operate on the basis of home-country standards and contribute to human capital development. One strategy to further this goal would be a wider adherence to the OECD Declaration on International Investment and Multinational Enterprises, which would further the acceptance of the principles laid down in the Guidelines for Multinational Enterprises.
- The empirical and anecdotal evidence indicates that, while considerable national and sectoral discrepancies persist, MNEs tend to provide more training and other human capital-upgrading activities than domestic enterprises. However, the evidence of the human capital thus created spilling over to the rest of the host economy is much weaker. Among strategies that may buttress such spillovers are policies to enhance labour-market flexibility and encourage entrepreneurship.
- While the benefits of MNE presence for human capital enhancement are commonly accepted, it is clear that their magnitude is significantly smaller than that of general (public) education. The beneficial effects that work via FDI can supplement, but not replace, generic investments in human capital. However, the presence of MNEs may provide a useful demonstration effect,

insofar as the demand for skilled labour by these enterprises provides host-country authorities with an early indication of what skills are in demand. The challenge for the authorities is to meet this demand in a timely manner while providing education that is of such general usefulness that it does not implicitly favour specific enterprises.

- Human capital levels and spillovers are closely interrelated with technology transfers. Empirical studies indicate that technologically advanced sectors and host countries are more likely to see human capital spillovers and, conversely, that economies with a high component of human capital lend themselves more easily to technology spillovers. This implies that the efficacy of efforts to reap the benefits of technology and human capital spillovers could increase when policies of technological and educational improvement are undertaken conjointly.

Notes

1. Tan (2000) finds strong econometric support for the “critical intermediary role of skilled labour in IT adoption and use in Malaysia”.
2. A widely publicised example relates to the massive influx of well-educated immigrants into Israel in the early 1990s, which contributed to a subsequent rise in the inflow of technology related FDI (Paltiel, 2001).
3. The argument is supported by the findings of Hansson (2001). This study observes that Swedish MNEs’ investments in non-OECD countries generally lead to an upgrading of skills in the home economy and attributes this to an allocation of low-skill activities toward the host economies.
4. In fact, UNCTAD (2000b) concludes that multinational enterprise tend to invest more than do their local counterparts in training. They also have the advantage of being more aware of emerging trends in training and the need for new forms of skill creation, and they tend to be more able to use state-of-the-art training materials and techniques, and to orient their training toward global markets.
5. The present subsection is based on the proceedings at the OECD Seminar on International Mobility of Highly Skilled Workers held in Paris on 11-12 June 2001. Further work is on the way covering Russia, China, India and Brazil.
6. Another reason for this exodus was the mass migration of Jewish people to Israel.
7. OECD (2002), “Summary of Technical Meeting”, mimeo.
8. However, some caution is called for when interpreting this. Comparisons across countries “reveal little relationship between public spending on education ... and outcomes ... once country income levels are taken into account” (Thomas, 2001).
9. OECD, *op cit*.
10. On Latin America, see Katz (1987), who finds that managers of Latin American companies had often started their careers and been trained within multinational enterprise affiliates.
11. Tsikata notes that Tanzania’s low enrolment rates at secondary (and tertiary) levels reflect a deliberate policy to de-emphasise primary education to increase basic literacy.
12. Kayizzi-Mugerwa (2001) argues that the East Asian and Latin American experience shows that to get into export manufactures in a competitive way requires a critical supply of skilled labour, and that African educational systems were slow responding to the private sector’s need for better human resources and more skills.
13. Indeed, Gaston and Nelson (2001) argue that controlling for size in the way that Caves does is mistaken, as it inevitably biases the wage impact of multinational enterprises towards zero.

14. See Lekluangarm (2001).
15. Cited in Blomström and Kokko (2001).
16. Capital (2001).
17. UNCTAD (1999).
18. Cited in UNCTAD (1999).

FDI, Market Structure and Competition

The linkages from FDI to competition in the host economy are complicated. Economic theory agrees that in the competition channel, significant potential costs and benefits clearly coexist: benefits, because of the capability of foreign entrants to engender competitive pressures in national economic sectors previously dominated by a few large incumbents; and costs, because MNEs sometimes have the potential to acquire a dominant share of any given market segment – nationally, but increasingly also internationally – with well-known adverse effects on competition. This, in turn, points to an essential role for host (and to some extent home) country authorities in maximising the benefits of FDI. In a jurisdiction with a well-designed and consistently enforced competition policy, foreign investment can be expected to provide clear benefits to the host economy. Where the competition policy framework is weak, the entry of large multinational players on a domestic market can in some cases pose additional risks.

Public debate often focuses on MNEs' influence on competition in domestic markets for final goods – and hence, in the FDI context, on the market-seeking investment identified in Chapter I. However, competition concerns can also be raised by investment in input goods, distribution channels, productive resources and technologies. In other words, any category of FDI may potentially affect competition.

In many cases, FDI accomplished through mergers may increase, or at least not decrease, competition in the host market. Any improvements that such mergers bring in the form of greater *productive* (i.e. lower unit cost) or *dynamic* efficiency (i.e. enhanced ability to innovate) would represent clear gains to the host economy. There could also be cases, however, where FDI via merger leads to decreased competition. Where that happens, the net effect on the host economy will depend on whether the consequent loss in *allocative* efficiency, plus increased profits to foreign owners occasioned by post-merger price rises, will be offset by any productive or dynamic efficiencies expected post-merger. It is noteworthy that where competition is harmed, there will be a lower probability of efficiency gains

in fact being realised post-merger, because there will be less pressure on the firm to behave in an efficient manner.

The productivity gains via trade linkages, technology transfer, human capital and direct enterprise restructuring that are evidenced in Chapters IV, V, VI and VIII largely reflect improvements in productive and dynamic efficiency as a consequence of FDI. The remainder of the present chapter focuses more narrowly on the impact of FDI on allocative efficiency.

VII.1. Definitions and methodology

While it may be intuitively appealing to argue that “the more competition, the better”, the actual relationship between competition and development is often more complex. The optimal degree of competition is the one that ensures maximum long-term value creation. The key word here is *long-term*: in some cases an apparently deficient degree of competition may be allowed in the short run on the expectation that it will contribute to long-run value creation.

a) Methodological issues

Direct effects of FDI on competition are not easily quantifiable since the concept of “competition” is difficult to measure. Ideally, an analysis of competition effects would rely on case studies, but in the past 20 years virtually no case studies of MNEs’ impact on competition have focused on developing countries. An assessment of MNEs’ influence on competitive conditions in a particular nation will therefore have to rely on proxies and indirect evidence regarding those conditions.

The *indirect evidence* of changed competitive pressures includes changes in productivity of enterprises competing with those that merged with foreign enterprises. This indirect indicator is, however, just as incomplete as the proxies. If, the market entry of a foreign enterprise leads to an immediate and significant increase in the productivity of domestic companies in the same sector, it may be reasonably assumed that the change is due to increased competition. There are two important caveats, however. First, the *absence* of swift productivity changes following foreign entry cannot necessarily be taken to indicate an absence of an increase in competition, since markets could already have been sufficiently competitive prior to the foreign entry.

Second, there are several channels other than competition (the ones broadly clustered above as “productive” and “innovative” efficiency) through which FDI may boost productivity, as noted elsewhere in the present study. Hence, only productivity changes that occur in the immediate aftermath of market entry and in enterprises whose ownership has not been altered by the FDI can properly be considered as reliable evidence of the effects of FDI on increased competition. This would, however, provide only a minimal estimate. To the extent that FDI

leads to sustained higher levels of competition, one would expect continuing pressure to improve productivity both as regards existing products and the introduction of new ones. Some evidence of productivity effects in mature and developed economies is reviewed in the penultimate section of this chapter.

The two *proxies* for competition vitality most frequently employed in literature are the frequency of entry and exit in a sector or a national market, and the degree of market concentration. Neither is fully satisfactory from a theoretical viewpoint. Frequent market entry and exit do indeed indicate a competitive environment, but their absence cannot necessarily be interpreted as evidence of weak competition. Moreover, high levels of concentration do not imply a lack of competition unless there are substantial barriers to entry into a properly defined relevant market. Some evidence of the impact of FDI on market concentration is reviewed in the following section, but first it is important to review the relationship between concentration and competition (Box VII.1).

VII.2. Multinationals and overall concentration levels

In recent decades there has been a significant increase in the international degree of concentration in many sectors, which could lead to concerns about competition in some markets.

Two analytical methods are commonly used to study the performance and efficiency of merged firms. First, so-called *event studies* in which the stock market value of the firms concerned is analysed for a limited time before and after the takeover. Event studies mainly involve calculating the cumulative abnormal returns (CAR), by which is meant the additional returns caused by the merger. CAR is calculated by comparing the profitability of the acquiring firm with an estimated “base case”, which may be founded in either the firms’ own historical performance or a relevant control group. The method has the benefit that very detailed data are available (*i.e.* stock data on daily basis), and that samples can be very large (up to several thousand mergers involving listed firms). A negative aspect of this method is the question to what extent stock data can be used to assess firm performance.¹ The second method of studying the performance and efficiency of merged firms is that of *outcome studies*, based on data from annual reports. Although these data are generally regarded as more reflective of firm performance than stock data, comparability across countries faces significant problems.

a) *The evidence from event studies*

In addition to the wave of international M&As in the 1990s, firms increasingly co-operated without transferring equity among themselves. Such “strategic alliances” take many organisational forms, ranging from cross-licensing agreements to

Box VII.1. **Concentration vs. Competition**

Economists often seek to obtain some measure of the competitiveness of markets by examining concentration ratios (the percentage of production, sales or some other measure accounted by the leading enterprises). However, “market” concentration is only adequate as an indicator of competitiveness if it reflects a market – the real-world choices that are open to buyers and sellers, taking into account potential substitute products and the geographic area in which products may be obtained. Moreover, even in accurately defined markets, high concentration alone is not an accurate indicator of a lack of competition.

The importance of accurately defining a “relevant product market” and “relevant geographic market” is easily illustrated. First, an enterprise may be one of many domestic producers of a product but nonetheless have a dominant position. It may be dominant either because it is the only seller in a geographic market that is less than national, or because its product is in a separate product market due to some feature that makes it uniquely valuable to certain buyers. By the same token, the only domestic producer in a country does not necessarily have monopoly power. It will not have such power if domestic buyers can buy the same product made by a foreign producer (*i.e.*, the geographic market is international), or substitute other products (*i.e.*, other goods are in the same product market).

Statistical categories of products and political boundaries are not good proxies for economic markets. The categories in which production data are reported do not generally describe economically sound product markets because they seldom reflect the demand side of the market. Information is usually collected on the basis of production methods or raw materials, meaning that a category might include, for example, all aluminium pots for cooking. Such a category is likely to be both over-broad (including some pots appropriate for individuals, some only for restaurants) and under-inclusive (including no steel, copper or ceramic pots).

Similarly, the contours of a geographic market must be determined by economic reality – the area within which a buyer may obtain a product or service. A key factor is often transportation cost in relation to the price of the product or service. A market may consist of several countries or only part of one country, and may be drawn as the area within a certain number of kilometres from one or more locations where buyers do business. Administrative or political boundaries are relevant only if they reflect an economically significant barrier, such as customs duties, a mountain range or differing legal provisions, including licensing requirements.

Finally, high concentration in well-defined markets is not, in itself, an indicator of a lack of competitiveness. Unless a market exhibits both high concentration and substantial entry barriers, there is no reason to presume that it is not competitive, and some markets can be competitive even when both these conditions are met. This is particularly so if buyers are well able to protect themselves from price increases.

fully-fledged joint ventures.² Firms involved in alliances remain *de jure* independent, and alliances usually cover only a part of their operations. Still, the involvement is of a longer-term nature than “traditional” business relationships, and it requires substantially more exchange of information and competences. One of the prime drivers of firm co-operation has been R&D and technology development, mainly in information technology and biotechnology (Correa, 1999). The aim of these technology alliances is to develop common technologies and standards, to share ideas and to spread risks.

The number of newly formed strategic alliances per year increased sevenfold in the 1990s from just over 1,000 in 1986, of which 860 were cross-border, to more than 7,000 in 1999, of which 4,400 were cross-border (Kang and Sakai, 2000). Firms from OECD countries have been by far the most actively engaged in fostering strategic alliances. According to sectoral breakdowns, trade and services, pharmaceuticals, electronics, chemicals and motor vehicles have been characterised by high alliance activity.

Three waves of corporate change in the 1990s (M&As, strategic alliances and restructuring through privatisation) must all *a priori* be assumed to have contributed to a rising degree of international concentration. The M&As and the less formal alliances certainly tend to have this effect. As for the privatisations in developing countries, they often led to the transfer of ownership from a locally operating (official) owner to a major international player.

Global concentration ratios in certain sectors – notably computers, pharmaceuticals and certain other chemicals – are currently high. As for the changes over time, Pryor (2001) cites evidence of rising concentration ratios in the United States since the early 1980s. Cortes (1998), using a sample of 436 industries for the period 1983-92, finds similar results for Japan. While data are less readily available for the EU area, Davies and Lyons (1996) estimate EU-wide top-4 concentration ratios and demonstrate a significant increases in concentration from 1987 to 1993.³ The European Commission (1996), citing the Davies and Lyons study, concludes that the sectors with the strongest increases in concentration were the ones with the strongest M&A activity.

Anecdotal evidence suggests that the increase in concentration is not limited to the developed world. Citing the examples of Brazil, Guatemala and Malaysia, UNCTAD (2000a) observes that the global trend toward concentration is reflected in the business sectors of developing countries as well. Firm-specific evidence from developing countries also points to high and increasing levels of concentration. For example, the Indian affiliate of Unilever recently acquired a local competitor to reach a dominant market position in soap (75%) and detergents (30%). Moreover, through an active takeover strategy, Unilever increased its share of the Indian ice-cream market to 74% in 1998. SmithKline-Beecham had already

obtained 64% of the Indian market for health drinks in the late 1990s before taking over yet another two competing brands (UNCTAD, 2000b).

Tichy (2000) concluded, based on a review of 32 event studies, that mergers in the manufacturing industry increase market price of the acquired firm. The market price of the acquiring firm usually develops less favourably in relation to a control group and develops increasingly unfavourably in the three to four years following the merger. Tichy concludes that a negative trend in the CAR of the merger is clear and that the merged firm is less efficient than the sum of its predecessors. Schenk (2002) finds similar results, also reviewing a group of event-studies. He concludes that more than three-quarters of the event studies established a negative CAR, with a median of roughly minus 7%. This is especially striking since the acquiring firms, before the takeover, usually performed much better than the market. The overview of Jensen and Ruback (1983) shows that on average, acquiring firms lose 5.5% of their market value within one year, and Agrawal *et al.* (1992) show a loss of 10% over five years.

b) *The evidence from outcome studies*

Outcome studies generally confirm the results of the event studies. On average, outcome studies have found *no* increase in profitability in 65% to 85% of all mergers and acquisitions involving at least one large firm (Schenk, 1998). In many cases decreases in profitability have been reported. For example, Dickerson *et al.* (1997) studied panel data of almost 3000 listed British firms for 1948-77, differing between firms active in M&As and firms not active in M&As. They found that M&A-active firms were less profitable than the others, a loss sustained over time.

One of the most ambitious studies on the effect of M&As on firm performance is the classic study by Ravenscroft and Scherer (1987) for the United States. It concludes that the acquired firms saw a strong decline in profitability after the takeover (whereas before the takeover they were relatively profitable), and the acquiring firms also showed decreased rates of return. Though the firms concerned were still profitable, they were much less so than their competitors. Other studies finding similar results for recent periods include Rhoades (1998), Simon *et al.* (1996) and Schenk (2002).

Apparently, therefore, M&As do not always bring firms the benefits they presumably expect. However, a merger's failure to bring anticipated benefits does not necessarily mean that the merger was anti-competitive or reduced economic welfare. For example, a merger may result in the creation of a maverick competitor, one that because of lower costs (perhaps obtained as a result of the merger) or simply newness in a market, is not easily incorporated into an existing web of anti-competitive co-ordination. The ensuing increase in competition could result in lower profits but greater allocative, productive and dynamic efficiency. Alternatively, reduced profitability may be due to the acquiring firm's having paid too much for

its takeover target. Assuming no overpayment was made and that a particular merger does substantially reduce competition, one would expect increased prices and profits, followed later by a reduction in productive and dynamic efficiency.⁴ Creeping X-inefficiency, or technical inefficiency, may sometimes even reach the point where despite increased market power, profits return to pre-merger levels so that the merger ends up harming general economic welfare without yielding benefits to the acquiring firm's shareholders.

Even if there is evidence that mergers sometimes lead to a decrease in productive and allocative efficiency, this still may be offset by increases in innovation. Indeed, higher dynamic efficiency is seen as one of the main reasons to allow a merger or acquisition. Several recent empirical studies have concluded, however, that there is little evidence of market concentration and large firm size being conducive to innovation (see Ahn, 2002, for an overview).

As regards the effects of mergers, and market concentration in general, on R&D expenditure, the evidence is still rather mixed. For example, Vossen (1999) finds for a sample of Dutch manufacturing firms for 1988 and 1992 that market concentration has a positive effect on the rate of R&D expenditure, without significant differences among industries. This effect is, however, stronger for smaller firms than for larger firms. Cohen and Levin (1989) also find that a positive effect of industrial concentration on R&D spending generally exists. Hitt *et al.* (1991), however, find that R&D intensity (*i.e.* spending corrected for firm size) decreases in the case of acquisitions. Tichy (2000) concludes that mergers are generally judged to have a negative effect on R&D, citing Hall (1990), who finds that the acquiring firms spend less on R&D than a control group, and generally restrict R&D spending even more after the merger.⁵ More recent work finds an ambiguous relationship between market power, R&D and productivity growth.⁶

VII.3. Effects of multinationals on local industry structure

Investment by a multinational can have positive effects on the efficiency of local firms, particularly when a local firm is taken over by an MNE. Moreover, when competitive and reasonably developed local markets exist, additional competition, following entry by one or more MNEs, may stimulate local firms to enhance and renew their production methods and increase their productivity (Görg and Strobl, 2000). Local firms have the option of copying the technology of the foreign affiliate, looking for better technologies themselves or seeking to use their existing production capacity more efficiently by reducing X-inefficiency (WTO, 1998). In these and other ways, the entry of an MNE may contribute to higher productivity in, and innovation by, locally owned firms (Lall, 2000). Positive effects of takeovers by MNEs may also result from salvaging and recapitalising inefficient local firms (Lahouel and Maskus, 1999).

MNEs may bring further benefits to the local economy because, with their larger size and better access to capital and technology, they may be better able to surmount barriers to entry and to increased competition than are strictly local firms. Schiffer and Weder (2001) show, based on a study of firms in 80 countries, that larger firms are better able to overcome various barriers to entry than are medium-sized firms, which in turn enjoy similar advantages over small firms.⁷ The study finds the linkage between size and difficulties surmounting barriers to entry to be particularly strong in non-OECD countries in Latin America and the Caribbean area, and in transition economies. Foreign firms in general, regardless of size, appear to face less formidable barriers to entry than do domestic firms. The favourable effects of MNEs on local competition may be multiplied if the entry of one MNE is followed by others. Newfarmer (1985) argues that this is what tends to happen in markets characterised by global oligopoly.

Increased competition and efficiency resulting from investment by MNEs can eventually lead to the closing of local firms. This would represent a loss for the owners of these businesses and for any employees who are unable to find similar employment in other firms (including the expanding MNEs). In such situations, the local government may wish to take transitional steps to facilitate labour market adjustment. After the transition, FDI-induced efficiencies should yield net local economic benefits, except possibly in cases where there are substantial barriers to entry (even for other MNEs) and/or where an MNE gains local market share through merger rather than by displacing less efficient firms. In any event, such risks point more to the need for an effective local competition policy (including merger review) than for restrictions on FDI.

a) FDI and local market concentration

Most empirical analysis of FDI's impact on concentration has focused on developed economies. The few studies that do address the relationship in the context of developing countries are based mostly on data from the 1970s and early 1980s, and hence quite dated.

For developed countries, the results are mixed. Knickerbocker (1976) finds a negative correlation between foreign entry in the United States market and concentration in manufacturing industries for data regarding the 1960s. Fishwick (1982) and Driffield (2001) find evidence that FDI into the United Kingdom significantly reduces concentration and acts as a competitive pressure on local industry. Parry (1978), however, reports a positive relationship between the degree of foreign ownership and seller concentration for Australian industry for 1972-73. Various studies on foreign presence in Greece (Papandreou, 1980; Petrochilos, 1989) also indicate a significant positive effect of MNE presence on concentration ratios. Bourlakis (1987) concludes that MNE entry in Greece significantly raises domestic

concentration to a degree that more than outweighs its potentially beneficial effects on domestic barriers to entry. Finally, Yun and Lee (2001) estimate that FDI into Korea has raised concentration somewhat.

While the evidence of the impact of FDI on market concentration is mixed for developed countries, this is much less so for developing countries. Generally, empirical findings indicate that foreign presence in the form of FDI is correlated with increasing seller concentration (for a survey, see Caves, 1996). Studies such as those by Cho (1990) and Cho and Nigh (1988), finding concentration-reducing effects of FDI in the Indonesian and Malaysian banking sectors, are an exception.

A broader study by Lall (1979), analysing the effect of MNEs on concentration in 46 Malaysian industries, indicates that FDI tends to increase concentration in the Malaysian business sector. The study concludes that the effect on concentration works through two channels: MNEs' role in increasing barriers to entry for the entire industry (*e.g.* through capital intensity, product differentiation, scale economies and advertising expenditure), and an independent effect of foreign presence. Similar results have been found for Mexico (Blomström, 1986), where FDI increased market concentration not only via the introduction of modern modes of operation (resulting in economies of scale, and higher capital intensity), but in other ways. This study speculates that the additional effects may reflect the fact that MNEs' firm-specific advantages raise entry barriers, or, more controversially, predatory conduct by the MNEs. Finally, one study concludes that FDI has generally raised concentration ratios in Brazil (Willmore, 1989).

It thus seems that FDI is more likely to raise host-country concentration rates in developing countries than in more mature economies. Blomström and Kokko (1996b) conclude that the risk of crowding local firms out is larger in developing countries, and that this increases the risk of problems associated with market power. A study by Kumar (1994) found that for 43 Indian manufacturing industries in 1975-81, the degree of seller concentration is not related to the profitability of foreign firms. On the assumption that concentration is negatively correlated with competition, the study interprets this result as indicating that higher concentration levels produce operational inefficiency rather than higher profits. Studies of certain other countries, however, find that rising concentration levels have not hurt allocative efficiency (Bourlakis, 1987, for Greece). Yun and Lee (2001) find an inconclusive direct impact of FDI on price-cost margins in Korea; they suggest that multinationals are attracted to markets where profits are stable (and probably high), but compete profit away as they enter these markets.

VII.4. Indirect evidence: productivity growth in unrelated enterprises

As mentioned, empirical studies of competition effects are difficult to perform because competition is not readily amenable to measurement. However, studies

examining the effect of foreign entry on the productivity of *incumbent* host-country enterprises provide a way around this and yield valuable insights. Where a positive effect of foreign entry is confirmed, it may in principle be attributed to any of the five channels identified in Chapter I (trade, technology transfer, human capital, competition, enterprise restructuring), but where the effect is found to be strong and immediate the most likely source of productivity increases is an increase in competition. Indeed Ahn (2002) notes that a large number of empirical studies confirm that the link between product market competition and productivity growth is positive and robust.

a) *Reviewing the evidence: developed countries*

The first studies to look for local productivity effects of foreign entry were Caves (1974), examining cross-sector data for Australia for 1966, Globerman (1979) studying Canadian data, and Blomström and Persson (1983), looking at Mexico. All three studies examined the relationship between the foreign share of employment or value added at the industry level and labour productivity in local firms, and all three found positive results.

Later studies have focused largely on the effects of FDI on productivity of local firms in developed countries. Cantwell (1989) studies US-based MNEs' operations in Europe in 1955-75 (looking at market shares of foreign *versus* domestic firms). He finds that in sectors where local firms had traditional technological strength, the entry of American MNEs provided "a highly beneficial competitive spur" (WTO, 1998), whereas in other industries, local firms with small markets were crowded out by United States entrants. Nadiri (1993), also focusing on US-based MNEs, examines the effects of foreign presence on productivity in manufacturing sectors in several European countries (France, Germany and the United Kingdom) and Japan in 1968-88. This study concludes that FDI by American firms has had a generally positive impact on total factor productivity growth.

One of the more recent studies by Liu *et al.* (2000), looking at productivity effects of FDI in the United Kingdom in 1991-95, finds that FDI has benefited the productivity of UK-owned firms in the same industry. The findings of this study are, however, somewhat contradicted by a study by Girma *et al.* (2001), which argues that the productivity gap between foreign and domestic firms in the United Kingdom is widening. In the case of Italy, Imbriani and Reganati (1997) found that productivity levels are higher in those sectors in which MNEs have larger shares, whereas Barrios (2000) found no significant spillovers for FDI in Spain (and negative spillovers for low R&D activities).

b) *Reviewing the evidence: transition and developing economies*

Although studies for developed countries on the impact of MNEs and FDI on productivity of local firms show mostly positive results, studies for developing countries have been more mixed.

1) *Transition economies*

An overview of studies provided by Görg and Greenaway (2001) shows that especially in transition economies, FDI does not seem to have brought the productivity spillover benefits that host countries had hoped. This result is supported by a report of the UN Economic Commission for Europe. UNECE (2001) states that the “expected spillover benefits to purely domestic enterprises – which represent the broader advantages of FDI for economic development – are found to be few and far between, and indeed often appear to have been negative rather than positive”. UNECE concludes that this may reinforce fears that an “enclave” economy could be emerging with a technologically advanced, foreign-owned sector which has little, if any, positive impact on the rest of the economy. Also, Djankov and Hoekman (1999) found evidence of negative effects of FDI on purely domestic firms in the Czech Republic.

This view of FDI in transition economies is, however, not uncontested. Sgard (2001), using Hungarian data for 1992-99, concludes that foreign-owned firms have higher productivity than the average and that they produce substantial positive spillover effects on other firms in the same sector. However, the author cautions that the strength of this finding depends (positively) on the degree of export orientation of the entrant and the proximity of the border.

2) *Developing countries*

Among the empirical studies addressing non-OECD countries more broadly, positive results are found by Sjöholm (1997a) and Blomström and Sjöholm (1998), which examine the Indonesian manufacturing industry. The authors conclude that foreign establishments have a higher level of labour productivity, but that domestic firms benefit from spillover. Anderson (2001), using panel data on Indonesian manufacturing establishments for 1980-95, also finds evidence of productivity spillovers from foreign to purely domestic enterprises. Kokko (1994) establishes similar positive effects for labour productivity in Mexico. Blomström and Wolff (1994) also conclude that foreign presence significantly influenced the rates of growth of productivity of local Mexican firms during 1965-82. Positive results are also found by Kokko *et al.* (1996) for the Uruguayan manufacturing industry.

Several other studies, however, have found negative effects of FDI on the productivity of local firms. Aitken and Harrison (1999), examining FDI into Venezuela,

observe that an increased foreign presence makes the productivity of local firms decline, whereas productivity in foreign firms and firms with significant foreign participation increases. Studies by Haddad and Harrison (1993) for Morocco, and Aitken *et al.* (1996) for Venezuela and Mexico also show no positive spillovers in productivity and wages.⁸ A study by Kawai (1994), focusing on a selection of Asian and Latin American countries, indicates that an increase in FDI had a generally negative effect on productivity in many countries, although positive results were established in the cases of Singapore, Chinese Taipei, Indonesia, the Philippines and Peru.

c) Interpreting the evidence

The overview of studies shows that foreign entry does not have an automatically positive effect on the productivity of local firms, and that this differs across countries and sectors. Two reasons – not mutually exclusive – are advanced to explain these differences. The first, largely unrelated to the competition argument, is that the above argument about threshold externalities (Chapter III) applies to the sectoral and firm level as well. Supportive evidence has been found *inter alia* by Djankov and Hoekman (1999) and Haddad and Harrison (1993).⁹

A second explanation for the differences in FDI impact on productivity of local firms is the level of competition before MNE entry. Blomström and Sjöholm (1998) established that firms in export-oriented industries already facing high competition from the world market do not see as much of an increase in productivity as non-export oriented firms. The authors argue that the entry of an MNE does not change the competitive environment as much for export-oriented firms as it does for non-export oriented ones. (An apparent contradiction with Sgard *op. cit.* seemingly reflects that foreign entries into Hungary have served to *strengthen* the export orientation of incumbent enterprises.) Sjöholm (1997b) found that competition from foreign-owned subsidiaries in the host economy – rather than competition from imports – especially has this effect. Kokko (1996) supports this explanation in the case of the Mexican manufacturing industry, noting that even after accounting for demonstration and contagion effects, competition by foreign firms has an independent effect on productivity of local firms.

VII.5. Summing up

FDI and the presence of MNEs may exert a significant influence on the competitive situation in host-country markets. However, since there is no agreed way of measuring the degree of competition in a market, few firm conclusions may be drawn from empirical evidence. The presence of foreign enterprises may greatly assist economic development by acting as a spur to domestic competition and thereby eventually leading to higher productivity, lower prices and more efficient

resource allocation. Conversely, the entry of MNEs may also raise the levels of concentration in host-country markets, and this has the potential to hurt competition. The risk of such an outcome is exacerbated if the host country constitutes a separate geographic market, the barriers to entry are high, the host country is small, the entrant has an important international market position, and, more generally, the host-country competition law framework is weak or weakly enforced. The following tentative observations can be drawn from the previous sections:

- Market concentration worldwide has increased significantly since the beginning of the 1990s due to a wave of M&As that has reshaped the global corporate landscape. The direct impact of rising concentration on competition appears to vary according to sectors and host countries. At the same time, a surge in the number of strategic alliances has changed the way in which formally independent corporate entities interact. Alliances are generally thought to limit direct competition while generating efficiency gains, but the evidence is not yet firmly established. There has also been a wave of privatisation that has attracted considerable foreign direct investment (mainly in developing and emerging countries), and this too could have important effects on competition (this is dealt with in Chapter VIII).
- However, there are relatively few industries where global concentration has reached levels causing real concern for competition, especially if relevant markets are global in scope. In addition, high levels of concentration in properly defined markets may not result in reduced competition if barriers to entry and exit are low or buyers are in a good position to protect themselves from higher prices.
- Empirical studies suggest that the effect of FDI on host-country concentration is, if anything, stronger in developing countries than in more mature economies. This could raise the concern that MNE entry into less-developed countries could sometimes be anti-competitive.
- Although there is ample evidence of MNE entry raising productivity levels among host-country incumbents in developed countries, the evidence from developing countries is weaker. Where such spillovers are found, the magnitude and dispersion of their effects are positively linked to prevailing levels of competition.
- While it is economically desirable that strongly performing foreign competitors be allowed to replace less productive domestic enterprises, policies to safeguard a healthy degree of competition must be in place. Arguably the best way of achieving this is by expand the “relevant market” by increasing the host economy’s openness to international trade. In addition, efficiency-enhancing national competition laws and enforcement agencies are advisable to minimise the anti-competitive effects of weaker firms exiting the market.

- When mergers are being reviewed and when possible abuses of dominance cases are being assessed, the accent should be on protecting competition rather than competitors. Modern competition policy focuses on efficiency and protecting consumers; any other approach may lead to competition policy being reduced to an industrial policy that may fail to deliver long-term benefits to consumers.

Notes

1. The more perfectly one assumes stock markets to work, the less this question is of relevance.
2. It is a distinguishing feature of alliances that they rather involve swaps or barter of goods and services than transactions for money.
3. Part of this increase is due to the restructuring of industry from the national to the regional level.
4. Tichy (2000) asserts that mergers have a negative impact on technical productivity.
5. This would coincide with one of the reasons larger firms sometimes acquire smaller research-oriented firms, sometimes at the rate of several firms a year. Instead of spending on R&D, larger firms may buy innovations by taking over innovating firms.
6. See Pereira (2001).
7. The barriers to entry referred to arise because of difficulties associated with financing, poor infrastructure, taxes and regulation, policy instability or uncertainty, inflation, exchange rate variability, functioning of the judiciary, corruption, street crime and disorder, organised crime and anti-competitive practices.
8. The study by Aitken *et al.* (1996) also included effects of FDI on local firms in the United States, where a larger share of foreign firms in employment did trigger higher wages in both foreign and domestic establishments.
9. See Saggi (2000) for a survey.

FDI and Enterprise Development

The commonly agreed benefits from FDI to enterprise development and restructuring may be broadly categorised as the direct and indirect effects. The *direct effects* occur when a foreign investor acquires or takes effective control of an enterprise in the host country, and subsequently changes the way this enterprise conducts business. The changes may affect any part of the acquired enterprise's operations. The following sections cite examples of foreign-orchestrated takeovers leading, for example, to changes in production technology, product offerings, marketing strategies, supplier relationships and corporate governance. The *indirect effects* occur when a foreign corporate presence, whether through competition (see Chapter VII) or demonstration effects, induces domestic enterprises to undertake similar restructuring.

The effects of FDI on enterprise restructuring thus differ according to the mode of entry, since direct restructuring effects occur when an existing enterprise is acquired.¹ Indirect effects, on the other hand, may apply regardless of the mode of entry – but will depend on the degree to which FDI takes place in sectors where indigenous enterprises are active.

As regards direct effects, another important distinction relates to the driving forces behind restructuring and, ultimately, behind the acquisition of an enterprise. Prospective investors may be motivated by any of the “motivation factors” listed in Chapter I. When singling out targets for acquisition, however, they focus on the potential for boosting corporate earnings through one of three channels: synergies from integrating the enterprise into the MNE's overall strategy; achieving cost reductions; or developing new activities. All of these goals pertain to enterprise restructuring, all of them have the potential to increase productivity in the host economy. They are not mutually exclusive. However, the second type – achieving cost reductions – tends to attract the most attention and spur the most public debate in developing countries.

Cost-saving strategies (frequently referred to as “defensive restructuring”) may involve the reduction of employment, the closing of factories and a reduction of the range of products and services brought to the domestic markets. While the

application of such measures to boost profitability is almost always economically justified, it may breed considerable resentment among interest groups and policy makers in host countries. Defensive restructuring of companies that are perceived to be profitable and well-run routinely leads to accusations of disdain for the national interests of the host country, particularly when engendered by major foreign-owned companies. Such arguments overlook the value, in alternative use, of the resources freed through restructuring.

Host-country reactions to defensive restructuring tend to differ when a company is considered to be in financial distress. In this case, foreign investors are often considered a welcome source of recapitalisation and managerial expertise. Most cases of FDI-backed privatisation in developing countries fall into this category.

VIII.1. The economics of FDI and enterprise restructuring: some observations

While a foreign investor may or may not decide to undertake new activities and cost-cutting upon acquiring an enterprise, strategies to actually integrate the acquired company into the overall network of an MNE are certain to lead to a degree of restructuring. The targeted enterprise will need to align itself with a number of MNE-internal processes, such as management, other aspects of corporate governance, R&D processes and marketing. To the extent that the MNE has a comparative advantage in these fields, this is likely to lead to productivity gains.

An unknown factor in connection with cross-border M&As and subsequent restructuring is the degree of *vertical integration* that the acquirer sees as optimal. There has been a tendency in recent decades for companies in certain sectors to replace internal production of sub-components and services by increasing reliance upon outsourcing – effectively curtailing the degree of vertical integration. The opportunity to achieve cost savings by applying market tests to subcontractors is often cited. In connection with cross-border transactions, this implies that FDI could in some cases lead to an accelerated spin-off of small enterprises from MNE affiliates in the host countries.

a) Economies of scale and scope

Generally, in sectors where economies of scale are perceived to exist (*e.g.* engineering, metal, chemical and medical industries), the relevant dimension of scale is the output of similar products rather than the size of plants or companies. Economies of scale for the output of groups of similar products are realised by spreading product-development costs and using more efficient production techniques as the output rate increases. If, however, products made by a company incorporate a large bespoke element (work specific to individual products, not easily duplicated in other products) economies of scale are likely to be limited. The

economies of scope relate to spreading common fixed and sunk costs, including some R&D and marketing expenditure.

When an MNE acquires a company in a developing (or advanced) country, it has to incorporate the acquisition into its worldwide network. The rationalisation of production likely will severely reduce the range of products made by the acquired company. In time, the acquisition will supply a small part of the MNE's range to the market in the host country and to export markets. Other products made by the MNE will be distributed in the host country. Also, the MNE is likely to rationalise production of components. In this context, MNEs make an important contribution to developing countries by enabling their subsidiaries to achieve international standards of quality. Restructuring and rationalisation permit an exploitation of the economies of scale and scope. MNEs are more likely than are purely domestic companies to have the financial resources and technical expertise to modernise facilities and expand capacity. MNEs also are likely to have greater in-house expertise for organising logistics and marketing.

As barriers to entry to national markets have fallen, product standards have been harmonised across countries, and increased competition has put pressure on customers to reduce the costs of the goods and services they buy, exploitation of these economies has become much more important for MNEs. Exactly how an acquisition is fitted into an MNE's operations will depend on many factors: the characteristics and location of the acquired firm's facilities, the size and distinctiveness of the host-country domestic market, access to adjacent markets, labour skills available, wage levels and other costs, the pressures brought by the host-country government, and the assessed reliability and stability of the legal, political and financial structures of the host country.

In industries not characterised by economies of scale or scope, the outcome of M&As is likely to be different. Acquiring companies in these industries will provide capital, brands, production expertise and marketing know-how and contacts, but the rationalisation of production facilities is likely to be limited where the possibility of economies of scale is slim. Additionally, transport costs are likely to be important in some such industries. Acquisitions of companies in the service sector, including retailing, oil distribution and telecommunications, are likely to involve still less rationalisation of existing facilities, but MNEs may still introduce new or improved products and services.

VIII.2. Management and corporate governance

Foreign companies are likely to invest more in firms in developing countries if they gain management control. The implication is that the magnitude of cross-border M&As and the degree of change in the management and corporate-governance structure of acquired companies may be mutually reinforcing. Whether or not a takeover

leads to the appointment of new managers, the discretion of top managers of an acquired company to make strategic decisions is likely to be reduced. Expatriate managers may be transferred to the acquired company and experts from the acquiring company will be available as management advisors. Rigorous systems for reporting to the MNE's headquarters will be introduced and different parts of acquired companies (sales and production, possibly subdivided into product groups) are likely to have separate reporting channels.

Acquisitions also result in the internalisation of processes that previously were brought to the market. For instance, managers of subsidiaries usually cease to deal directly with banks and other financial institutions, and instead have to negotiate with top managers of their MNE for finance. Some purchasing of materials and components may also be centralised within the MNE. The management of a company acquired by an MNE may apply a longer planning horizon when deciding whether to invest in new products and facilities. This applies particularly to developing countries, where many companies operate with little long-term planning due to their limited financial reserves and high cost of capital.

MNEs may be in a weaker position than local companies regarding information asymmetries. When problems in a subsidiary require swift action, the distance to headquarters is sometimes a problem. MNEs are usually in a strong position, however, when it comes to appointing high-quality managers, and, partly depending on the quality of the managers, when dealing with other stakeholders. Moreover, because MNEs are knowledgeable about the state of their industry worldwide, can compare their business performance in different countries, and are free to relocate their operations, it is easier for them to identify poor performance and reduce agency problems.

a) *The impact of privatisation*

Privatisation and corporate governance are linked in two main ways. First, the sale of state-owned enterprises exposes them to takeover and bankruptcy threats, thereby addressing some corporate governance problems arising under state ownership. Second, privatisation provides an opportunity to modify the distribution of ownership rights among different classes of investors, by extending public listing among large firms, increasing the number of small shareholders and reducing ownership concentration. It is important to reconcile two opposing imperatives: providing an appropriate mechanism for protecting small shareholders; and allowing management the flexibility required to pursue long-term corporate goals. Potential improvements in technical efficiency following transfer of control may be jeopardised if corporate control is not contestable. In this case, and especially if conduct regulations fail to open up protected markets, managers can exploit rents accruing from market position without having to worry about the threat of takeovers.

Privatisation policies need to take such factors into account, making it imperative to introduce reforms and redress perceived inefficiencies.

The experience of most countries, however, suggests that the privatisation of large companies is unlikely to lead to their permanent transfer to a dispersed ownership. Generally, there is a slow but steady decline in the number of small shareholders following the initial privatisation. In the United Kingdom, “control [of privatised companies] is not exerted in the forms of threats of takeover or bankruptcy; nor has it for the most part come from direct investor intervention” (Bishop *et al.*, 1994). In Italy, privatisation was accompanied by a legislative effort to provide non-controlling shareholders with adequate safeguards and to create conditions that allow them to monitor managers.

Privatisation of enterprises in developing countries has often led to the transfer of ownership to foreign strategic investors, either through trade sales or share purchases after the actual privatisation. Those countries that have chosen mass privatisation schemes (*e.g.* voucher-based programmes) have done so largely out of political necessity. As a result, many of them face persistent governance and efficiency problems in the privatised enterprises (OECD Development Centre, 2002). However, more successful experiences, such as in Chile, indicate that the success of mass sell-offs could require the development of new classes of institutional investors, which may play a pivotal role in corporate governance. (In Chile, the takeover of the country’s dominant electricity utility was stalled for months in 1998 as pension funds objected to the additional terms that incumbent managers had negotiated for themselves.)

VIII.3. FDI and privatisation: evidence from developing countries

a) Empirical studies

Table VIII.1 summarises the results of 11 econometric studies of the effects of FDI on various dimensions of restructuring. While most of the evidence surveyed related to the privatisation process, some studies include data related to FDI that is not directly related to privatisation. Various aspects of performance are compared for different ownership groups – firms wholly or partly owned by foreign investors, state-controlled and other private companies. The four questions raised by the empirical studies are:

1. What is the effect of FDI on productivity?
2. Is the replacement of existing managers important for improving the performance of firms?
3. What is the impact of restructuring on cost efficiency?
4. What are the other concrete effects of restructuring?

Table VIII.1. **FDI and enterprise restructuring in connection with privatisation: a survey of empirical studies**

Study	Data/Coverage	Questions addressed	Estimation technique	Major findings
Barrell and Holland (2000)	Manufacturing in Hungary, Poland and the Czech Republic.	(1)	Panel data study for 11 manufacturing sectors.	FDI has helped to speed the process of enterprise restructuring. The size of the stock of FDI is positively and significantly related to labour productivity in most manufacturing sectors.
Bortolotti <i>et al.</i> (2001)	31 national telecommunication companies in 25 countries that were fully or partially privatised between October 1981 and November 1998.	(1) (3) (4)	Univariate pre- and post privatisation comparisons, and panel data study.	Privatisation is significantly positively correlated with higher profitability, production and efficiency. The profitability decreases when together with the privatisation, competition is introduced, just as the number of employees and – perhaps surprisingly – the efficiency. Privatisation programmes that allow for management change and are open to foreign purchasers can improve firm performance. The advantage of foreign investment “is the ability of foreign owners to introduce western managerial know-how”.
Dyck (1997)	50 firms in eastern Germany which responded to a survey in 1992.	(2)	Data and regression analysis.	The launching of new products and the upgrading of existing ones are significantly associated with improved performance, but more internal reorganisation of firms is not. Firms with foreign ownership tend to perform better than state-owned firms.
EBRD “Transition Survey of Report 1999”	3 000 enterprises in 20 eastern European transition economies reported in 1992.	(4)	Data analysis.	

Table VIII.1. **FDI and enterprise restructuring in connection with privatisation:
a survey of empirical studies** (*cont.*)

Study	Data/Coverage	Questions addressed	Estimation technique	Major findings
Frydman <i>et al.</i> (1999)	Questionnaire survey of 506 midsize manufacturing firms in the Czech Republic, Hungary and Poland made in 1994.	(3) (2)	Data and regression analysis.	Foreign investors “bring a significant improvement in revenue performance” but “their impact is not significantly stronger than that of any domestic outsiders”. The implication is that the change of management is critical for improved performance. Foreign-owned firms “appear softer on employment reductions”.
Halpern and Korosi (2001)	Profit and loss and balance sheet data for a large number of Hungarian firms.	(3)	Frontier production functions.	Foreign-owned firms were clearly the most efficient ones, compared to state-owned firms and firms owned by domestic private investors, throughout the transition period 1990-97.
La Porta and Lopez-de-Silanes (1997)	All privatisations in Mexico for the period 1983 to 1991, which involved 218 transactions spread over 49 sectors (excluding financial firms).	(1) (3) (4)	Univariate pre- and post privatisation comparison and regression analysis.	They found that privatisation increased profits significantly, mainly because of increases in productive efficiency. On the other hand, employment suffered significantly: both the number of white collar and blue collar workers decreased by more than half. Capital investments – which are usually expected to improve or replace older production facilities – showed only a small and insignificant increase. On the other hand, privatised firms became important taxpayers instead of subsidy receivers.

Table VIII.1. **FDI and enterprise restructuring in connection with privatisation: a survey of empirical studies** (*cont.*)

Study	Data/Coverage	Questions addressed	Estimation technique	Major findings
Konings (2001)	Dataset of company accounts for over 5 000 firms in Bulgaria, Romania and Poland.	(1)	Panel data study	Foreign firms do not perform better than domestic ones except in Poland. There is no evidence of positive spillovers to domestic firms. The author concludes that the results suggest "it may take time for ownership effects to have an effect on performance, due to lags in restructuring".
Petrazzini and Clark (1996)	Telecom sector for 26 developing countries, year 1994.	(4)	Data analysis	Privatisation is associated with a significant increase in both the level and the growth rate of network density. Privatisation has no consistent impact across countries on the level of service.
Ros (1999)	Telecom sector for 110 countries, 1986-95 period.	(4)	Panel data study	The network density is significantly higher in those countries where at least half of the largest telecom firm is in private hands. Privatisation increases network density and enhances efficiency.
Rojec (2000)	A dataset of income statements for more than 5 000 Czech, Hungarian, Slovakian and Slovenian companies.	(3) (4)	Data analysis	Foreign affiliates "perform much better. They favour macroeconomic restructuring... by tending to locate in manufacturing industries with above-average profitability... (and) export orientations". They "have more investment activity, and are more export-oriented".

- * This still underestimates the real unemployment effect. Even before privatisation lay-offs occurred, presumably to make the firms more attractive for investors.

The studies indicate that foreign investment facilitates the restructuring of companies. Firms in which foreign investors have acquired a stake generally outperform other firms, especially in management quality and efficiency of cost-reducing measures. However, the studies also seem to indicate that the advantages of FDI vary significantly between countries.

The results in the table below must be interpreted with caution, due to some methodological problems. For example, some of the studies are based on firm-level data of sales and profits, which are affected by the pricing policies of MNEs. Other studies are based on surveys with low response rates, or have used alternative definitions of FDI, rendering the individual studies difficult to compare. Furthermore, the results may be subject to a selection bias since foreign investors are likely to choose firms perceived to have a high potential for restructuring. Finally, some studies deal with the period immediately following the transition in Eastern Europe, which was characterised by recession.

b) The evidence from case studies

The results of in-depth case studies support the findings from the econometric evidence. Case studies arguably are the best sources of information to identify and illustrate the effects of M&As in developing countries. In contrast to econometric analysis, case studies may shed valuable insights into the causal nature of developments. On the other hand, case studies have an obvious drawback: they focus on selected investment projects and hence may reflect the results of a few relatively successful M&As. Moreover, evidence of the effects of FDI on targeted companies and host economies is more readily available for the transition economies of Eastern Europe than for other developing countries, and the present survey reflects this concentration of evidence. Eastern Europe provides opportunities to study the effects of a large-scale experiment with privatisation and investment by MNEs.²

1) Sectors characterised by economies of scale

In developing and emerging economies, the **utilities sector** saw some of the most important privatisation projects in recent decades. For instance, Argentina launched an ambitious privatisation programme in 1989. Key sectors including telecommunications, electricity, gas, oil, airlines and ports were privatised. In most cases foreign strategic investors took control of the companies. On the whole, the transfer of ownership was associated with higher efficiency and lower prices, but problems in a few sectors (water and sewerage are often cited) highlighted the need to maintain regulatory oversight when transferring a monopoly to private ownership.³

In Chile, privatisation of the telecom sector and of electricity started in the late 1980s. Serra (2000) observes that the services of the former state-owned enterprises expanded, and that productivity increased. Still, only in those cases where competition was introduced did these benefits translate into lower charges for consumers. The privatisation of the Côte d'Ivoire Electricity Company (CIE) led to an increase in productive efficiency, thanks mainly to organisational innovations and cost reductions. Despite the monopoly position of the newly established private firm, electricity prices decreased significantly (Plane, 1999).

The Brazilian telecom privatisation process from 1995 to 2001 led to the transfer of 11 of a total of 12 privatised companies to the ownership of foreign strategic investors. Unlike many other cases, the telecom sector had been restructured prior to privatisation and the government linked the privatisation to a gradual opening of the market to competition from operators others than the purchasers of the privatised enterprises. This led to a gradual improvement in efficiency and pricing prior to and immediately following the ownership transfer.

The privatisation of the telecommunications sector in Sri Lanka, including the necessary institutional and organisational reforms, was spread out over nine years. Privatisation has led to benefits including increased investment, lower prices and higher levels of connectivity, and improvement in the quality of service and in innovation. The introduction of competition parallel to the privatisation arguably helped in reaching these positive results, and it also appears to have prevented a rolling back of the reforms (Samarajiva, 2000).

The **engineering and electrical industries** of transition economies have seen some of the largest privatisation projects with foreign participation of the last decade. The acquisition of Skoda in the Czech Republic by Volkswagen and Tungsram in Hungary by GE are frequently cited as examples of the advantages of domestic champions being acquired by MNEs. (Brzezinski, 1998, Marer, 1999, Szanyi, 2000). Both enterprises were financially weak when acquired, and their capital equipment was generally seen as substandard. Both were completely restructured: the product range was revamped, new products were developed, new machinery and equipment installed, just-in-time production methods introduced, new suppliers recruited, quality standards tightened, environmental pollution reduced, local R&D increased, new export markets opened and, in the case of Tungsram, additional brand names introduced.

Moreover, in the concrete cases the alternatives to acquisition by MNEs do seem unattractive in retrospect. The expertise required to build up a competitive motor vehicle company is not a tradable asset, and although independent companies can acquire design skills and marketing knowledge from consultants, and top managers can be recruited from other countries, this usually gives rise to considerable problems of co-ordination. It is doubtful, furthermore, that sufficient amounts

of capital could have been made available locally to allow these companies to upgrade production so as to reap the full benefits of scale economies, develop new markets and meet safety legislation in Western countries (GE has, for example, invested more than USD 700 million in Tungsram).⁴ The alternative to being taken over by foreign-owned enterprises probably would have been operating as subcontractors to MNEs.

The observation that enterprise restructuring may be particularly vigilant when undertaken with the support of foreign capital can lead to political controversy in the host countries. For instance, the GE takeover of Tungsram led to swift reductions of employment in the Hungarian company, from a payroll of 18 000 to about 10 000 (Linden, 1998). It is, however, likely that the counterfactual scenario would have had an even more adverse long-term effect on the company payroll.

In the **steel industry** large economies of scale apply to traditional steel-making plants and rolling mills. The acquisition of Kazakhstan's largest steel plant, Karmet, by the Dutch-controlled Ispat took place in 1995 *after* the failure of two attempts to revive the business with the help of Western managers (EBRD, 1999). Following the takeover, the new owners banned all barter sales and purchasing deals, placed all dealings with the authorities under central management and imposed financial controls. A strengthened marketing effort abroad boosted exports, currently 90% of total sales. The immediate impact on employment was significant, but far from unusual in the context of a major enterprise restructuring: 6 000 of the 33 000 employees left the company within the first year.

Other widely publicised cases came in the **chemicals and pharmaceuticals industry**. In 1991, the German chemical and detergents company Henkel entered into a joint venture with the Slovakian company Palma, producer of plant oils, soaps and detergents. The joint venture distributes Henkel's whole production line in Slovakia, and it produces chemicals in its own right. Its production arm has invested significantly in new packaging lines and in environmental improvements. The net overall technology effect of the joint venture is not entirely clear. Ferencikova (1998) concludes that "the joint venture led to a transfer of technology, increases in productivity and better and higher quality products". Yet, the local research function was abolished. In 1998, Henkel bought out its partner.

Another example is the joint venture between Hoechst of Germany and the Slovakian pharmaceutical company Bioteka Martin. Again, the Western partner financed the installation of new machinery, including a filling line. Hoechst also introduced new products. By 1996, 80% of inputs used by the joint venture were imported and 65% of its output was exported. (The transport costs for both inputs and outputs are not a hindrance to concentrating the production of pharmaceuticals). The joint venture has led to improvements in product quality and efficiency.

The technology spillover effects have, however, been described as limited (Ferencikova, *op. cit.*).

The **building and construction materials industry** illustrates the restructuring of a business where the economies of scale are relatively less pervasive, but where transport costs are important. One case in point is the acquisition of the Czech glass producer Glavunion by Glaverbel of Belgium. The new owner built two new units for making mirrors and automotive windscreen glass, and it reconstructed and refurbished existing float-glass lines. Quality standards were improved and markets were divided regionally (Matesova, 1999).

2) *Other sectors*

Foreign-orchestrated takeovers in the **food and beverages industry** have had a relatively limited impact on enterprise restructuring, evidence indicates. The acquisition of Matra Cukor Rt, which owned two Hungarian sugar factories, by the French subsidiary of an Italian company is arguably a case in point (Kacsirek and Koczion, 1999). This enterprise has been unable to replace the export markets for sugar in Eastern Europe that it lost in the early 1990s. However, the acquiring firm has made investments in the Hungarian plants and attempted to raise labour productivity through downsizing and investments in human capital. Restructuring efforts seem to have been limited by the fact that sugar is an undifferentiated product, which limits the scope for using brands and marketing.⁵ On the production side, the use of written-down equipment and infrastructure in the acquired enterprise has resulted in low depreciation costs.

Economies of scale are generally thought to be insignificant in the **clothing and textiles** industry, and some operations, notably sewing, remain labour-intensive. The industries are highly fragmented. Quality, design and quick response to changes in market demand are important dimensions of competitiveness, while brands owned by manufacturers, wholesalers or retailers are significant in some sectors. Eastern European countries have the advantages in textile and clothing production of proximity to Western European markets and, like other developing countries, low labour costs.

Italy is the leading European manufacturer of textiles and clothing, and in recent years Italian manufacturers have increasingly invested in these industries in East European economies (Graziani, 1998). The industry differs from many others, particularly those with significant advantages of scale, in that ownership and control over the investment differ significantly according to countries and projects. The choice between outright ownership, joint ventures and subcontracting in the textile and clothing industries is a complicated one for both investors and host countries, since the benefits of foreign control and ownership are less evident. Machinery for knitting and sewing can, for example, be adapted to different product

lines, and there is a second-hand market for the machines. Italian manufacturers can provide expertise and market contacts, but production technology is readily available locally. From the viewpoint of the investor, ownership and control as opposed to co-operation and subcontracting may involve unnecessary complications while adding little.

VIII.4. FDI not directly related to privatisation

a) *The evidence from empirical studies*

Table VIII.2 summarises the results of four statistical studies of the effects of FDI and the dimensions of restructuring. The studies focus on data related to greenfield and other forms of investment not directly related to privatisation. Various aspects of performance are compared for different ownership groups – firms wholly or partly owned by foreign investors, state-controlled and other private companies. The empirical studies raise four questions: What is the effect of FDI on labour productivity? What is the impact on structural efficiency? What is the effect on profitability? And do takeovers trigger a shift of sales toward export markets?

The four studies employ very different methodologies, and lend themselves to no sweeping conclusions. Their findings would seem, nevertheless, to be consistent with the above observation that foreign takeovers act as a catalyst for (positive) change in the targeted enterprises. However, as also found in Chapter VII, the effects on unrelated enterprises in the host economy can be more complex, dependent on the sectoral and national context, and, in particular, the technological and financial ability of local companies to face the foreign competition.

b) *The evidence from case studies*

The **motor vehicles industry** has been the topic of several studies on ownership transfer and formal co-operation between domestic and foreign enterprises. Brid (1996) argues that MNE ownership of vehicle operations in developing countries is beneficial to the host economy and to the individual national enterprises. For example, the Mexican car and light commercial vehicle industry has restructured and expanded in response to government decrees and tariff changes enabling market entry by MNEs.

Host-country authorities often prefer joint ventures as an alternative to ownership changes among “national champions”. For instance, in 1982 the Indian government was advised that a project to build a national car would not succeed without foreign technology. As a result, a joint venture agreement was signed between Maruti (a state-controlled company) and Suzuki of Japan. The initial agreement was followed by additional FDI during the 1990s, including greenfield investment. A principal benefit of the FDI was to upgrade the product quality and

Table VIII.2. **FDI and restructuring in cases not related to privatisation:
a survey of empirical studies**

Study	Data/Coverage	Questions addressed	Estimation technique	Major findings
Aitken and Harrison (1991)	Data for more than 4 000 Venezuelan plants from 1976-89.	(1)	Panel data analysis.	Increases in foreign equity participation are correlated with increases in productivity for plants with less than 50 employees. Increases in foreign ownership negatively affect the productivity of wholly domestically owned firms in the same industry.
Blomstrom (1986)	Mexican Census of Manufactures 1970 and 1975.	(2)	Efficiency frontier analysis.	Foreign presence is positively correlated with structural efficiency – “in the sense that the average firms come closer to the best practice firm”.
Grosse (1989)	Managers assessments (3) of the relative profitability of their Venezuelan manufacturing operations (37 firms)	(3)	Comparison of pairs of companies and regressions.	Foreign firms were slightly more profitable than Venezuelan firms. “FDI appears to offer net benefits to the host country”.
Blomstrom, Kokko and Zejan (1994)	Analysis of national trade data and trade data for US owned affiliates from 1975-86.	(4)	Data analysis.	Among US multinationals’ affiliates in heavily indebted Latin-American countries there was considerable shift from selling in the host-country markets to exporting after the debt crisis began.

production technology in the Indian car industry, and FDI moreover had “a generally positive...employment effect” (Okada, 1998). Likewise, the Taiwanese motor assembly industry is dominated by joint ventures with foreign firms, including several Japanese enterprises and Ford Motor Company (Lynch, 2000).

In the **steel industry**, one project frequently cited as a success story relates to the Brazilian economy, where most steel producers are state-owned. A rare exception is the plant Usiminas, which was founded as a joint venture with a Japanese

consortium led by Nippon Steel. It has proven to be the most successful of the three Brazilian integrated plants in “stretching capacity and attaining the best productivity rates” (D’Costa, 1999). Nippon Steel retains an interest in Usiminas, and technical agreements between the companies enable Usiminas to produce comparatively high value-added products.

VIII.5. Summing up

FDI has the potential to significantly spur enterprise restructuring in the host economy. The direct impact on the targeted enterprise includes the achievement of synergies within the acquiring MNE, efforts to raise efficiency and reduce costs in the targeted enterprise, and the development of new activities. Additional efficiency gains may occur in unrelated enterprises through demonstration effects and other spillover channels akin to those discussed in Chapters V and VI. While the empirical and case study evidence surveyed above is somewhat inconclusive, the following tentative observations can be made:

- The evidence points to a significant improvement in economic efficiency in enterprises acquired by MNEs, albeit to a varying degree according to countries and sectors. The strongest evidence of improvements is found in industries with economies of scale. Here, the submersion of an individual enterprise into a larger corporate entity generally gives rise to important efficiency gains.
- Foreign-orchestrated takeovers lead to changes in management and corporate governance. MNEs generally impose their own company policies, internal reporting systems and principles of information disclosure on acquired enterprises (although some cases of learning from subsidiaries have been seen), and a certain number of foreign managers usually come with the takeover. To the extent that foreign corporate practices are superior to those prevailing in the host economy, this may boost corporate efficiency. Empirical studies indicate that the migration of managers can be an important source of improvement, but to the degree that country-specific competences are an asset for managers in subsidiaries, MNEs have to strive toward an optimal mix of local and foreign management.
- An important special case relates to foreign participation in the privatisation of government-owned enterprises. Experiences, many of them derived from the transition economies in Eastern and Central Europe, have been largely positive. MNE participation in privatisations has consistently improved the efficiency of the acquired enterprises. Some political controversies have occurred, however, since efficiency gains often were associated with sizeable job losses. Moreover, the value of FDI in connection with privatisation in transition economies may partly reflect the fact that few

domestic strategic investors have access to sufficient finance. In the fewer cases where domestic private investors were brought into previously publicly owned enterprises, important efficiency gains followed.

- The privatisation of utilities is often particularly sensitive, because these enterprises often enjoy monopolistic market power, at least within segments of the local economy. The first-best privatisation strategy is arguably to link privatisation with an opening of markets to greater competition. Where the privatised entity remains largely unreconstructed prior to privatisation, however, local authorities often attract foreign investors by promising them protection from the threat of competition for a period. In this case there is a heightened need for strong, independent domestic regulatory oversight.
- Overall, the picture of the effects of FDI on enterprise restructuring that emerges from recent experience may seem too positive, because investors often will have picked their targets among enterprises with a potential for achieving efficiency gains. However, from a policy perspective this makes little difference, as long as foreign investors (as opposed to domestic investors) perceive an opportunity to improve efficiency or to realise new business opportunities through the takeover of an enterprise. Authorities aiming to improve the economic efficiency of their domestic business sectors have incentives to encourage FDI as a vehicle for enterprise restructuring.

Notes

1. The direct effect may, however, also apply where foreign investors take a minority stake in an existing enterprise – *i.e.* in cases of foreign investment falling short of rising to the level of FDI.
2. Eastern Europe also provides opportunities to study the adverse effects of a lack of host-country transparency. Eliasson (1998) describes the difficulties encountered by two Swedish companies that acquired the Grand Hotel Europe in St. Petersburg in 1988. The Swedish companies invested USD 85 million in the project to restore the hotel to international luxury class. During the first year, the hotel had a problem managing its cash flow and was granted permission to manage its liquidity through a bank in Stockholm. In 1993 it moved its bank accounts to St. Petersburg, following which the tax police reinterpreted the tax rules and made a claim for USD 24 million back tax. The claim made it difficult for the Swedish companies to sell their stake in the hotel.
3. Nestor (2000).
4. Linden (1998).
5. Moreover, restrictions on the international trade in sugar and uncertainties about future policies in this area have not been helpful.

Chapter IX

Social and Environmental Consequences of FDI

While emphasising the need to use inward FDI as a tool for encouraging economic growth, especially in the poorest countries, it is important to recognise that FDI may also affect quality of life beyond the narrowly defined economic context. International investment can impact on the environmental performance of host countries. Such impacts may be positive or negative, and will depend largely on the enforcement of adequate environmental policies and standards in the host country. As touched upon in Chapter VI in connection with human capital formation, FDI may also contribute to the development of labour standards. Likewise, it may influence a range of other social indicators.

It seems intuitively appealing to assume that FDI influences environmental and social conditions in the host country through a causal sequence equivalent to the one that relates to economic benefits and costs: initial investment; transfer of home-country production practices within the MNE; spillovers to local companies. However, two important differences apply. First, unlike the case of economic benefits of FDI, where investors typically are attracted by high host-country standards, certain kinds of investment may be motivated by a laxness of host-country environmental and social regulation. Second, whereas individual corporate strategies are often concerned with limiting the economic spillovers from affiliates to direct competitors, foreign enterprises have no incentive to limit the positive environmental or social externalities that their presence may generate in societies in which they operate. Indeed, in many cases they take an interest in furthering such effects. The following sections summarise the evidence of these potentially contrasting forces.

IX.1. Benefits and costs for the environment

a) *Direct effects*

The analytical consensus from studies on the environmental effects of FDI is to decompose the direct effects into “scale effects” (resulting from the expansion of economic output), “structural effects” (from the reallocation of production and

consumption), and “technology effects” (from technological development and diffusion). In general, scale effects are expected to be negative, while technological and structural effects are expected to be positive (*i.e.* FDI flows in services as opposed to investment in more polluting sectors).¹ What becomes relevant, analytically, is the net outcome of the three effects, not the individual parts. While some overview studies have found that the overall effect of FDI on pollution could be positive (*e.g.* Wheeler, 2001), a survey of recent work suggests that the net effects depend upon sector and context (Zarsky, 1999). However, the task of identifying “net effects” of FDI on the environment is very complex and empirical studies of this nature are virtually non-existent (for a more comprehensive discussion see OECD, 2002a).

In studying economic development, focusing on scale effects could lead the analysis astray. Since expanded economic output is precisely the outcome that most developing countries hope for from inward FDI, a concomitant increase in pollution may be considered as an inevitable side effect. Rather, host-country authorities face the challenge of maximising the benefits and minimising the drawbacks of the increased economic activity (*e.g.* through adequate environmental regulations and institutions). This, in turn, further accentuates the importance of the technology effects. The focal question is whether FDI – through access to foreign technology and its direct impact on the host economy – serves to alleviate or to accentuate the environmental costs of economic growth.²

As for the structural effects, it is recognised that FDI may contribute to sectoral changes in host economies that may take a toll on the environment (one obvious example is the transformation from an agrarian to an industrial economy). However, the crucial question is whether this reallocation is sought by the host country and perceived as generally beneficial. In that case, the question again becomes whether the technology effects of FDI are such that they minimise the environmental cost of the change. On the other hand, if foreign corporate presence triggers an expansion of particularly polluting production, significantly beyond what would have taken place with domestically financed growth, then the structural effect of FDI must be characterised as negative. The technology and structural effects are reviewed in some detail below.

1) *Technology effects*

Technology effects emerge as FDI flow drives a more rapid rate of technology development, diffusion and (sometimes, cf. Chapter V) transfer. Assuming that the technologies used by foreign investors tend to be less polluting and use fewer resources,³ technology effects are expected to be positive (or neutral), depending on whether they improve economic and resource efficiency (OECD, 2001f).⁴ The prospect of a technology upgrade positively affecting the FDI-environment relationship

has received great attention from researchers, governments (especially in developing countries) and international organisations. While a full overview of the literature is beyond the scope of this chapter,⁵ the issues listed below nevertheless provide an introduction to some of the channels through which the FDI-technology linkage may benefit the host-country environment:⁶

- *The arrival of newer and “cleaner” technologies.* Foreign investors are likely to possess technologies that are relatively advanced, newer and less environmentally damaging than the production apparatus among developing-country incumbent companies (OECD, 2001f; OECD, 1995a; Schmidheiny, 1992). The presumed technological advantage of foreign entrants is supported by the fact that when MNEs establish themselves in foreign markets, they have to overcome hurdles such as unfamiliarity with domestic markets, local tastes and regulatory systems. Technological advantages are among the most decisive factors that may provide them with a competitive edge over host-country competitors (Grossman and Helpman, 1995).
- *Host-country spillovers.* In keeping with the spillover channels reviewed in Chapters V and VI, foreign investors can create other positive environmental externalities in the host economy through local imitation, employment turnover, and by supply-chain requirements (*e.g.* demanding higher quality standards, see Blomström and Kokko, 1996a; Blömmström and Wolff, 1994).⁷

The above observations lend strong support to the argument that FDI, via technology effects, has the potential to greatly benefit the host economy's environment. However, some incentive problems exist, not least as the profits earned through FDI accrue wholly or largely to legal entities domiciled outside the host country, whereas any negative environmental fallout is mainly felt locally. More concretely, in the absence of adequate host-country environmental regulation (and, increasingly, concerns about the corporate image elsewhere in the world) MNEs have economic incentives to contribute to positive technology effects only when the new and “cleaner” technologies are not more expensive to use than the more polluting ones.

Where this is not the case, there have been cases even of “technological dumping”, where MNEs moved equipment banned in home countries for its poor environmental performance to countries with lax environmental standards (OECD, 2001f; Esty and Gentry, 1997). In some cases MNEs have economic incentives to employ relatively more environmentally damaging technologies in their production. For example, companies attracted by an availability of cheap natural or human resources to regions with weak environmental regulations will be tempted to use cheaper (and, most likely, more environmentally damaging) technologies (OECD, 1997).

The empirical evidence of exports of “dirty” industries to developing countries is, however, not compelling. A study by Letchumanan and Kodama (2000) finds no strong correlation between FDI flows into developing countries and the corresponding polluting content of the relevant industries. An illustration of the environmental benefits and costs that may occur in the mining sector is presented in Box IX.1.

Box IX.1. FDI and environment in the mining sector

Many countries which are reliant on the export of minerals have received increased flows of FDI in recent years, not least in connection with the privatisation of state-owned mining companies (UNCTAD 1999b). The modernisation of such enterprises and the inflows of new investment into new projects have usually enhanced the prospects for better environmental performance. Innovations such as energy-efficient “flash” smelters, biotechnology-based leaching alternatives to smelting, and continuous concentration processes are substantially reducing the overall use of resources (energy in particular) and the damage to water, air, land and ecosystems (Warhurst and Bridge, 1997).

Warhurst (1999) conducted 25 case studies^{*} analysing the diffusion of four environmentally friendly technologies in mineral extraction, as well as the potential of FDI as a conduit for the transfer of “clean” technologies. The studies suggest that *technological collaboration* between suppliers and recipients – in particular intensive training – can contribute to improved environmental performance and enhanced environmental management capacity. However, in order to do so, the recipient must have mechanisms both to retain capacity and to diffuse it systematically throughout the operation. Unless these mechanisms are in place, the study suggests the capacity transferred through collaboration could be lost over time, or may remain concentrated in only one part of the operation. In other words, FDI’s technology transfer does not occur automatically; opportunities need to be purposefully harnessed by both suppliers of technologies and recipients.

The adoption of cleaner technologies in the mineral sector as part of FDI is happening in developing-countries and transition economies particularly in greenfield investments; but also at existing sites where there is significant investment in capacity extension. Another finding from the study is that the uptake of cleaner process technologies (and opportunities for enhanced environmental management) occurs only if the process offers savings when compared to other commercially available processes. Thus, environmental advantages *per se* were not sufficient to ensure the adoption of the cleaner technologies in the cases analysed.

* The countries analysed were Australia, Bolivia, Brazil, Chile, China, Papua New Guinea, Peru, Russia, South Africa and the United States.

2) *Structural effects*

Structural effects are associated with the adjustments within and between economies that occur when the *pattern of resource use* shifts. To the extent that trade and investment liberalisation promote allocative efficiency among economies, structural effects are expected to be positive: goods will be produced with lower input and capital per unit of output worldwide. Moreover, as noted in Chapter II, FDI may have contributed to a considerable reallocation of resources between sectors. The relative importance of primary sectors in investment flows has been reduced significantly over recent decades, while service sectors have gained ground.

Analysts have suggested that this structural shift toward service-related FDI is positive environmentally (OECD 2001f; Gentry, 1998). These studies argue that newly industrialised countries have benefited from FDI to co-finance a shift in their production patterns toward the tertiary and light manufacturing sectors, hence contributing to an improvement in environmental quality. It should be noted, however, that not all elements of the service sector can be properly classified as environmentally “clean”.

Analysts have also addressed the question of whether structural changes in the global economy that favour service sectors in OECD countries may induce certain manufacturing activities to relocate from developed countries to emerging or developing economies; this could have negative environmental implications for the latter (O'Connor, 2000). While evidence suggests that such relocation has taken place, an assessment of its overall environmental impact on host countries is a matter for empirical studies. Finally, MNEs' entry into developing countries (particularly the poorer ones) is sometimes motivated by the availability of a few natural resources, and the ensuing pattern of production may differ significantly – and be more environmentally burdensome – from a more balanced growth scenario.

b) *Policy-induced effects*

Given that MNEs, like any other companies, may not have economic incentives to maximise their individual contributions to the host-country environment, host-country authorities may act through their choice, and enforcement, of environmental standards, to improve the environmental benefits of FDI.

To the extent that higher environmental standards would discourage investors, the authorities face a trade-off between the expected environmental benefits and the loss of other benefits due to lower FDI and lower growth. This goes to the heart of the discussion about “pollution havens” and a regulatory “race to the bottom” (see OECD, 2002b). According to this argument, if stricter regulations increase the costs of polluters, then the regulatory gap between mature and developing countries could make MNEs relocate their most polluting activities to the latter (pollution havens). If, moreover, host-country authorities give greater

weight to the economic benefits of such FDI than to the environmental burden, they may compete to attract investors by gradually lowering environmental – and social – standards, leading to a race to the bottom.

However, while there is some anecdotal evidence of MNEs relocating activities for environmental reasons, empirical studies find little evidence to suggest that “pollution havens” and “races to the bottom” are widespread in the world economy. Jaffe (1995) attributed this to the fact that MNEs based in OECD countries face environmental-compliance costs that appear minimal from the company viewpoint. Mani and Wheeler (1997), surveying inward FDI flows for a number of host countries, find no pattern between mature and developing economies in the allocation of pollution-intensive industries. Zarsky (1999), synthesising the results of several empirical studies, finds that differences in environmental standards and abatement costs have not made a significant difference in firms’ location decisions. This study does conclude, however, that to the extent that the environmental performance of MNEs in developing countries is somewhat better than that of local enterprises, this is attributable almost entirely to their larger size.

An additional point relates to the risk of a “regulatory chill”. If fears of discouraging FDI play a role for host-country authorities, even as they do not lead to an easing of regulatory standards, they could dissuade policy makers from attempting to upgrade and tighten such standards. Whether this is presently a significant problem is difficult to establish empirically. However, Zarsky (*op. cit.*) cites evidence to the effect that companies (local and MNE affiliates) incrementally improve their environmental performance in many parts of the world, primarily in response to effective national regulation or local community pressure, which would seem to speak against the regulatory freeze hypothesis.

c) *An empirical illustration*

To further investigate the complexities of the interaction between FDI and pollution a simple empirical model has been estimated for 14 developing countries chosen on the basis of data availability (Algeria, Chile, Colombia, India, Indonesia, Ivory Coast, Kenya, Malaysia, Mexico, Morocco, Nigeria, Pakistan, Thailand, Venezuela). As an indicator for pollution data, CO₂ emissions per capita (variable name: CO2) were used. In order to capture the scale effect, real domestic GDP per capital was included in the model (variable name: GDP). As an indicator of the magnitude of structural effects in the host economy, an approximation of domestic fixed capital stock was included (real cumulated gross fixed capital formation: CAP). To capture changes in pollution patterns in response to shifts in energy prices, oil prices were included (Brent in national currency, corrected for inflation: POIL). Foreign corporate presence was approximated by means of real

cumulated FDI inflows (variable name: FDI).⁸ The following standard error-correction specification was chosen:⁹

$$\Delta\text{CO}_2 = \alpha_1\Delta\text{GDP} + \alpha_2\Delta\text{CAP} + \alpha_3\Delta\text{FDI} + \alpha_4\Delta\text{POIL} + \beta_1\text{CO}_{2,-1} + \beta_2\text{GDP}_{-1} + \beta_3\text{CAP}_{-1} + \beta_4\text{FDI}_{-1} + \beta_5\text{POIL}_{-1} + \beta_6$$

The estimation results do not produce unambiguous evidence about FDI's possible impact on host-country pollution. In four cases it was impossible to achieve economically meaningful and statistically significant estimates (Chile, Colombia, Ivory Coast, Kenya). In the cases where equation (1) yielded meaningful results, a modelling strategy was pursued of omitting insignificant variables until the point where further omissions lead to sharp drops in explanatory power. The outcome (Table IX.1) suggests that there is no one dominant orientation of the effects of FDI on host-country pollution.

As shown in the table, while stable relationships between pollution and economic variables are found for several countries, FDI is eliminated from the error-correction mechanism (which is the part of the equation that matters in the context of longer-term co-variation) or comes out as insignificant in five of the nine cases. In the remaining four country equations (India, Malaysia, Nigeria and Pakistan) FDI enters in significantly, but with an environmentally important effect on pollution in only two cases: positive in the case of Malaysia, negative in the case of Nigeria.

Overall, therefore, it must be concluded that available economy-wide data for pollution and economic factors do not lend themselves to firm conclusions about the environmental impact of FDI. Rather, it would appear that local factors (such as the degree of industrialisation, sectoral distribution of production and environmental policies) have an important and multifaceted influence on the degree to which FDI triggers scale, structural and technological effects on the local environment.

IX.2. The social dimension

While Chapter VI touched upon the social effects of inward FDI in the context of human capital formation, the potential impacts of evolving corporate practices on host-country social conditions have implications that go well beyond the organisation of production. Earnings and social conditions of the host-country labour force cannot be addressed in isolation; from the investors' viewpoint, efforts to raise labour standards amount to costs largely equivalent (except perhaps in terms of employee motivation) with higher wages.

Moreover, the improvement of corporate practices has the potential to improve the quality of life well beyond those employees directly concerned. It reduces poverty, improves the observance of core labour rights, promotes the emergence of the formal sector, and contributes to a more dynamic social environment in which change and improvement are more feasible.

Table IX.1. **Estimation results: Factors influencing CO₂ emissions**
t-values in parentheses

	Changes				Error correction						R ²
	ΔGDP	ΔCAP	ΔFDI	ΔPOIL	CO ₂ ₋₁	GDP ₋₁	CAP ₋₁	FDI ₋₁	POIL ₋₁	Constant	
Algeria	0.62 (1.92)	–	1.02 (3.95)	–0.24 (–3.25)	–0.93 (–5.25)	0.93 (3.38)	0.27 (3.06)	–	–0.26 (–3.76)	0.75 (0.04)	0.78
India	0.41 (2.33)	–	–0.05 (–1.44)	–	–0.66 (–3.85)	0.28 (1.54)	0.29 (3.76)	0.07 (3.08)	–	7.31 (0.82)	0.69
Malaysia	1.05 (3.07)	–	0.48 (2.42)	–	–1.78 (–9.65)	1.16 (3.25)	–0.33 (–3.30)	0.64 (7.05)	–	26.9 (1.70)	0.87
Mexico	0.56 (1.14)	–0.96 (–1.38)	–0.18 (–1.25)	–	–0.84 (–4.68)	1.77 (4.76)	–0.15 (–2.25)	–	–	–68.7 (–3.88)	0.70
Morocco	–	–	0.22 (4.52)	0.06 (3.29)	–0.50 (–3.71)	–	0.24 (3.46)	–0.02 (–1.38)	–	26.4 (3.77)	0.70
Nigeria	0.53 (2.14)	–	–	–	–0.84 (–3.45)	0.85 (3.44)	0.25 (2.35)	–0.25 (–2.73)	–	–14.8 (–0.40)	0.50
Pakistan	0.37 (1.34)	–	–	–	–1.23 (–5.77)	1.08 (4.56)	0.16 (2.17)	0.06 (3.87)	–	–9.53 (–1.34)	0.68
Thailand	0.61 (3.03)	–	–	–	–0.39 (–3.44)	0.98 (4.88)	–0.27 (–5.10)	–	–	–19.6 (–6.09)	0.91
Venezuela	–	–	–	–	–0.10 (–1.14)	0.63 (2.63)	0.28 (3.25)	–	–	–77.9 (–2.29)	0.69

Note: Annual data, 1970–96.

FDI has the potential to contribute to these improvements in two main ways, namely through its positive impact on host-country GDP and by disseminating some of the (generally higher) standards of industrial relations and remuneration from mature countries to the rest of the world. Regarding the former channel, the effect from higher growth may differ in the short run according to the host country's level of economic development. For example, where FDI serves to ease a funding constraint or contribute to financial stability (cases 1 and 2 in Chapter I), the effects on incomes and social indicators need not differ much from the effects of domestically financed investment. The impact of FDI on growth through higher factor productivity, however, could have important short-term distributional effects. The investing enterprises initially trigger much larger productivity increases in their affiliates than in the host-country business sector at large, which has the potential to increase wage inequality and unemployment gaps in the host economy. The time needed by the broader labour force to reap the wider benefits of foreign investment depends on the quality and flexibility of the host-country business sector and the functioning of the labour market.

Second, MNEs may have the potential and the incentives to contribute more toward social concerns, and pay higher wages, than domestic enterprises in an otherwise identical position. As for the economic potential, the MNE-wide synergies that are found to be particularly pertinent in sectors with economies of scale (Chapter VIII) may boost per-unit profitability beyond what a purely domestic company can achieve. MNEs have an incentive to impart some of this gain on their local staff, whether in remuneration or improved work conditions, *inter alia* to limit the loss of qualified labour to other enterprises. For example, a recent survey of employer satisfaction in Chile indicated that the most popular Chilean companies are affiliates of MNEs. Respondents saw them as paying higher wages and providing more job training (Capital, 2001).

Moreover, especially when operating in environments with internationally low social and labour-market standards, MNEs are obliged increasingly – by their own corporate policies and by external constraints such as legal requirements and the risk of litigation in their home countries – to strive toward better industrial relations than their local competitors. When the social difference between home and host countries is large, MNEs that neglect social concerns in countries of operation are more likely to be the subject of pressure at home. In the case of regional integration within developing parts of the world – where the levels of incomes and social development among countries are somewhat more limited – there has been anecdotal evidence of companies attempting to “export social problems”.

However, even as MNE affiliates in developing countries may generally have the means and incentives to take host-country social concerns into account, it has been argued that they contribute to cementing a social structure in the host country that could be socially sub-optimal. A country with particularly low wages and

weak social protection may, for instance, attract large amounts of FDI into industries that rely on low-skilled and low-paid labour. Even if the foreign entrants bring short-term improvements to labour relationships, when the host-country industrial structure undergoes a durable shift in orientation, the longer-term impact on social development may not be positive. This, however, ignores the longer-term impact of changes in labour demand on relative wages, which is the main channel through which durable social progress is likely to materialise.

Finally, political constraints on host-country authorities could evolve as they compete to attract – or try to retain – foreign corporate presence. In more extreme cases, this could contribute to the creation of “low-wage havens” and a “social freeze” that are observationally equivalent to the environmental policy risks discussed in the previous section. The following section assesses some of the evidence from empirical studies of the social costs and benefits of FDI.

Empirical evidence

The areas in which foreign corporate presence may influence social conditions in host countries are legion. A few examples such as reduction of poverty, use of child labour and gender inequality are briefly surveyed below.

Poverty reduction. As suggested above, FDI as a potential source of increasing wage inequality has implications for a range of measures of relative poverty. However, as regards the economic development of relatively poor countries, it is arguably more meaningful to focus the analysis on the need to reduce poverty among the poorest members of the population, and hence on absolute measures of poverty. FDI may be instrumental in solving this problem in several ways. Here, and somewhat in contradiction of the “low-wage haven” argument, recent literature indicates that FDI may be an appropriate tool for poverty alleviation (and the pursuit of other social concerns) when targeted at labour-intensive industries (*e.g.* Aaron, 1999).

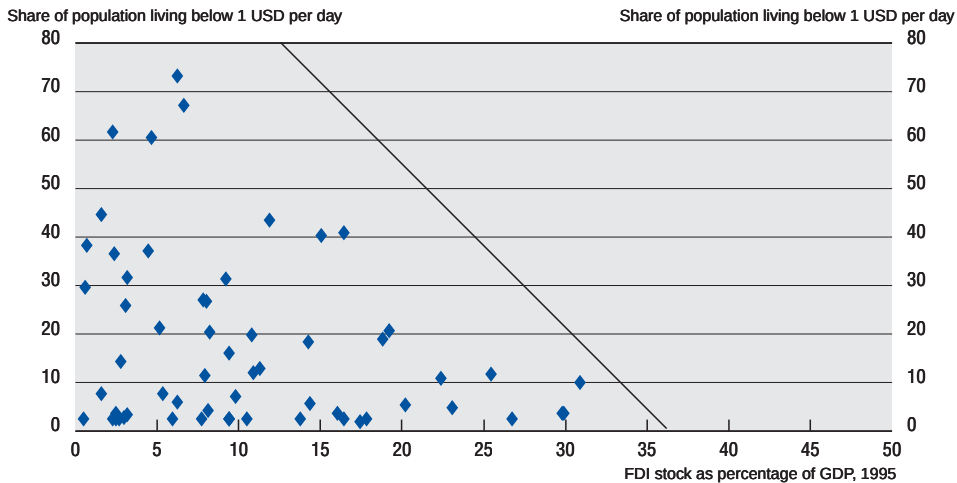
Roemer and Gugerty (1997) provided a comprehensive documentation of the linkage between growth and poverty reduction in developing countries. Analysing data from 26 developing countries in different periods, this study finds that a 10% increase in the growth rate of GDP produces an equivalent 10% increase in the incomes of the poorest 40% of the population. In other words, economic growth does not appear, on average, to change income differentials; this implies that the poorest segments of the population receive a significant share of the improvement. This study does not suggest that growth contributes to reducing inequality. This distributional goal is increasingly being stressed in the development context – for example in the context of the endorsement by the OECD Development Assistance Committee High-Level Meeting on 26 April 2001 of the *Guidelines on Poverty*

Reduction. The Guidelines stress the need to “empower the poor”, *inter alia* through an increasing scope for civil society interaction and freedom of association.

Finally, contrasting the poverty rates (the share of population living at an income below USD 1 per day) in 60 developing countries with the inward FDI stock in these countries provides an interesting insight¹⁰ (Figure IX.1). While there is no apparent linear link between poverty and inward FDI stock, the combination of poverty and FDI appears to be upward limited – the limit being illustrated by the added line in the figure. Put differently, there is no example of a country at the same time attracting an economically important amount of FDI and having an internationally serious poverty problem. Given the uncertainties about causality, this finding does not lend itself to firm conclusions about the effects of FDI on poverty reduction. Most likely, the dominant causal relationship works via the state of development of the host economy, which influences both the level of poverty and the attractiveness to FDI. Figure IX.1 does, however, seem to contradict the hypothesis that inward FDI should exert downward pressure on incomes in developing countries

Core labour standards. Several opposing factors influence MNEs’ strategies for dealing with the issue of core labour standards. While companies have an economic incentive to minimise labour costs, including costs in connection with the

Figure IX.1. Poverty and FDI level



Source: World Development Indicators.

adherence to standards, they also have an incentive to retain qualified staff and improve productivity through an adequate overall compensation package. The latter part of the argument relates positively to the degree of sophistication of production and the skill level of the staff. Companies domiciled in mature economies are increasingly concerned, moreover, about their reputation with the general public, their exposure to the economic risks associated with a loss of reputation, and the risk that unhealthy social relations may lead to instability in host countries.

The strongest empirical evidence that MNEs are not generally interested in violating core labour standards derives from studies of factors driving the allocation of FDI. Rodrik (1996) finds a strong positive relationship between FDI and workers' rights in developing countries, and Oman (2000) argues that "FDI location decisions are not significantly affected by labour standards *per se* – or more accurately low labour standards are not an attraction and can be a deterrent to most FDI". A recent study by the International Labour Organisation concluded that there is "no solid evidence in favour of the 'conventional wisdom' that foreign investors favour countries with weaker worker rights" (Kucera, 2001).

One core labour standard frequently discussed in the context of FDI is the one relating to *child labour*. MNEs domiciled in OECD countries generally have company rules in place (plus in many cases bodies of national legislation) to prevent

Figure IX.2. Reduction in child labour and change in inward FDI stock, 1980-2000



child labour in their affiliates, but non-trivial problems still concern these affiliates' supply chains within developing countries. This is particularly the case in low-skilled and labour-intensive productions such as textiles and apparel, where several industry initiatives in recent years have focussed on the need to impose behavioural standards on local suppliers.

The limited empirical evidence of the prevalence of child labour around the world does not allow sweeping conclusions. Figure IX.2 contrasts the changes in child labour and in inward FDI stocks from 1980-2000 in selected developing countries.¹¹ As appears from the figure, almost all observations are in the second quadrant, which means that two decades of increases in inward FDI stock have concurred with a generally lower incidence of child labour. It must, however, be recognised that there are no signs of a particularly strong reduction of child labour in the countries that have attracted the most FDI.

IX.3. Summing up

FDI has the potential to bring social and environmental benefits to the host economy through the dissemination of good practices and technologies within MNEs and through their subsequent spillovers to domestic enterprises. There is a risk, however, that foreign-owned enterprises could use FDI as a way of "exporting" productions that are no longer approved in their home countries. In this case, and especially where host-country authorities are keen to attract FDI, there would be a risk of a lowering or a freezing of regulatory standards. In actual fact, there is little empirical evidence to support the risk scenario:

- The direct environmental impact of FDI is generally found to be positive, at least where the environmental policies in host countries are adequate. There are, however, specific situations where this positive result may not occur, for instance in particular industries or sectors. Most importantly, adequate local capacities (as regards regulatory standards and the broader technological capabilities in the host country) are needed to allow host countries to reap the full environmental benefits of inward FDI.
- The technologies that are transferred to developing countries in connection with direct foreign investment tend to be more modern and environmentally "cleaner" than what is locally available. Moreover, positive externalities have been detected where local imitation, employment turnover and supply-chain requirements have led to more general environmental improvements in the host economy. However, there have been some instances of MNEs moving equipment that was deemed environmentally unsuitable in the home country to their affiliates in developing countries. While the usage of such inferior technology will usually not be in the better interest of a company, it is an example of an environmental risk associated with FDI.

- Empirical studies have found little support for the assertion that policy makers' efforts to attract FDI may lead to "pollution havens" or to a "race to the bottom". The possibility of "regulatory chill", however, is harder to refute for the lack of a counterfactual scenario. Apparently, the cost of environmental compliance is so limited (and the cost to a company's reputation of being seen to try to avoid them so great) that most MNEs allocate production to developing countries regardless of these countries' environmental regulation. The evidence in favour of this argument seems to depend positively on the wealth and the degree of environmental concerns in the MNEs' home countries.
- Empirical evidence of the social consequences of FDI is far from abundant. Overall, however, it lends support to the notion that foreign investment may help reduce poverty and improve social conditions. The general effects of FDI on growth (Chapter III) are essential, insofar as studies have found that higher incomes in developing countries generally benefit the poorest segments of the population proportionately. The beneficial effects of FDI on poverty reduction are potentially stronger when FDI is employed as a tool for developing labour-intensive industries, and they must be anchored in the adherence of MNEs to national labour law and internationally accepted labour standards.
- There is little evidence that foreign corporate presence in developing countries leads to a general deterioration of basic social values, such as the core labour standards. On the contrary, empirical studies have found a positive relationship between FDI and workers' rights. Low labour standards may in some cases even act as a deterrent to FDI, due to investors' concerns about their reputation elsewhere in the world and their fears of social unrest in the host country. However, in more specific contexts problems may arise. For example, it has been argued that the non-trivial role of EPZs in many developing countries could raise concerns regarding the respect for basic social values.

Notes

1. While recognising that the potential environmental effects of FDI go beyond mere pollution (*e.g.* waste production, depletion of species), the remainder of this chapter focuses on pollution and in practice uses the word interchangeably with environmental effects.
2. However, important methodological limitations apply, as environmental effects cannot be analysed in isolation from other related factors. For example, as pointed out by O'Connor (2000), trade affects the potential market for a country's output. In resource-intensive industries, for instance, trade facilitates a larger scale of resource extraction. And while the scale effect would tend to dominate, it could be offset by increase average efficiencies in the extraction and processing technologies.
3. This assumption is not unproblematic. During periods of sustained real declines in energy prices new technologies could actually be more polluting than old ones due to a lower degree of energy efficiency.
4. These effects are also associated with freer trade. In fact, the OECD (1995a) has suggested that 75% of international technology transfer arises from trade flows and 18% from investment flows.
5. For an overall discussion about technological transfer see UNCTAD (1999, Chapter VII), OECD (2001f, Chapter 6).
6. FDI may also, at its most basic, improve access to financial resources. A lack of external finance is sometimes at the heart of lacklustre environmental practices (OECD, 1995b). It has therefore been argued that free international capital flows, especially FDI, are an element in strategies toward environmental improvements in developing countries (Panayotou, 2000; Gentry, 1998).
7. For example, Ford Motors, after getting certified all its plants around the world under ISO 14001 (106 manufacturing facilities in 25 countries), will require certification by all suppliers. Specifically, Ford is requiring suppliers to certify at least one manufacturing site to ISO 14001 by the end of 2001 and all manufacturing sites shipping products to Ford by July 1, 2003 ("Supplier Certification" available at <http://www.ford.com>, visited 9/10/2001). ISO 14001 is an environmental standard under which independent auditors evaluate environmental processes and system performance.
8. In the interest of comparability all variables were rebased to index 1990 = 100.
9. The times series properties of the variables support such a formulation. Unit root tests indicate that the variables in practically all cases are integrated of order one. Johansen co-integration tests generally support the presence of one co-integrating vector, although in a couple of countries there could be more than one.

10. The countries included in the figure are the 71 for which the World Bank provides poverty indicators, except 11 member of OPEC and other countries that rely on the export of a few raw materials.
11. The countries included in the figure are Algeria, Angola, Bangladesh, Botswana, Brazil, Chile, China, Colombia, Ivory Coast, Egypt, India, Indonesia, Kenya, Malaysia, Mexico, Morocco, Nigeria, Pakistan, Thailand, Uganda and Venezuela. The changes 1980-90 and 1990-2000 are two separate data points. Data for the first of these periods are not available for all countries.

Chapter X

Selected Policies for Attracting and Reaping the Benefits of FDI: Country Experiences

Policies aimed at benefiting from FDI have two facets, namely policies to attract inward investment, and policies aimed at reaping the maximum benefits from foreign corporate presence. Attracting FDI generally relies on the broader enabling environment for investment in the host country (and, depending on national and local circumstances, specific incentives and other inducements to invest).

Some of the main elements of the enabling environment were spelt out in Chapter I. Authorities may, by pursuing an appropriate mix of policies, influence any of these – apart from factors such as natural resource endowment and size of domestic market¹ – thereby boosting their country's attractiveness to foreign investors. The relevant policy levers are summarised in the Overview; they include efforts to improve: macroeconomic stability; physical, financial and technological infrastructure; openness to international trade; non-discrimination; and transparency of the political and regulatory environment. In addition to making the host country more attractive to potential investors, most of these policies will also be instrumental in maximising the benefits of foreign corporate presence through their impact on the overall quality of the domestic business environment. The present chapter focuses on the importance of transparency, which is commonly identified – in its own right and in connection with efforts to combat corruption – as the single most important factor in attracting investment.

The policy options for reaping the benefits of foreign corporate presence also include generic policies to improve domestic infrastructure, technology and skills; specific policies for raising efficiency and promoting competition in the domestic business sector; and measures targeted at the activities of foreign-owned enterprises. The latter category includes, in particular, the imposition of performance requirements on foreign direct investors. The second section of this chapter reviews the evidence of the effectiveness of such measures, and raises the issue of whether their imposition may create a potentially damaging trade-off between authorities' efforts to attract FDI and their efforts to benefit from it.

X.1. Transparency

While there is no commonly agreed definition of transparency, most people would agree that a transparent business climate necessarily implies that economic agents must possess essential information about the environment in which they operate and that search costs and information asymmetries not place an undue burden on them. This, in turn, implies that in the FDI context there are two main sources of (lack of) transparency, namely the actions of host-country authorities, and the degree of opacity that prevails more generally in the host country's business sector.

a) *The importance of transparency*

The tentative definition of transparency proposed above suggests channels through which a lack of transparency may deter FDI and, by hampering the proper functioning of the host country's business sector, reduce the benefits of foreign corporate presence. First, it heightens the risk of operating in the host-country business environment, which either translates into higher risk premiums (in the case of the pricing of corporate assets, or discounts) or imposes additional information costs on enterprises. Second, and particularly important from the viewpoint of a new entrant, it raises the risk of information asymmetries that would in most cases benefit the market incumbents.

Transparency by itself will not create a motive for investing where market conditions do not justify it, but a lack of transparency will almost certainly discourage foreign investors. For example, frequent public complaints by investors of red tape, bureaucracy and arbitrary decisions all relate to a lack of transparency. If the anticipated returns are high enough, then the investor may be willing to bear the risk uncertainty, but in many developing countries this is not the case. Also, a lack of transparency may lead to adverse selection among foreign investors, if those most likely to invest into a non-transparent environment are companies that are themselves privy to privileged information, or who bank on their ability to influence the host-country public and corporate governance.

Transparency is not simply a market access question. In the context of foreign investment, transparency is also important for foreign firms already established in the market. Transparency also allows more freedom for manoeuvre for host governments in their policies towards foreign investors. Evidence presented below suggests that foreign investors are deterred more by opacity and unpredictability in government regulations than they are by the nature of the regulation itself. A more efficient and transparent regulatory structure allows host governments to pursue policies to benefit from FDI while avoiding the risk that their policy action will cause unnecessary fear and uncertainty among investors.

Increased transparency (whether as part of regulatory reform or not) makes for more efficient investment by both domestic and foreign firms. Prior consultation in the formulation of rules and greater accountability in decision-making will enhance the commitment of the investor to the host economy. Transparency raises capital inflows, and it encourages reinvestment by established firms. (Indeed, reinvested earnings make up an important share of total FDI figures.) This commitment will permit greater flexibility in the implementation of policies deemed to be in the national interest with less fear of decreased inflows of FDI as a result.

Finally, it should be recognised that, while raising transparency is in the long-term interest of every host country, it comes at a short-term cost to the authorities. At its simplest, this may amount to little more than “the price of good governance”, but the establishment of elaborate mechanisms for information sharing, monitoring and enforcement may represent a significant strain on the financial resources of authorities and the enterprise sector. While this applies equally to mature and developing countries, poorer nations generally will feel the burden of achieving a high level of transparency more acutely.

1) *Transparency of the host-country business environment*

As noted above, the importance of good governance founded on transparency in order to attract and benefit from foreign investment has its logical counterpart in the private sector in terms of a transparent system of corporate governance. Just as the government wishes to benefit from foreign capital and technology, so too might a local firm benefit from association with a foreign investor. Similarly, just as a lack of transparency in government policies and their implementation raise the risks of investment for a foreign firm, so too does a lack of corporate transparency.

Corporate transparency is particularly important when, as is often the case, the foreign investor wishes to enter a market by acquiring a local firm. But even when considering a greenfield site, the investor will require information on potential suppliers, customers and competitors. The OECD survey of the investment environment in Russia demonstrates how the absence of good standards of corporate transparency deters investment.

“A lack of transparency [in standards] may make it difficult or impossible for potential investors to accurately identify the sources of influence and control on the behaviour of enterprises. In many cases, investors will want to have some information on the ownership and control of companies that are important competitors, suppliers and customers in the market in question” (OECD, 2001c).

2) *Transparency of government action*

The transparency of public governance arguably has a static, an intertemporal and a dynamic aspect. As for the former, the need to establish formal and rigorously enforced legal and regulatory frameworks as a prerequisite for transparency is commonly accepted, as is the notion that transparency needs to pervade every aspect of the administrative process governing FDI (*e.g.* approvals, regulation of established firms, dispute settlement and taxation).

The intertemporal aspect, which has been termed “*ex-ante* transparency”, relates to the degree of clarity that investors can obtain regarding future legal and regulatory changes. Indeed, transparency does not mean that policies cannot be changed, but it does imply that the corporate sector should be given access to as much information and prior consultation as the host country’s domestic political process should legitimately permit. A separate issue relates to the principle of non-discrimination; since locally owned enterprises often have better knowledge of the intentions of national policy makers, it is a particular challenge for host-country authorities to ensure that all parties have equal access to information.

As regards the dynamic aspect, transparency may act as a means by which regulations are improved. It imposes a discipline on governments and hence is an integral part of good governance and regulatory reform. The introduction of greater transparency provides a channel through which the effectiveness of policies can be judged. It allows for a review by interested parties and helps to point out redundant, inefficient or inconsistent regulations. By helping to achieve more efficient regulation, transparency ensures that the regulatory framework better fulfils the policy objectives set by government.

3) *Discrimination and corruption*

While transparency does not imply that host governments cannot favour local firms over foreign ones, it is only with an adequate degree of transparency that there can be a completely level playing field for investors. Those firms with preferential access to information or with the political power to influence unaccountable administrative decisions will gain an insuperable advantage over other firms. In most cases, these well-connected firms will be large local conglomerates, though major foreign investors can also sometimes influence decisions. Small firms, whether domestic or foreign, will almost always be at a disadvantage because they are less able to bear the extra costs of doing business in an opaque regulatory environment. Transparency also reduces the scope for special interests’ pleading and corruption. In a study of customs procedures in developing countries, it was observed that “systems and procedures appeared to have evolved to maximise the number of steps and approvals – to create as many opportunities as possible

for negotiation between traders and customs officials" (Cunningham (1996) as cited in Finger and Shuler, 2000).

As for corruption, by its very nature it cannot be transparent and thus a potential investor cannot assess accurately ex-ante its costs or the consequences of non-payment of bribes. A recent OECD report found that "cross-country data for 28 countries...demonstrated that the uncertainty bred by regulatory instability, of which corruption is only one element, adversely affects investment more than does corruption itself" (OECD, 2000a).

6) Transparency and FDI: country evidence

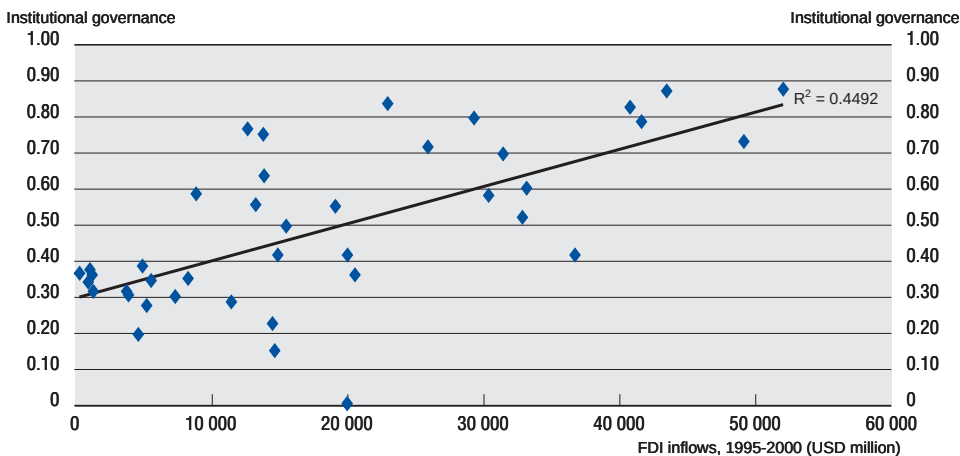
By its nature, transparency cannot be easily quantified, nor can it be isolated from other policy aspects that impinge on FDI. Owing to the links between the regulatory structure of a country and the transparency of its policies, the focus needs to be both on the nature of the rules applying to foreign investment and on the extent of transparency in their implementation.

Studies indicate that business environments often remain non-transparent even after governments have moved to enact clearer policies, simply because those measures are not actually implemented. However, except in cases where the host government maintains an outright prohibition on market access by foreign firms, the implementation of relevant legislation is likely to be more important in shaping investors' perceptions than is the actual legislation itself. National treatment, for instance, may be enshrined in legislation in many countries, but if foreign firms are effectively discouraged through discretionary decisions of the relevant national authorities, they will perceive such arbitrariness as being just as restrictive as an outright prohibition on foreign investment.

This point is brought out clearly in a major study of 55 developed and developing countries, which found that "better functioning legal systems and governance and better enforcement appear to be more important than legal origins per se in terms of their impact on development" (Chan-Lee and Ahn, 2001). This study, path-breaking in many respects, of the informational quality of financial systems and economic development, constructs indices for various aspects of transparency for 55 countries. Of particular relevance in the context of FDI is the measure of institutional governance² (Figure X.3).

There are wide variations in inflows even for countries with the same institutional governance rating – as one would expect given the multiplicity of factors behind the investment decision – but overall the relationship between the quality of institutional governance and the level of inflows is clear and positive. Thus, countries where the rule of law prevails and is enforceable, the judicial system is efficient, corruption is low and ownership is less concentrated, receive more investment.

Figure X.3. The relationship between inward FDI and the quality of institutional governance¹



1. Only those countries with cumulative inflows of less than \$60 billion since 1995 are considered so as to focus on the developing and small-country context.

Source: Based on data on institutional governance provided in Chan-Lee and Ahn (2001).

1) Individual country examples

One of the most interesting national cases relates to **China**, whose policies toward foreign direct investment have been quoted in literature both as examples of the virtues of raising transparency, and to point to areas where problems remain. Box X.1 provides a brief overview of some of the issues.

Russia arguably provides one of the clearest examples of a divergence between regulation and implementation. A recent OECD survey of the investment environment in Russia found that the otherwise adequate rules-based legal and regulatory environment was consistently being undermined by failures in implementation and enforcement.

There is no unified economic space, no “level playing field” for businesses in Russia, because of the multitude of administrative barriers and obstacles encountered by investors, particularly at regional level, often in contravention of federal legislation and regulation. As specific examples of unpredictable hurdles to be surmounted by investors at federal level could be mentioned

Box X.1. Chinese policy experiences

China's business environment has become far more transparent since Deng Xiaoping began his programme of reforming and opening up the Chinese economy at the end of 1978, but authorities' way of dealing with private enterprises is still largely characterised by relationship-based rather than rule-based decision-making.

Laws such as the Joint Venture Law were put in place hurriedly to accommodate new forms of business enterprise. At first these were sketchy, often amounting to no more than a few pages of general stipulations. Business legislation has since become increasingly complex and precise. Law courts, which had virtually ceased to function by the 1970s as a result of the total politicisation of law, began to develop in the 1980s as lawyers and judges were trained and appointed. However, the application of law in China remains under the control of communist party leaders at all levels and is better described as rule *by* law rather than the rule *of* law.

Regulations governing inward FDI exemplify this problem. Local authorities such as the Special Economic Zones in South China and the other open coastal areas have the power to approve the establishment of foreign-invested enterprises up to established maximal values, but the process of approval is not always wholly transparent. In the 1980s it was often necessary for a foreign company to spend several years building relationships with local officials before securing such approval, though this practice has (at least in the more developed regions) become less necessary in recent years. The line between central and local approval powers has also been more blurred in practice than the regulations suggest.

Secrecy has been replaced by openness, but although information is more widely available, it is not wholly reliable. Before reforms began, most of the country was closed to foreigners and economic statistics were largely classified top secret. The whole territory (with the usual exceptions) is now open to all, and the National Bureau of Statistics has been publishing heavy yearbooks replete with socio-economic statistics for two decades. Serious problems, however, beset major series such as annual GDP growth, unemployment and non-performing loan ratios.

China's entry into the WTO in December 2001 has increased the pressure for transparency, initially regarding laws and regulations specifically related to commitments to the country's WTO partners, but eventually extending inevitably to all matters pertaining to business done by foreign entities in China. Leaders like the Prime Minister, Zhu Rongji, who are determined to use foreign competition as a weapon in reforming the inefficient state-owned enterprises, will strive to ensure such transparency.

Ranged against them are protectionist voices arguing in favour of developing "national champions", or merely defend the living standards of those employed in over-manned sectors. Local officials, pressed by central government to remit a

Box X.1. **Chinese policy experiences** (*cont.*)

larger share of their tax revenue to the centre, often support such protectionism (much of it regional as well as national), and prefer to maintain freedom of action in, for example, levying local charges. Another major enemy of transparency at all levels of officialdom is corruption.

Great strides have been made towards transparency in recent years, but opacity will reign in many areas until the rule of law is firmly entrenched.

sudden withdrawal of frequencies from telecommunication companies, or sudden unavailability of previously posted railway freight tariffs, which served as a basis for feasibility calculations. At the regional level, examples abound in the form of unforeseen licensing or permission requirements, license fees in excess of what is legally required, tax payments that are negotiable rather than statutory, “voluntary” contributions to extra-budgetary funds, etc. In addition, the general burden of licensing and other policy-induced start-up difficulties at regional level is so onerous that firms specialising in helping new businesses to manage this process are becoming a new growth industry (OECD, 2001c).

These manifest problems with transparency are almost certainly one of the main reasons why Russia, despite having a large domestic market, abundant raw materials, an educated workforce and geographical proximity to Europe, does not rank even in the world's top 30 destinations for FDI.³ Significantly, both foreign and domestic investment are low in Russia, suggesting that local investors are as discouraged by the lack of transparency as are foreign ones.

India is another example of a country that offers many potential advantages to MNEs – a large market, widespread knowledge of English and a skilled workforce in certain sectors – and yet has not always been able to provide the degree of transparency sought by foreign investors. For example, while the government grants fast-track approval procedures in certain high-priority sectors, all other investors must go through the Foreign Investment Promotion Board and the Secretariat for Industrial Approvals. Since there are no prescribed ground rules in this latter case for deciding whether to admit an investor, approval becomes subject to negotiations and is ultimately at the government's discretion. This and numerous other sources of low transparency contribute to a widespread uncertainty about the country's commitment to open investment policies, and it arguably puts foreign companies at a disadvantage *vis-à-vis* their domestic competitors. India's

performance in attracting FDI cannot be ascribed exclusively to this opacity, since important restrictions and a considerable resistance to foreign investment still remain, but it is noteworthy that India ranks only 39th in terms of inflows over the past decade.

Another example is that of **Ukraine**. A recent OECD Investment Policy Review of Ukraine highlighted that stability and transparency were of more concern to investors than the actual level of regulation in the economy. A survey of 20 German investors in Ukraine ranked legal uncertainty first in terms of its disincentive potential, followed in third place by the government's failure to abide by its commitments. A similar survey of legal, accounting and consulting firms concluded that "substantive flaws in Ukraine's legislation are secondary to an overall climate of the lack of transparency and insecurity characterised by arbitrary application of continuously altering legislation with often retroactive force". Another survey ranked unstable and excessive regulations and ambiguity of the legal system first among investor concerns (OECD, 2001e).

c) An illustration: improving transparency in the approvals process

At its most basic, the problem with transparency in many developing countries relates to the process of approving FDI. Many more countries than the ones listed above permit market access on a case-by-case basis subject to criteria that are often less than clear. Even in a relatively liberal investment climate where countries compete actively for investment, the approval process can be cumbersome and non-transparent. A study of investment in Ghana found that, owing to the number of agencies involved and the number of back-and-forth steps, it would take an investor following all of the procedures a year and a half to two years to complete them (FIAS, 1997).

Multiple approvals and administrative discretion increase investor uncertainty. One way around this problem is the establishment of an investment agency with the power to assume ultimate responsibility for the approval procedure, subject to clear criteria. There is a limit to how much can be achieved in this way, however, since FDI involves a host of legal issues that cannot be covered by such an agency (*e.g.* building permits, customs certificates, visa procedures). Also, while many developing countries have established investment promotion agencies, not all have been successful, owing chiefly to a lack of political will to grant the agencies sufficient administrative freedom. An investment agency without decision-making power becomes simply one more stop rather than a one-stop-shop. In many cases, the investment promotion agency is a revamped approval authority that is still mired in its old habits of control, and even where an agency has authority over other public bodies, it is sometimes necessary to submit multiple applications.

Some developing countries (including India and Indonesia) operate automatic approvals for investment into non-restricted sectors, but it has been argued that many such systems are in reality simplified approvals with a time limit and relatively objective criteria (FIAS, 1997). On the other hand, stipulating time limits in deciding whether to approve an investment may in fact increase the efficiency of the approval process. For example, a study of the Philippines suggests that the imposition of a requirement that applications be processed within 20 days was instrumental in forcing the Board of Investment to streamline its approval process by reducing the scope for red tape (OECD, 1999a). Sweeping, and largely successful, efforts were undertaken by Uganda in the 1990s to improve the functioning of its investment agency along similar lines (UNCTAD/ICC, 2001).

The Economic Development Board (EDB) of **Singapore** is considered by many as serving as a best-practice case of transparency and efficiency. Backed by a strong political will of the government to attract foreign investment, the EDB has not had to share decision-making power with other agencies or ministries and has thus been able to present clear and consistent policies to prospective investors. While the EDB welcomes investors, its approach is not purely *laissez-faire*. Indeed, it has a tighter monitoring programme than that found in many other developing and emerging economies. Such monitoring has not discouraged investors, precisely because it is based on transparent and mutually agreed criteria which do not change over time (Wells and Wint, 1991).

d) Can FDI promote transparency?

The evidence presented above suggests that foreign investors respond favourably to increased transparency. Developing countries with more transparent regulations tend, on average, to receive more inward investment. But the relationship between transparency and FDI works not in only one direction: the presence of foreign firms can help to promote transparency in the host country. They may encourage more open government and best practices in corporate transparency and can help in the fight against corruption. By being open about their dealings (financial and otherwise) with host-country authorities, foreign affiliates in developing countries can encourage greater fiscal transparency, as well as reducing the scope for corruption.

Recent cases of the favourable role of foreign enterprises in this context include the example of an OECD-based mining company with operations in a region of Indonesia, which decided to divulge the amount of money it had paid in taxes. Similarly, two oil companies domiciled in OECD countries have disclosed payments made in Angola (in one case making “precise technical and financial information” available to the IMF and the World Bank). In the latter case, disclosure had to be undertaken in the face of dissatisfaction from the host country.

Foreign affiliates of MNEs may also contribute to increasing transparency within host countries' business sectors. For example, foreign-owned enterprises often publish more detailed financial accounts than required under local accounting rules, thus helping to promote the adoption of best practices by local firms. A recent ADB report highlights the notion that "experience shows that a prerequisite for the emergence of a sound regulatory environment is good accountancy standards...[which are] essential for transparency (as they act as an interface between rules and enforcement)" (Chan-Lee and Ahn, 2001). Such financial information also provides a useful reference for other potential investors.

Last, as home governments and non-governmental organisations have come to realise, foreign firms can also be used as tools to promote corporate responsibility and other behavioural standards in host countries. The OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions, for instance, can be instrumental in ensuring that foreign affiliates reduce rather than encourage the culture of corruption in many developing countries. The OECD Declaration on International Investment and Multinational Enterprises includes a range of further provisions concerning good corporate behaviour in host countries.

X.2. Performance requirements

Performance requirements are host government measures which affect the operations of foreign firms within the host economy including, but not limited to, trade-related investment measures. Although they can take different forms, the most important requirements relate to local content, joint ventures (or domestic equity participation), exports, technology and employment. All are designed to enhance the benefits and minimise the costs of the foreign MNE presence. The first four of these categories are reviewed below.

Export and local content requirements are intended in part to reduce the risk that inward investment leads to a deterioration of the current account. Moreover, export content requirements may be part of government efforts at boosting the long-term competitiveness of the host country's business sector, while local content requirements may have employment as a second motivation. The requirement that the foreign investor enter through a joint venture with a local firm has been justified as a way both of ensuring greater linkages between the investor and the host economy and of allowing local investors to appropriate some of the economic rents of the foreign firm. Mandatory technology transfer is seen as a way of promoting the development of an indigenous and competitive industry.

Little concrete evidence is available to shed light on the pervasiveness of performance requirements. The authoritative study most frequently quoted was carried out in the early 1980s by the US Department of Commerce and covers only

the affiliates of companies domiciled in the United States. At the time, most performance requirements were imposed by a small group of countries, which were nevertheless important destinations for United States FDI. Among the most restrictive sectors were transport equipment, particularly with regards to local content requirements, and electronic equipment and chemicals, mostly in terms of technology transfer requirements.

A source of partial evidence derives from the fact that, under the Trade-Related Investment Measures Agreement (TRIMs), certain types of performance requirements which affect trade are disallowed (*e.g.* export restrictions, trade- or foreign-exchange balancing requirements and local content obligations). WTO members are required to notify the Council for Trade in Goods of any non-conforming measures. The current notifications, which are summarised in Table X.1, relate mostly to local content. Although a number of countries have general horizontal restrictions, almost half of notifications relate specifically to the automotive sector. Only 26 countries listed any performance requirement not in conformity with the TRIMs agreement, and many of these have since been repealed. Only 10 members have requested an extension of the transition period before the measures are repealed and six of these had restrictions in the automotive sector. The prevalence of performance requirements which affect trade is therefore limited and shrinking.

Table X.1. **Local content and other restrictions notified to the WTO under the TRIMs agreement**

Restriction	Sector		
	Automotive	General	Other
Local content	Argentina Chile Ecuador Indonesia Malaysia Philippines South Africa Thailand Uruguay Venezuela	Costa Rica Dominican Republic Malaysia Pakistan Romania	Barbados Bolivia Colombia Cuba Cyprus Indonesia Peru Philippines Poland South Africa Thailand
Not specified or other restriction	Mexico	Egypt Nigeria Uganda	India

Source: UNCTAD.

a) *The effectiveness of performance requirements*

The effectiveness of policies should be assessed at two levels. First, do they encourage or discourage foreign investment? Second, do they achieve the development objectives for which they are intended? Governments wishing to impose requirements on investors need to strike a balance between attracting investment and maximising its benefit to the host economy.⁴

If investors have continued to invest in certain cases in spite of performance requirements, it is because they perceive such requirements as the *quid pro quo* for certain advantages offered by the host country. These “advantages” may basically take two forms: privileged access to host-country markets, raw materials or low-wage labour force; and host countries’ FDI incentives. It follows that countries that are either large, productive or wealthy have greater leeway than others in imposing performance requirements. In other words, the dissuasive impact of requirements is not constant across countries.

Similarly, not all performance requirements have the same potential impact on the investment decision: Their impact varies across sectors and according to the motive for the investment. In certain sectors, such as pharmaceuticals or electronics, where technology is the key to competitiveness, foreign investors are likely to resist strongly any effort by host governments to enhance leakages of technology to local firms (technology transfer or joint venture requirements). For investors wishing to export to the world market in sectors characterised by economies of scale, local content requirements which involve sub-scale production are likely to make the export location uncompetitive. For investors seeking access to the local market in sectors involving standardised technologies, performance requirements are likely to be less of an obstacle but also more pervasive.

1) *Local content*

Because of the cost and time involved in finding reliable local suppliers, foreign investors often begin by importing inputs into their production (*cf.* Chapter IV). Although the share of local production tends to increase over time, local content requirements, it is argued, can speed up the process. Such requirements essentially provide a degree of market protection to local suppliers and hence can be seen as an extension of infant-industry strategies. Local content rules therefore face much of the same criticism addressed to infant-industry protection: that protection creates dependency, with inefficient producers unable to compete in world markets. Such rules are particularly important in the automotive sector, as seen in Table X.1.

Although local content requirements are being phased out as part of the TRIMs agreement, some developing countries still support them. Indian officials have argued in the WTO context that domestic content is a necessary tool for

developing countries. According to this view, such requirements encourage domestic economic activities in raw materials and intermediate input sectors, as well as the upgrading of these activities over time; safeguard international liquidity; and ensure linkages between foreign and domestic firms (WTO, 1999).

A relevant case study is the Japanese participation the Indian Maruthi car project. Balasubramanyam (2001) mentions it as an example of how local content rules can serve development objectives. According to this study,

“... the Japanese firm contracts out supply of components to local suppliers, provides them with the blueprints and required know-how and stipulates that the price paid for the components would be reduced over a specified time period to that prevailing in international markets. This scheme nourishes the infant suppliers with all they need in order to grow up, but if they fail to do so within a reasonable period of time, they are allowed to die”.

Three points, however, need to be stressed. First, the relations between suppliers and the Japanese firm resemble those found in all markets where such firms operate, so it is not clear that local content requirements played a role beyond speeding up the process. Second, the Japanese investor was offered privileged access to the second most populous market in the world and hence might have been willing to countenance requirements that normally would not have been acceptable. Third, it remains to be seen whether the project has contributed to creating a viable, internationally competitive components industry.

Other country studies tend to discount the effectiveness of local content rules in improving the productivity of local firms. An early UN study found that the prolonged use of local content rules in markets with little competition from imports results in high cost and poor quality output from uncompetitive supplier industries. A more recent study of FDI in China found that, while local content rules did promote local suppliers, these firms tended to be inefficient and high-cost producers (Xia and Lu, 2001, cited in UNCTAD, 2001c). Where studies have found some element of success, host countries have tended either to have relatively high absorptive capacity for technology diffusion (Korea or Chinese Taipei) or large internal markets sufficient to allow for economies of scale (Brazil or Mexico).

These studies do not consider the dissuasive impact of such requirements on potential foreign investors. For investors wishing to supply the local market, such requirements do not necessarily provide a disincentive to invest, provided they expect to enjoy a degree of incipient monopoly in the host economy and hence have some scope for higher profits to offset higher costs. Foreign firms will have an incentive to seek out local suppliers in most cases anyway because of the lower costs of local inputs compared to imports, particularly the purchase of certain services. Even in these cases, local content rules should be phased in over time to allow the investor to seek out and foster local suppliers.

For export-oriented investors with an eye on the competitive world market, local content rules are likely to make most developing countries too costly as locations for production unless there already exists a competitive supplier industry or if foreign suppliers are also willing to locate in that market. For this reason, many developing countries exempt exporters from the usual performance.

2) *Export requirements*

The governments of most developing countries recognise the value of joining in the ongoing process of trade integration, and in harnessing foreign corporate presence as a means to this end. This traditionally was done by imposing some form of export requirement on affiliates. As this method is being phased out, many countries now offer direct incentives or some other advantage to firms that export a given portion of their output. This approach is at its most visible in EPZs, which offer numerous advantages not available to firms outside of the zone, but where, by definition, there is an export requirement.

More generally, most developing countries offer some form of inducements for foreign affiliates to export. As with other performance requirements, inducements range from market protection (as in Malaysia in the Proton case), to a greater ability to import free of tariffs (Thailand), to majority ownership (*e.g.* India and Malaysia) to other incentives. The impact of export requirements on host-country development is not independent of these inducements. As mentioned in Chapter IV, it has in many cases been notoriously difficult to generate linkages between EPZs and the local economy, partly because they are often located in separate customs territories. Similarly, incentives can sometimes constitute a high cost to the host government and amount to an implicit export subsidy for the affiliate.⁵

Finally, some studies have argued that failure of foreign-owned companies to export may sometimes reflect imperfections in the governance of MNEs that hold back the exports by affiliates even when they have an underlying cost advantage in doing so (*e.g.* Moran, 1998). If this is indeed the case, export performance requirements can play a crucial role in pushing MNEs to incorporate developing- and transition-economy sites into their international sourcing strategies. The study by Moran cites the cases of the automotive sectors in Mexico, Brazil and Thailand, and the petrochemicals and electronics sectors in a number of countries as evidence that such measures may be welfare-enhancing for both MNEs and host country.

However, and while not denying that these forces may have been at play in some cases, it is not obvious that they apply more generally. In particular, what works for one country will not work if all host governments pursue the same strategy in the same sector. Furthermore, except in the case of a general export

requirement, the host government is obliged to choose sectors to promote for export which could lead to a misallocation of resources within the economy.

3) *Technology transfer*

In an attempt to unbundle the FDI package and to increase spillovers to local firms, host governments have sometimes imposed mandatory technology-sharing requirements on affiliates or, as in India, promoted technology licensing rather than direct investment. Two country experiences often discussed in the context of this policy approach are those of Japan and Korea; numerous studies have discussed to what extent technology licensing achieved the desired ends in these cases.

This discussion does, however, need to be tempered by a few reservations. Certainly both Japan and Korea have attained technological competence and international competitiveness in a number of sectors, but in both countries there are sectors where such an approach failed. Success needs to be compared with what might have been achieved by an alternative approach. Moreover, the two countries offered high absorptive capacity for foreign technologies and relatively large markets with which to entice foreign MNEs. Significantly, they also ensured that local firms ultimately faced stiff competition to foster rapid upgrading.

A more relevant example is probably that of India (Box X.2); China has likewise required some technology transfer for foreign firms in its automotive industry. The conclusion emerging from the multitude of empirical studies of mandatory technology licensing – such as weak protection of intellectual property rights and joint venture requirements – is that such requirements generally lead MNEs to transfer older, if not outdated, technologies. In some cases they discourage investment.

4) *Joint venture requirements*

Many developing countries limit foreign equity participation in local enterprises for all but export-oriented investors. The motives are partly political (avoiding a popular backlash against foreign investors), and partly economic (securing a share in the rents from the investor for local investors; encouraging technology transfers). One recent survey of empirical studies on joint venture requirements concludes that “direct evidence is not promising on [their]... use to try to enhance technology transfer, penetrate international markets, or even expand and strengthen backward linkages to the domestic economy” (Moran, *op. cit.*). An early study found that “parent firms transferred technology to wholly owned subsidiaries in developing countries one-third faster, on average, than to joint ventures or licensees” (Mansfield and Romero, 1980). Other empirical studies have yielded similar results (Kokko and Blomström, 1995).

In a similar spirit to the joint venture obligation, governments sometimes require certain levels of local ownership (whether majority or minority) or a

Box X.2. **FDI and technology policy in India**

The Government of India has traditionally followed a policy designed to unbundle technology from FDI, using the full panoply of performance requirements. The emphasis wherever possible has been on technology licensing agreements rather than FDI, together with strict limits on royalty payments. In sectors where local capabilities have been deemed sufficient, no technology imports have been permitted in order to save on foreign exchange. At one stage, Indian companies were even permitted to sub-license such technology to other local firms. Where technology is considered relatively unsophisticated and stable, licensing has generally been mandated. For newer, more sophisticated technologies, where licensing is not a viable option, investment has been permitted (see Athreye and Kapur, 2001, for an overview).

Technology licensing has been complemented by policies in other areas to enhance technology spillovers. Beginning in the early 1970s, foreign equity participation was restricted to 40% in most cases, and intellectual property rights were curtailed. As a result of these policies, certain major multinational investors such as Coca Cola and IBM divested from the Indian Market in the late 1970s. Other investors sometimes found a way around the restrictions on equity participation by diluting and fragmenting local share ownership and indirectly by exerting influence through loans from the parent company at a time of foreign exchange shortages.

What has been the record of technology policies in promoting spillovers and improving local technological capacity? By offering technology licensing as the only method for foreign firms to tap into the large Indian market, the Government has managed to acquire certain technologies on its own terms and conditions, but there has been criticism with both the quantity and quality of that technology. One study characterised the record of Indian technology acquisition as “shallow and narrow” (UNCTAD, 1992). Furthermore, as the example of IBM demonstrates, some investors backed away from the Indian market as a result of performance requirements and weak intellectual property rights.

A few studies have nevertheless found evidence of positive spillovers where foreign firms have been allowed to set up affiliates (*e.g.* Basant and Fikkert, 1996, and Kathuria, 2000). Significantly, however, a recent review of productivity spillovers from technology transfer to Indian manufacturing firms found that spillovers are not an automatic consequence of a foreign firm's presence but depend instead largely on efforts by local firms to invest in R&D activities so as to decodify the spilled knowledge (Kathuria, 2000).

Technology transfer in India also appears to be a function of the degree of foreign equity participation in an enterprise. The Associated Chambers of Commerce and Industry stated that “a number of Indian companies have reported that the nature of technology transferred is related to the level of equity foreign companies are permitted” (UNCTAD, 1992). Majority foreign ownership is not just an issue for technology transfer: it can also affect the export performance of the affiliate. Majumdar and Chibber (1998) examine the link between ownership and export performance in India and find that majority foreign ownership of local affiliates is positively correlated with export performance.

phase-down of the foreign ownership share over time. Evidence of success here is equally hard to find. In Indonesia and the Philippines, both of which have employed phase-down regulations in the past, the experience has not been positive, with reduced investment and product- and process-technology flows and little, if any, enhancement of domestic capabilities (Conklin and Lecraw, 1997).

b) Policy alternatives

Notwithstanding the less-than-encouraging record for performance requirements in achieving host-government development objectives, governments are not helpless in influencing the balance of costs and benefits from FDI. It could even be argued that because of the greater global flows of FDI and the increased competition to attract MNEs, host-country government policies matter more than ever. Appropriate policies can both improve the chances of attracting international direct investment and increase the degree of technology transfer stemming from that investment.

The single most important step a host government can take is to improve the enabling environment for both domestic and foreign investment. The term “enabling environment” is often construed as a euphemism for *laissez-faire* economic policies, but while it clearly involves recourse to market mechanisms and the removal of restrictions, it also necessitates more active policies in other areas. An appropriate enabling environment, together with the transparent implementation of policies, provides greater scope for host governments to influence investor behaviour (see Overview).

Specific policies other than performance requirements may also be applied to facilitate spillovers to local enterprises, and to encourage linkages more generally. The former point is treated in some detail in Chapters V and VI. Policies aimed at facilitating spillovers were treated in great length by UNCTAD (2001d). Text Box X.3 provides an overview of the issues.

X.3. Summing up

Policies for boosting the general functioning of the domestic business sector and making a given country attractive as a locus for FDI are interrelated. For instance, the measures authorities may take to boost attractiveness by creating a more appropriate enabling environment generally have an even more significant impact on the national business climate of the host country. The relevant policy levers include efforts to improve: macroeconomic stability; physical, financial and technological infrastructure; openness to international trade; non-discrimination; and transparency of the host-country political and regulatory environment. In addition to making the host country more attractive to potential investors, most of these policies are instrumental in maximising the benefits of foreign corporate

Box X.3. Policies for promoting linkages

The most recent UNCTAD World Investment Report was devoted to the issue of promoting linkages between investors and the host economy. This report discusses how, in a competitive environment, investors have been found to develop linkages with local suppliers, how these linkages grow over time as the affiliate becomes more established, and how local governments can facilitate and accelerate this process.

One way to do this is through fiscal incentives such as exemptions from corporate income tax or value added tax when local inputs are used. The UNCTAD report cites examples in Malaysia, Indonesia and the Philippines. This approach has the benefit that it does not reduce the degree of competition in the market, but it can be costly for the host government – especially in cases where the linkages would have formed anyway. Governments can also intervene in the negotiations between the foreign investor and local suppliers in order to ensure that the latter do not receive less than could be expected, either because of the monopolistic position of the foreign buyer or because of a lack of experience in such negotiations. Both Korea and India have implemented policies in this area.

Governments can help to reduce the search costs involved in finding suppliers by providing information to investors, although the report cautions that “maintaining a reliable up-to-date broad-based database is difficult and costly and... unless it fulfils these criteria, its usefulness may be limited”. Investment agencies can also perform matchmaking services by bringing suppliers and investors together, acting as honest broker in negotiations and helping to resolve problems and disputes. Ireland, the Czech Republic, Thailand and Mexico, among others, have all practised such an approach to varying degrees.

Once supplier-buyer relations have been established, the government can also help to encourage technology transfer. Here, the Local Industry Upgrading Programme (LIUP) sponsored by the Economic Development Board (EDB) of Singapore is one notable and rare success among developing countries. The aim of the programme is to work with foreign investors to raise the efficiency, reliability and competitiveness of local suppliers in three phases: improvement of overall operations efficiency, such as product planning, inventory control, plant layout, financial and management control techniques; introduction and transfer of new products or processes to local enterprises; and joint product, process R&D with foreign affiliates as partners. To further this collaboration, the EDB contributes to the salary of a foreign firm's representative seconded to a local supplier. According to UNCTAD (2001d), in 1999 about 30 foreign investors and 11 large local firms and government agencies were partnering 670 local suppliers.

The World Investment Report is quick to concede, however, that “policies aimed only at inducing or encouraging foreign affiliates to transfer technology have generally not been very effective”. The LIUP works because it is in the self-interest of the foreign investor to develop wherever possible competitive suppliers. Indeed some of these Singaporean suppliers have even gone on to become part of the global network of the MNE. Such a programme can impose a heavy administrative burden on the host government, which might help to explain why “most specific linkage programmes are in countries with a significant FDI presence and a strong local supplier base”.

presence through their impact on the quality of the domestic business environment. The policy options for reaping the benefits of foreign corporate presence likewise include generic policies toward improving the domestic business environment, but in practice much attention has focused on targeted measures aimed at the activities of foreign-owned enterprises. The latter category includes, in particular, the imposition of performance requirements on foreign direct investors. A review of host-country policy options suggests the following conclusions:

- Among the elements of the enabling environment that can be influenced by policies, transparency is arguably the single most important one. Case studies suggest that companies may be willing, for example, to invest into countries with legal and regulatory frameworks that would not otherwise be considered as “investor friendly” provided they are able to obtain a reasonable degree of clarity about the operating environment. Conversely, there appear to be certain threshold levels for transparency beneath which business conditions become so opaque that virtually no investor is willing to enter, regardless of inducements. An important further transparency-related factor is the degree of social cohesion and stability of the host country. Absence thereof greatly adds to investors’ risk perception, and may spark reputational concerns among foreign enterprises.
- The need for transparency relates to both the action taken by authorities and to the broader business environment of the host country. Given the relative irreversibility of FDI, unnecessary uncertainties about legislative action and rules enforcement act as major impediments, by giving rise to risk premiums in general and by raising fears of discriminatory treatment. A non-transparent host-country business environment raises information costs, diverts corporate energies toward rent-seeking activities and may give rise to outright crime such as corruption. While this weighs down on the entire host-country business sector, it arguably acts as more of a discouragement to outsiders who are not privy to locally available information.
- The short-term costs to host-country authorities and enterprises of achieving a high level of transparency, while non-trivial, are tempered by the considerable longer-term advantages of maintaining a transparent national business environment. Home-country institutions and international organisations may assist the transparency-related efforts by host-country authorities through measures toward capacity building.
- FDI generally contributes to creating a more transparent environment. There are cases of foreign corporate presence encouraging more open government practices, raising corporate transparency and assisting in the fight against corruption. More generally, through observing commonly agreed standards such as the OECD Convention on Combating Bribery of

Foreign Public Officials and the Declaration on International Investment and Multinational Enterprises, MNEs can contribute to raising standards for corporate social responsibility in host countries. The evidence suggests that performance requirements are neither pervasive (except in certain sectors) nor particularly effective (apart from countries with the appropriate enabling environment). Although the counterfactual is always difficult to prove, it is nevertheless possible to argue that performance requirements sometimes reduce rather than enhance the potential benefits from FDI. Joint venture requirements or foreign ownership limitations can discourage potential investors (or, as in the Indian case, can cause certain major investors to divest) or can lead MNEs to transfer only obsolete or second-rate technologies to the affiliate so as to reduce the scope for leakages. The same can be said for technology transfer requirements.

- In addition to the built-in disincentive to transfer state-of-the-art product and process technology, performance requirements involve an offsetting inducement for the firm to invest, whether privileged access to the local market or an investment incentive. These inducements impose a cost on the local economy, not only in terms of higher prices to consumers, increased government outlays or forgone fiscal revenues, but also potentially lower levels of technology transferred between the parent and its affiliate.

One reason why many developing countries nevertheless defend performance requirements is that the ability to impose restrictions gives the host government some flexibility in negotiations with large investors, allowing it to extract concessions in return for incentives or access to the local market. Moreover, performance requirements such as local content rules represent a residual belief on the part of some governments in the ability of targeted industrial policy measures to achieve development objectives. However, such measures would appear to represent a poor second-best to working toward a more attractive enabling environment to attract FDI.

Notes

1. Moreover, by using the participation in regional and other free-trade arrangements to broaden the “relevant market”, a country may make itself attractive as a target for FDI.
2. The index is calculated as a weighted average of various estimates of the extent to which the rule of law prevails in each country, the efficiency of the judicial system, corruption, enforcement, ownership concentration (as a proxy for political obstacles to transparency), and finally shareholders’ and creditors’ rights. The indicator is a relative measure between 0 and 1, with Russia at the bottom and the United Kingdom at the top.
3. Russia attracted less than USD 20 billion worth of inward FDI between 1995 and 2000, well below European countries with only a fraction of its population.
4. Some investment may arguably have adverse welfare effects on the host economy, so a decrease in inflows as a result of a policy shift is not always *a priori* evidence that the new policy is worse than the one it replaced. However, this argument relates largely to very closed economies, and with the greater openness to trade over the past decade the positive link between inflows and benefits is likely to be stronger.
5. Incentives will be considered in a separate OECD project. See also OECD (2000b).

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