

# Chapter I

## Competitiveness, restructuring and FDI: an analytical framework

### 1.1 Introduction

Rapid technical progress is driving sweeping changes in the global economy. It is so broad and far-reaching that some see the emergence of a new technological paradigm transforming the productive system (Freeman and Perez, 1988). This paradigm offers a cornucopia of productive knowledge, with immense scope for raising incomes, employment and welfare. It is also an irresistible force for globalization. By reducing transportation and communication costs, it links economies in closer, tighter webs. It facilitates the integration of production under common ownership (of transnational corporations), allowing access to capital flows, world markets, skills and technology. Its productive potential induces Governments to liberalize trade and investment policies. This policy shift is assisted – sometimes induced – by the international community, which is fashioning new rules of the game to facilitate increased trade and capital flows, promote the enterprise sector and protect property rights.

The emerging system is changing the location of production and innovation and, thus, national patterns of comparative advantage. Moreover, technical progress is creating new forms of industrial organization and management and altering relations between productive and other sectors, in particular, research institutions, universities and the information transmission sector. All this calls for new skills and work specialization. There are many ways in which the new paradigm differs from previous paradigms. According to Esser et al. (1996, p. 1), it is characterized by a “new pattern of competition ... marked by knowledge- and technology-based competitive advantages; competitive advantages based on inherited factor endowments are losing their significance” and the “emergence of new organizational structures characterized by less hierarchic concepts... . The firms are embedded in dense technological and productive networks (industrial clusters, industrial districts, business alliances, long-term contractual arrangements with suppliers)”. The same authors go on to say: “Radical technical change gives rise to both a restructuring of old industries and a creation of new ones and to substitution processes that see traditional raw materials being edged out by new ones... In the political sphere, the new pattern of competition requires active policies aimed at shaping new industrial locations. Their formulation and implementation is based on cooperative approaches that focus on the know-how provided by firms, science and the public sector (policy networks), in this way complementing the policy mechanism.” The system is immensely productive. It is also enormously demanding (World Bank, 1999). Enterprises in developing countries are facing far more competitive environments in this fast-moving technological world. To survive and compete, they have to restructure their activities, facilities and skills. Restructuring needs to take place *within* firms, to raise their ability to compete, *across* firms to shift resources from those unable to compete to those that are, and *geographically*, from uncompetitive to competitive regions and countries.

This is a study of the impact of foreign direct investment (FDI) on industrial restructuring in selected industries in some developing countries. The focus is on how FDI affects the ability of economic actors – directly, foreign affiliates, and indirectly, local firms

or the economy at large – to compete better in a globalizing world, primarily by raising, upgrading and diversifying exports. It is, in brief, about the impact of transnational corporations (TNCs) on the industrial competitiveness of host countries, an issue of growing concern in the developing world.

## **1.2 Concerns with national competitiveness**

Governments have long worried about national competitiveness. Initially, this preoccupation was more manifest in the mature industrialized countries than in developing countries. The European Union, the Organisation for Economic Co-operation and Development (OECD), and UNCTAD have published several studies on this subject.<sup>1</sup> Many developed countries established high-level committees to deal with competitiveness, often reaching across ministerial divisions to devise appropriate policy. The United Kingdom Cabinet Office's White Paper on competitiveness (1996) expressed this concern succinctly:

“Improving competitiveness is central to raising the underlying rate of growth of the economy and enhancing living standards. Achieving this means removing the impediments to investment in machines, people and ideas and improving the efficiency with which resources are used throughout the economy, not just in those sectors directly involved in international trade. It means giving people the freedom to grasp new opportunities. It involves benchmarking all our activities against the best of our competitors to see how well we are doing compared to them and what we can learn from them.

The need to improve our competitiveness is not imposed by Government, but by changes in the world economy. Improving competitiveness is not about driving down living standards. It is about creating a high skills, high productivity and therefore high wage economy where enterprise can flourish and where we can find opportunities rather than threats in changes we cannot avoid” (p. 10).

With widespread liberalization, this concern has spread to policy makers in many developing countries: the restructuring of industries to face international competition, the upgrading of domestic technological and other capabilities, and their attractiveness as sites for production and investment by TNCs, have become a major focus of development policy.

The trend towards globalization of production, facilitated by falling transport and communications costs exposes countries to much greater competition than at any time in the

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<sup>1</sup> See, for instance, European Communities (1994), OECD (1994) and UNCTAD (1995). There are many studies of United States, European and Australian industrial competitiveness: see, among others, DTI (1998), Hughes (1993), Scott and Lodge (1985), CBI and LBS (1994), Competitiveness Policy Council (1993), Irish Competitiveness Council (1998), and Australian Business Foundation (1997).

past. The failure to keep up with changing technologies imposes far greater penalties. It is hardly surprising, then, that Governments of developing countries worry about how their industrial sectors will fare in this challenging world, and how to harness globalization as a force for upgrading and export growth rather than for devastation and de-industrialization.

Competitiveness is often confused, wrongly, with maintaining low wages. While low-cost labour provides an excellent launching pad for the initial export of simple manufactures by developing countries, countries cannot grow if their competitive edge remains low-wage, unskilled labour. True competitiveness requires that economies continue to produce more goods for international markets as wages rise and the phase of labour-intensive exports is complete.<sup>2</sup> Thus, competitiveness over time means upgrading simple labour-intensive activities to make higher-quality products that yield greater value-added, and so sustain higher wages. It means diversifying from these into more complex activities that offer a broader base for production and building capabilities. And it means deepening local technological and organizational skills over time to handle more advanced functions (say, from simple assembly to adaptation and improvement, new product design, innovation and basic research). The process of longer-term industrial restructuring should comprise all these elements if it is to lead to sustained benefits.

There is thus an important distinction to be drawn between *static* and *dynamic* competitiveness. Static competitiveness competes on the basis of received endowments such as low-cost labour or natural resources. These are the starting points for export growth, but they lose their edge as technologies change or incomes rise. In dynamic competitiveness the productive sector retains its edge in international markets as wages grow and new technologies and demand patterns emerge. Restructuring for industrial competitiveness means moving from static to dynamic sources of cost advantage in manufacturing industry, not cutting wages to retain a market position in labour-intensive exports. In essence, this means moving within activities to more complex products and processes and across activities from low to high value-added industries.

Restructuring entails that countries move up the technological ladder in both existing and new activities. This is not just a matter of adopting more capital-intensive technologies in response to rising wages (moving smoothly along a given production function), as textbook economics may suggest. This gives the impression that restructuring is an automatic and costless process of responding to market signals. This impression can be misleading, since there are complex learning processes involved, calling for technological effort, skill building, networking and using new organizational forms. These processes can be costly, prolonged and uncertain; in developing countries they tend to face widespread market and institutional failures. It may also involve moving backwards and forwards along the "value chain" of production, diversifying in related activities on the basis of existing competencies. In general, it necessitates the shift in the industrial structure from simple to complex activities, in particular those that offer greater scope for technological advance and more spillover benefits to related activities. Without such a structural shift, developing countries may just stay in a

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<sup>2</sup> Reinert (1995) used the case of Haiti, which has the lowest production cost for baseballs, to illustrate that this would not lead to Haiti being described overall as a very competitive economy.

low-growth path; it is only countries that manage a sustained structural transformation that achieve long-term competitive industrial growth.<sup>3</sup>

As noted, restructuring in the current context poses difficult challenges. Protected activities become exposed to extremely intense and demanding competition: as a consequence, industries are obliged to introduce new and often much larger-scale technologies. What is more, industries have to operate at "best practice" efficiency, often with new modes of organization. All this is very different from the post-war decades, when technological and managerial slack could be tolerated. New competitors or new technologies often overtake existing comparative advantages. Restructuring is thus no longer a discrete process of adapting to a once-for-all increase in competition or change in technology, but a continuous one of flexibly responding to very rapid change: it is developing the capacity to adapt continuously to technical change.

FDI is relevant to restructuring in several ways (see UNCTAD, 1995). As one of the main manifestations of globalization and a carrier of new technologies, it provides both opportunities and threats to developing host countries. The opportunities arise from the benefits that TNCs can bring in terms of financial, technological and human resources – the main ones are access to state-of-the-art technologies and to large markets overseas. The threats arise from the competitive pressures they exert on domestic enterprises and from their own strategies, for instance, by exploiting static advantages in host economies and not upgrading these dynamically, or by choosing to use intermediate inputs from abroad rather than from potential local suppliers. Much also depends on the nature of the activity and the endowments and policies of host countries.

### **1.3 Influences on competitiveness and restructuring**

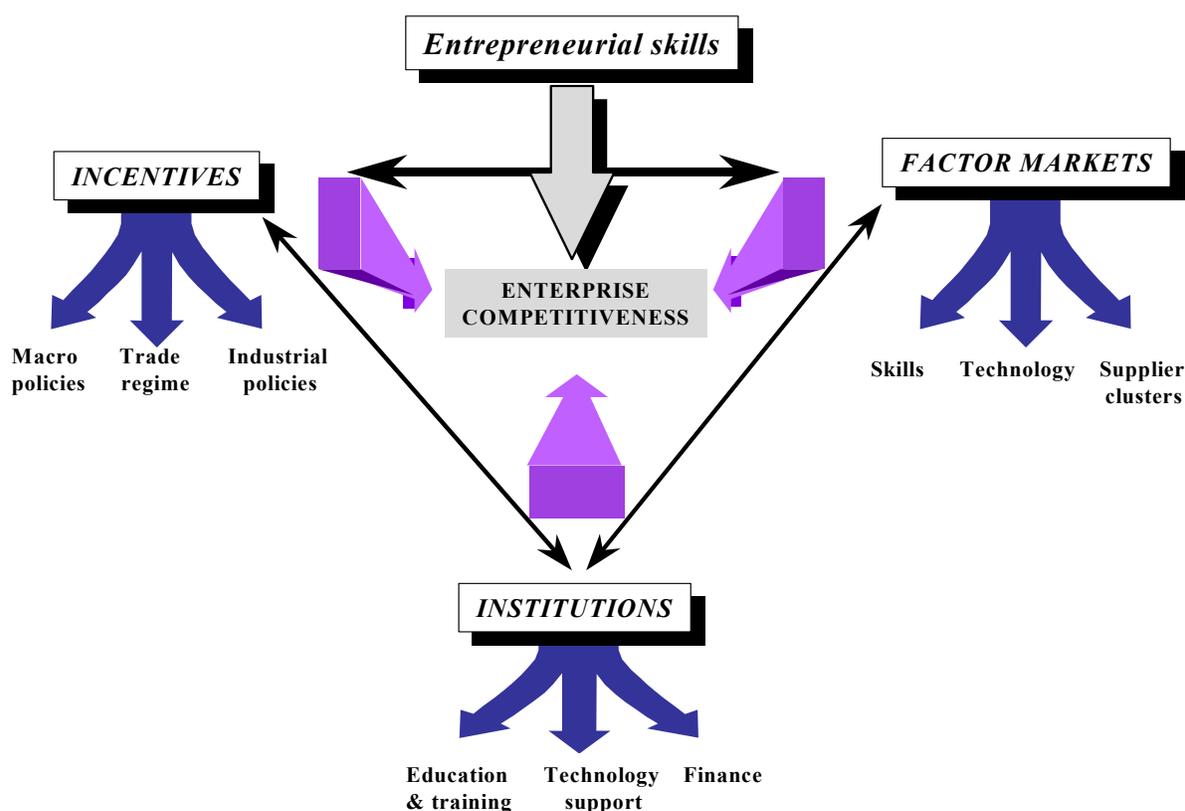
Industrial competitiveness is affected by a large number of factors. The ultimate agent for building competitiveness and undertaking industrial restructuring is the individual firm, which responds to signals from the product and factor markets surrounding it to obtain, master and adapt technology, improve upon it over time, and produce and market its products. The influences, at this level, on whether and how firms invest in building up their competitive capabilities can be simplified into three main sets – the incentive structure, the factor markets on which firms draw, and the institutions with which they interact (figure 1.1). Each of these has three sub-determinants (many more could be added but the purpose here is to provide a simple schema). There is a potential role for policy in improving competitiveness. Each "market" that the firm operates in can suffer from deficiencies and failures, giving the wrong signals, providing inadequate inputs or support or failing to respond at all to its needs. Governments can help by remedying these market failures and coordinating individual firms' efforts where necessary (see Lall, 1996, for a discussion of the theoretical issues involved).

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<sup>3</sup> On the possibility of such "multiple equilibria" and the need to shift across them, see Rodrik (1996) and Stiglitz (1996). On the historical analysis of the growth process as the move across specific activities, see Reinert (1995).

All this concerns competitiveness at the individual enterprise level. “Industrial restructuring” includes this but goes further, to cover the improvement of competitiveness at the industry, sector, regional and national level. The policy concerns are similar. Governments have to ensure that industrial activities as a whole face a combination of incentives that stimulate the adoption of relevant new technologies and support efforts to master, adapt and improve upon these technologies. They have to assist the factor markets that provide the finance, skills, information and marketing support that competing requires. They have to help in setting-up or improving the institutions that are necessary for these markets to function. And they have to coordinate investment decisions across activities where market forces by themselves are unable to provide adequate information (Stiglitz, 1996). In the long term, countries manage this process with different degrees of success, with different roles played by their Governments; however, the evidence suggests that recent successes, for instance in Asia, have involved a significant role for government policy.

**Figure 1. 1. Triangle of national competitiveness**



Source: UNCTAD.

The process of industrial restructuring has many components, involving elements of broad macroeconomic policy and infrastructure as well as those more specifically concerning firms themselves. This report focuses on the latter set, which are broken down into four components:

- physical investment;
- human capital investment;
- technology upgrading;
- improved supply linkages.

*Physical investment* is generally an important element of restructuring to the extent that new plant, equipment, buildings and so on are needed to improve competitiveness. Upgrading of productivity can take place without adding to investment, by improving skills, organizational routines or the use of existing technologies; however, more sustained improvements would require new facilities or technology with “embodied” components in the form of physical investment.

*Human capital investment* is also generally required in the industrial restructuring process. While some necessary skills can be hired directly from labour markets, many that are specific to the technologies being used have to be created in-house, by training and on-the-job learning. The need for skill upgrading rises with the complexity of new technologies that may be introduced. With the growing pace of technical change, moreover, firms have to invest increasingly in continuous re-training of their employees to keep abreast of their competitors. Human capital creation can mean both an increase in the total amount of training as well as a change in its content – traditional training methods or curricula may be inappropriate to restructuring needs in a liberalizing economy.

*Technology upgrading* is an essential component of restructuring for competitiveness. Such upgrading can take place with existing facilities and equipment, for instance by improving quality or maintenance, lowering costs, changing product design or speeding delivery; or it can involve purchasing new technologies (with new equipment and skills). The more radical the restructuring process, the greater the technological upgrading involved; however, the extent of local effort required can vary. Where technologies are highly embodied in the equipment (as with process industries), the upgrading may not require a great deal of local technological effort. In contrast, where there is a great deal of tacit knowledge and coordination involved (as with metal working), it may take long periods of learning and technological activity. In more advanced firms, technology upgrading may involve launching or increasing research and development (R&D) into new products and processes, since simply mastering existing technologies may not yield sufficient competitive advantage to cope with world-class competitors.

*Improved supply linkages* refer to raising productivity by establishing more or closer relations with local suppliers and subcontractors. This includes greater transfer of technology or skills to local suppliers to raise their quality and efficiency; the fostering of a network of suppliers who can provide the needs of just-in-time production; closer collaboration with vertically related firms in technology development; or strengthening relations with local consultants and technology institutions. The strengthening of the local supply base is an increasingly important part of building competitiveness in a globalizing world. It is necessary, not just to improve the quality and efficiency of production but also to raise local content, capture greater spillover benefits and promote small and medium-sized enterprises.

These four categories of restructuring activities are addressed in the case studies of this volume. TNCs influence each type of restructuring in economies where they establish affiliates. Where possible, and applicable the case studies provide evidence from interviews on the nature of this influence.

### 1.4 Globalization and shifting competitive advantages

The three most relevant features of the globalization process this study is concerned with are: (a) industrial relocation; (b) increased international competition in manufactured trade; and (c) the knitting together of the international economy through FDI.

The economic structure of industrialized countries has moved towards the services sector as competitiveness in many manufacturing industries has eroded with rising wages and changing technologies. Many industries have had to be pruned, restructured or closed down. By 1995, manufacturing contributed less than a third of GDP in industrial economies; at the same time, there was a significant relocation of industry to developing countries (UNIDO, 1996). The growth and pattern of international trade in manufactured products illustrates clearly the nature of the relocation process. Take, for instance, the structure of imports of the mature industrialized countries. In 1995, manufactures contributed over three-quarters of all OECD imports, up from 55 per cent in 1980.<sup>4</sup> In the period 1980-1995, 47 of the 50 most dynamic imported products were manufactures (at the SITC three-digit level). Of these, 32 were from six technologically advanced and dynamic industries such as computers, other electrical machinery, electronic equipment, chemicals, automotive products and non-electrical machinery. The 50 products also included less technologically advanced products such as garments, which, while technologically relatively stable, were undergoing a process of massive relocation from high- to low-wage countries.

The intensification of international competition is shown by changes in import market shares of the OECD countries (table 1.1). Over the period 1980-1995, the share of OECD imports of manufactures from developing countries as a whole practically doubled, from 10.8 to 19.7 per cent of the total, while industrialized countries lost market shares correspondingly.

**Table 1.1. Market shares in OECD imports of manufactures, 1980-1995**  
(Per cent)

Country/region	1980	1995	Percentage change 1995-1990
OECD countries	85.4	75.4	-12
Developing Asia	7.9	16.2	105
Latin America	2.1	3.4	67
Africa	1.3	0.8	- 41
Central and Eastern Europe	1.3	1.1	- 16
Total CAN data base	98.6	97.0	
Others	1.4	3.0	

*Source:* ECLAC, CANPLUS.

<sup>4</sup> Figures reached using the CANPLUS computer software on international competitiveness developed by the Economic Commission for Latin America and the Caribbean (ECLAC).

The largest gains took place in Asia and Latin America. In the six dynamic industries, Western Europe and North America both lost market shares (-11.9 and -3 per cent respectively), while Japan gained (2.2 per cent). In the developing world, the four “Asian tigers” took the largest increase in market share (3.7 per cent), followed by China (2.7 per cent), the four “new tigers” (2.4 per cent), and 25 Latin American countries (2.3 per cent).<sup>5</sup>

Who were the individual winners and losers? The winners and losers, defined as the 10 countries that gained or lost one-half of a percentage point or more of OECD imports of manufactures between 1980 and 1995, are shown in table 1.2. The winners are mainly Asian developing economies (China, Singapore, Malaysia, the Republic of Korea, Thailand, Taiwan Province of China and Indonesia), and a few others (Mexico and Spain). The “losers” are all developed OECD members (Germany, the United States of America, Belgium/Luxembourg, France, the United Kingdom, Italy, the Netherlands, Sweden and Switzerland). The countries with the largest market shares lost ground in industrial exports to a group of challengers from the developing world, mainly from Asia.<sup>6</sup>

The prime movers of the globalization process were TNCs. These companies are, in general, domestic firms that transformed into TNCs in the course of industrialization and, more recently, globalization. By 1998, some 60,000 TNCs with 500,000 foreign affiliates accounted for world sales of \$11 trillion and assets of almost \$15 trillion. FDI in that year came to \$640 billion, and it was highly concentrated. In most investing (“home”) countries, the top 25 investors controlled over one-half of the outward FDI stock. The 100 largest TNCs (by external assets) control one-fifth of the global foreign assets and one-third of TNC sales. These firms originate in a small group of industrialized countries: the United States (35 per cent), Japan (16 per cent), the United Kingdom (11 per cent), Germany (13 per cent), France (10 per cent), the Netherlands (7 per cent) and others (8 per cent). They concentrate on a few activities: automotive, petroleum/mining, electronics, chemicals, food products and others (UNCTAD, 1999a). Interestingly, the main home countries were losing world export market shares while their TNCs were expanding production overseas, expanding activities overseas and restructuring their domestic manufacturing.

Globalization has, of course, meant a rapid expansion of FDI flows. From an average annual outflow in the order of \$170 billion in 1987-1992, total FDI increased to over \$640 billion in 1998. As a proportion of gross domestic product (GDP), FDI more than doubled from 5 to 12 per cent, and of gross fixed capital formation from 4 to 8 per cent. A substantial share of FDI flows were for mergers and acquisitions rather than greenfield investments, especially in the industrialized countries, indicating the nature of the restructuring process in particular industries. FDI flows also changed in destination. Developing countries accounted for 17 per cent of inflows in 1985-1990, and 26 per cent in 1998. Within the developing world, FDI was heavily concentrated in Asia (about 51 per cent in 1998) and Latin America (43 per cent in 1998). The five principal recipients of FDI accounted for almost 60 per

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<sup>5</sup> The four “Asian tigers” are Hong Kong (China), Singapore, the Republic of Korea and Taiwan Province of China. The four “new tigers” are Indonesia, Malaysia, the Philippines and Thailand.

<sup>6</sup> This topic is taken up for the cases of developing Asia and Latin America in Mortimore, Bonifaz and Duarte de Oliveira (1997).

**Table 1.2. Winners and losers in world trade in manufactures, 1980-1995**  
(Per cent)

Economy	OECD import market shares			Manufactures as per cent of the country's exports to the OECD
	1980	1995	Change 1980-1995	
<b>10 winners</b>	<b>15.8</b>	<b>26.6</b>	<b>10.7</b>	<b>87</b>
China	0.5	4.3	3.8	88
Mexico	0.7	2.1	1.4	76
Singapore	0.5	1.5	1.0	92
Malaysia	0.4	1.3	0.9	79
Spain	1.4	2.1	0.7	77
Republic of Korea	1.5	2.2	0.7	93
Thailand	0.2	0.9	0.7	70
Taiwan Province of China	1.8	2.4	0.6	92
Indonesia	0.1	0.6	0.5	49
Japan	8.7	9.2	0.5	98
<b>9 losers</b>	<b>65.5</b>	<b>53.6</b>	<b>-11.8</b>	<b>82</b>
Germany	16.2	12.8	-3.3	89
United States	13.0	11.3	-1.7	81
Belgium/Luxembourg	5.3	3.8	-1.5	83
France	7.7	6.6	-1.1	79
United Kingdom	6.6	5.6	-1.0	80
Italy	6.3	5.4	-0.9	89
Netherlands	4.1	3.4	-0.7	63
Sweden	2.6	2.0	-0.6	85
Switzerland	3.0	2.4	-0.6	84

*Source:* ECLAC, based on the CANPLUS computer programme.

*Note:* Winners and losers are classified as having gained or lost market shares in OECD manufactures imports.

cent of all inflows to developing countries during 1998: China (27 per cent), Brazil (17 per cent), Singapore (4 per cent), Thailand (4 per cent) and Mexico (6 per cent). Thus, a significant part of industrial expansion by TNCs focused on a relatively small group of host countries, though others were also involved (for many of these even low levels of TNC participation by global standards meant significant changes in their industrial and export structures).

For most developing countries, integration into the production systems of TNCs took the form of foreign affiliates, in one out of three cases via the acquisition of local companies. For some developing countries with strong local enterprises, however, association with TNCs took the form of inter-firm agreements between local and foreign firms (through subcontracting, original equipment manufacture or joint ventures) or strategic partnerships (co-production, use of common components or modularization).

## **1.5 TNCs and industrial restructuring**

As noted above, TNCs can play an important role in industrial restructuring. By virtue of their size, technological prowess and internalized markets for skills, capital, technology and brands, they offer access to investible and human resources, technology and supply linkages. Moreover, in activities where their production networks dominate world trade, their presence can make it easier to enter markets and achieve competitiveness. In those activities where scale economies are important, TNCs can offer the resources to reach minimum efficient sizes by aiming production at export markets if domestic markets are insufficient to support economic plants. The international location and integration of TNC production facilities has been one of the main forces behind recent shifts in competitiveness and industrial restructuring.

However, direct TNC involvement is only one of several possible means of upgrading and restructuring industrial activities in developing countries. Each of the factors critical to competitiveness may be available from other sources, or from TNCs themselves (by non-equity-based contracts). Capital can be obtained through a variety of channels other than direct investment; technology can be purchased in non-FDI forms, created locally or imitated; skills can be generated locally or recruited directly. In fact, some economies with impressive industrial records (Japan, the Republic of Korea and Taiwan Province of China) have relied on domestic enterprises to drive industrial and technological growth. This required the Government to play an important role in guiding, coordinating and stimulating investment and factor market responses. The activities of other countries that relied on FDI have also not been of a laissez-faire nature. The best industrial performers in this group were those where Governments adopted policies to target, guide and utilize TNCs rather than wait passively for market forces to guide investment. TNCs would invest in new technologies and upgrade their affiliates because the local skill, technology and institutional base was improving sufficiently to make these new activities and functions viable.

Industrial restructuring is thus the outcome of several factors. Given the initial level of industrial development (and assuming sound macroeconomic and investment policies), it results from the interplay of TNC activity and strategies with host country public policies on trade, investment, factor markets and institutions. The host country may adopt different strategies to using the resources offered by TNCs, ranging from a passive open-door approach, through proactively targeting and directing TNCs, to controlling their entry to build up local capabilities. In essence, the impact of TNCs depends on how their internalized transfers of capital, technology and skills build on, and in turn affect, the development of local markets and capabilities (Dunning, 1993). The effects may be positive or negative.

This section considers briefly the existing state of knowledge on the positive and negative effects of FDI on developing host countries.<sup>7</sup> Not all the issues raised here were investigated in the country studies presented in this volume, but the discussion is designed to “set the stage”.

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<sup>7</sup> For a comprehensive analysis, see UNCTAD (1999a).

### *1.5.1 TNCs and product markets*

What effects do TNCs have on trade, competition and export performance in the host country? Trade and competition policies of host economies interact with FDI. The policy framework affects the entry and composition of foreign investments. Foreign investors in turn influence the policy regime. The presence of globally integrated TNCs can induce governments to liberalize more readily, and to open up inward-looking economies to import competition and export promotion. Much depends on the nature and strategies of the TNCs concerned. Those searching for low-cost locations to serve world markets, or processing local resources for international markets, are much more likely to press for liberal trade regimes than those that are aiming primarily at local markets. This applies particularly to large firms with globalized operations, which benefit from international integration of production and services. These are TNCs that are pursuing the deep or complex integration of their activities in host countries (UNCTAD, 1993). In a world that is rapidly opening up anyway, TNCs may appear to be a marginal direct influence. However, their indirect impact, as the engines of globalization, is likely to be very strong – host countries look to TNCs to ease their liberalized economies into international activity.

TNCs also affect the domestic market structure. The beneficial impact is that new entry, in particular of efficient firms, raises the intensity of competition and forces incumbents to improve or exit. The competitive spur that TNCs provide is one of their most important advantages to previously sheltered industrial structures. However, the impact of large affiliates (backed by the resources of their parent firms) on local market structures and enterprises has long been debated. It is feared that TNCs, with their financial and other competitive advantages, may use aggressive entry tactics, cause growing market concentration and stifle local entrepreneurship. In many host economies, especially those with small domestic markets, FDI is in fact often associated with higher levels of concentration. However, it is premature to draw definite conclusions from this. The rise in concentration may reflect the realization of scale economies rather than anti-competitive behaviour by TNCs. Moreover, concentrated domestic market structures in countries with open trade regimes and the possibility of foreign investment entry have a different economic implication than similar structures in relatively closed economies: markets are far more contestable in the former than in the latter. Nevertheless, predatory conduct always remains a risk – and calls for stringent competition policies. According to UNCTAD:

“... in a globalizing and liberalizing world economy, the number of actual or potential entrants into foreign markets increases. This gives rise to a greater potential for competition in markets regardless of their geographical scope. Entry barriers are less the outcome of government policies and more associated with costs and know-how or technological advances. Thus, despite the openness of the world economy to new competitors, entry barriers may lead to increased concentration (followed perhaps by increased market power). On balance, the effects of liberalization and globalization on market structure and competition depend substantially on industry characteristics influencing market

contestability. But in certain industries, especially those in which integrated production holds efficiency gains for firms, TNCs can play an important role in the process” (UNCTAD, 1997a, p. 179).

For that reason, UNCTAD has recommended that countries establish review procedures for certain mergers and acquisitions to ensure that they result in improved market performance, especially from an efficiency perspective (UNCTAD, 1997a; UNCTAD, 1999; UNCTAD, 2000).

What is the impact of a strong foreign presence on the development of local entrepreneurship? While TNCs can stimulate the growth of local suppliers and provide a competitive spur to local firms, Governments legitimately worry about whether an open-door policy will lead to advanced industries falling under foreign-owned control when some at least could remain in local hands. The argument is related to that for infant industries: given the high costs, risks and duration of building up competitive capabilities in advanced industries, domestic firms may not be able to develop without an initial period of protection from foreign entry. The “infant entrepreneur” argument may have a sound theoretical basis. Some developing countries have built up domestic enterprises in advanced activities by restricting direct foreign entry and subsidizing the growth of local firms. The Republic of Korea is a classical example of the use of selective trade and FDI interventions to develop their giant *chaebols*, some of which are among the leading TNCs from the developing world. However, the argument has also been misused to prop up inefficient domestic firms with close ties with policy makers, resulting in inefficient, incompetent production.

Are there any economic reasons to prefer domestic to foreign ownership of dynamic industries? There may be, if local firms are more prone to strike supply, technological and other linkages in their home economies than do foreign firms, and if the retention of corporate decision-making in the home country has benefits. In developed countries, TNCs tend to retain their most vital and technologically advanced functions in the home country, particularly in large countries like the United States (Porter, 1990). This clearly offers dynamic benefits to the home country and may deprive developing countries of an opportunity for more advanced R&D. But restricting foreign ownership in advanced industries may mean slower or more limited *access* to new technologies and markets. Local firms can gain access to new technologies by other means, including licensing them from TNCs, but licensing tends to become more difficult and expensive as technologies grow more advanced and as the firms become competitive threats to innovators. The promotion of local ownership in technologically dynamic industries requires that sufficient domestic skills and technological effort can be mustered to substitute for foreign licences. Not all developing countries can claim to meet this condition.

As far as export promotion is concerned, one of the main advantages that TNCs offer is the possibility of participation in their global supply networks and direct access to their sales channels and brand names. A significant and growing proportion of world trade, especially in sophisticated manufactures, takes place within TNCs, between different affiliates. In a large number of vertically integrated activities, TNC participation may be the only way for new

entrants to access export markets. In other activities, especially those with strong product differentiation, TNCs offer an avenue to overcome the entry barriers that can hold back exporters which lack established marketing outlets or brands.

However, TNCs may not always be more export-oriented than domestic firms. Much depends on the country and industry, the capabilities of local firms and the level of technology used in export activity. TNCs can increase exports substantially from host countries with FDI-friendly policies, outward-looking trade regimes and efficient labour and appropriate infrastructure. Their contribution is likely to be lower in simple assembly activities where local firms offer comparable levels of efficiency. For instance, a substantial proportion of clothing exports from the developing world comes from domestic enterprises subcontracting to foreign importers and retailers. The TNC contribution is likely to be greater in activities with advanced technologies or integrated production systems spread over different countries (by intra-firm trade). This is where they have the greatest strengths in terms of innovation, production know-how and skills, and internal markets they can coordinate efficiently. The most dynamic export item from developing countries in recent years has been electronics products. Much of this has come from assembly operations in South-East Asia, and more recently Mexico, as part of tightly-knit TNC operations where different functions are spread in line with costs and skills in different locations.

Developing countries can succeed in complex industrial exports without going through TNC networks if they are able to build the necessary indigenous base of technological capabilities. Even the early Asian newly industrializing economies (NIEs) relied on technologies imported or copied from TNCs, though, as noted, their own R&D became increasingly important as buying new technologies grew more difficult. Their exports depended heavily on original equipment manufacture (OEM) arrangements with TNCs. Under these arrangements they made electronics and other products to specifications provided by TNCs, which sold the products under their own brand names (Hobday, 1995). OEM arrangements gave TNCs greater flexibility and access to low-cost efficient suppliers; it gave the exporters access to new technology and saved them the costs of export marketing. However, OEM arrangements in advanced products have taken root only in countries with well developed local capabilities – in others, like Malaysia, similar products are exported by foreign affiliates. Not many developing countries have the technological base to replicate the autonomous export success of economies such as the Republic of Korea and Taiwan Province of China. Moreover, the new international rules of trade and investment make it more difficult for others to mount the kinds of strategies used by them. This suggests that much of the growth of sophisticated exports in the future will be situated in or around TNC systems – some of them headquartered in NIEs whose enterprises have built up advanced capabilities.

The benefits of TNC-driven export activity are highly concentrated. In general, the bulk of the developing world's manufactured exports come from a handful of countries. In 1996, just 12 economies accounted for over 90 per cent (Lall, 1998). These economies were China, the Republic of Korea, Taiwan Province of China, Singapore, Hong Kong (China), Malaysia, Indonesia, Thailand, the Philippines, India, Mexico and Brazil. In many of these, TNCs played significant export roles. TNCs do account for large proportions of exports from other developing countries, but the values involved are small. In many cases, TNC- manufactured

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exports are driven by the availability of low-cost labour. Some dynamic upgrading has certainly taken place, but not in all host countries: the ones that succeeded best are those where the Government undertook to raise the quality of factor inputs and to induce investors into more complex activities. In others, the technological level of TNC export activity has tended to stagnate. The case studies will highlight some of these differences.

### **1.5.2 Factor markets**

TNCs can benefit host countries by improving three vital ingredients of competitiveness: technology, local suppliers and skills.

*Technology:* The main benefit that developing host countries expect from TNCs is access to advanced technology and their ability to implement new technologies effectively (with the entire package of skills, capital and marketing that makes them commercially viable). With the rising costs and scale of frontier innovation and the growth of strategic alliances in high-tech activities, it is becoming increasingly difficult in many activities to obtain new technologies without direct participation by TNCs. Moreover, with the growing liberalization of FDI regimes, the rising cost of innovation is leading many TNCs towards greater internalization of technology transfer. In activities with economies of scale and the need to integrate production across many countries, even the deployment of less innovative technologies requires such participation. In general, FDI provides the fastest and most effective way to deploy new technologies in developing host countries. As the number of TNCs grows and their origins diversify, the range of technologies offered also increases. Growing competition among TNCs can improve the terms on which host countries can obtain technology, potentially strengthening the advantage of FDI as a source of technology transfer, if Governments use their bargaining power effectively.

However, there are two possible drawbacks of FDI technology transfer. First, TNCs tend to transfer the results of innovation but not the innovative capabilities, which are centralized in advanced industrialized countries, mainly in their home countries. This results in a truncation of the process of technology transfer, and can relegate developing host countries to lower levels of technological activity (even when their industrial capabilities have reached a level when, as in many NIEs, they are able to efficiently undertake advanced R&D work). There is certainly a powerful argument that developing countries that have been able to build up the most powerful innovative bases have restricted internalized technology transfer via TNCs precisely in order to allow national enterprises to develop their infant innovative capabilities.

The second possible drawback is that TNCs may transfer the technology that is appropriate to the static factor endowments of host economies and not their dynamic endowments. Thus, they may invest in simple assembly technologies and move on to lower-cost locations when wages rise; it is not in their economic interest to invest in the creation of the high-level skills that would make more complex technologies viable. How widespread this practice is cannot be judged from the available evidence, since both cases have been observed. In some countries, rising wages have led to more capital-intensive processes while

in others investors have relocated elsewhere. Even in countries where processes have been upgraded, however, it is commonly found that little R&D activity is located in the host economy: the process of deepening technological capabilities is not clearly promoted by FDI.

*Domestic suppliers and linkages:* TNCs can be powerful sources of demand for the output of local suppliers and subcontractors, and can raise their capabilities and quality to international levels more effectively than links among domestic firms by transmitting technical or market information, skills, finance and other forms of assistance. Under import substitution regimes, many large countries forced the pace of local content by imposing time-bound rules, albeit not always efficiently. “Tigers” like the Republic of Korea and Taiwan Province of China, for example, did use them effectively by ensuring that supplier capabilities were able to match world levels and were geared to their export effort (Lall, 1996). However, local content provisions are now under the purview of the Uruguay Round Agreements. TNC linkages are being increasingly driven by pure cost and efficiency considerations. As a result, TNCs are changing their sourcing patterns and raising local content in countries that have capable supply clusters, while lowering it elsewhere. They are also often rationalizing regional patterns of sourcing to get fewer components from particular countries but on larger scales. This is leading to second-round effects on FDI patterns, as TNC home-country suppliers set up affiliates near their principals to meet this need for efficient local content.

The evidence suggests that TNCs have strong, but often very uneven, effects on the development of local suppliers in host countries. As with FDI flows themselves, there appears to be growing concentration on locations that are industrially advanced and able to meet the rigours of world competition without substantial additional cost and effort. Other locations may well receive FDI but may not gain much by way of local depth and linkages.

There are differences in terms of the organization of global production, for example, between producer-driven and buyer-driven networks. Producer-driven commodity chains are those in which large, usually transnational, corporations play central roles in coordinating production via backward and forward linkages. This is most characteristic of capital- and technology-intensive industries, such as automobiles, aircraft, semiconductors, and electrical machinery. Buyer-driven chains are those in which large retailers, brand-named merchandisers, and trading companies play a central role in shaping decentralized production in a variety of exporting countries, often developing countries. This pattern of industrialization is typical of relatively labour-intensive consumer goods, such as garments, footwear, toys and housewares (Gereffi and Koreniewicz, 1994).

There also appear to be differences by home country of the investor. Japanese investors have been particularly criticized for sticking with traditional suppliers (though this seems to be changing with greater international experience and under host government pressures). United States investors have been more amenable to developing local suppliers (though they are more likely to retain majority or full ownership of their own affiliates).

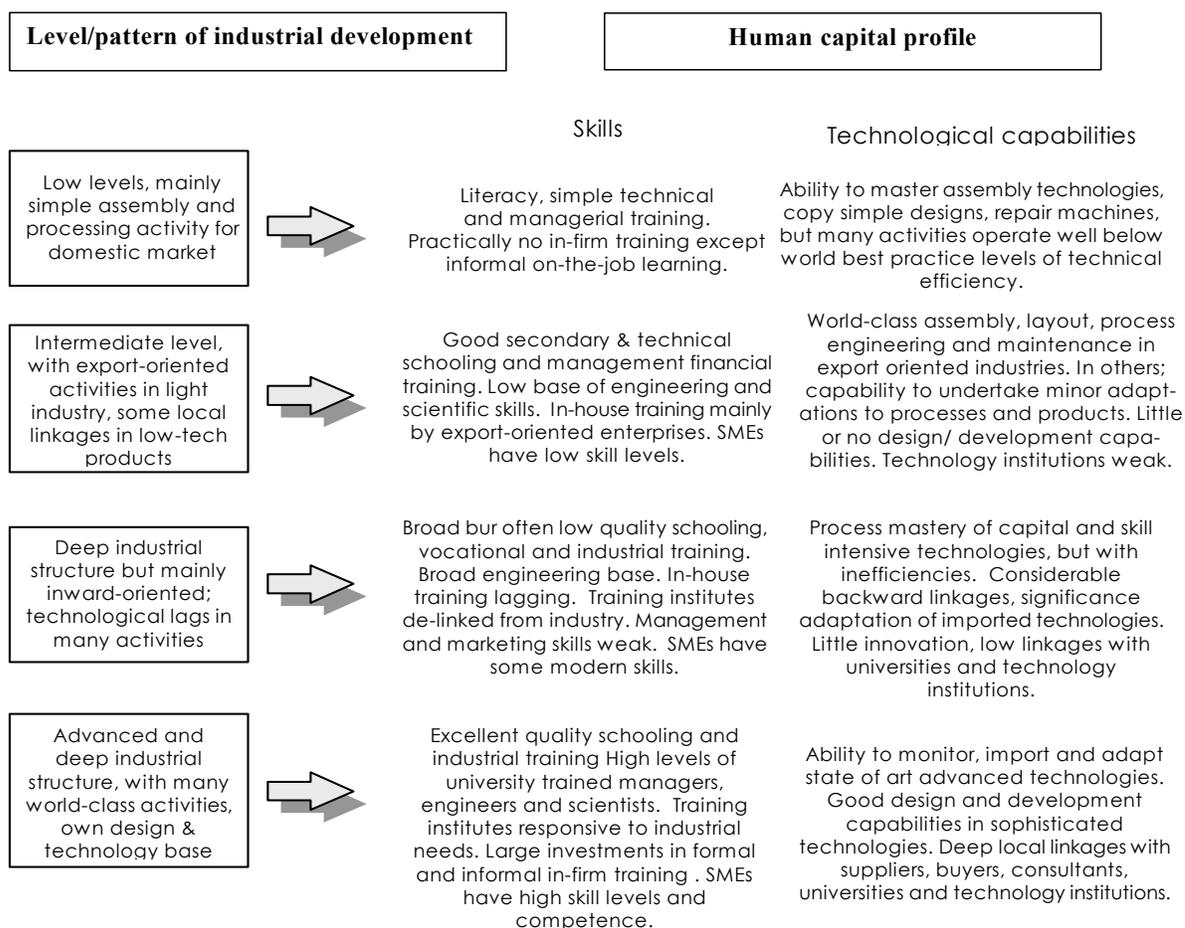
Governments have a significant role to play in terms of institutional support focusing on upgrading the capabilities of domestic suppliers and with regard to promotional

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programmes combining public and private resources to accelerate linkage development (FIAS, 1995).

*Skills:* The gaining of competitiveness in most new technologies requires a more highly skilled workforce at all levels of the enterprise. What is more, it needs different kinds of skills and work attitudes: “multi-skilling”, teamwork and flexibility, rather than simply people trained in traditional ways to do routine production line tasks. The pace of technological change also raises the need for constant retraining of the workforce, and many developed countries are now emphasizing the central role of “lifetime education” to maintain an efficiency and innovation edge. Of course, different economies have very different skill needs, as figure 1.2 shows. What is incontrovertible is, however, the need to invest in skills: *all* economies constantly need to upgrade their human capital stock to sustain industrial competitiveness.

**Figure 1.2. Human capital and industrial development patterns**



Source: UNCTAD.

The contribution of TNCs to skill development is potentially large. Many foreign affiliates in developing countries pay higher wages to employees than local counterparts, and invest more in training. They tend to be more aware of emerging trends in training and the need for new forms of skill creation; they are able to use state-of-the-art training materials and techniques; and their training is oriented to global markets (UNCTAD, 1994, 1999a). Several large TNCs have set up training facilities to ensure that their need for specialized skills is fully met. Examples include Intel and Matsushita in Malaysia. Such training can, in principle, have spillover benefits if, for example, employees leave, join local firms or set up their own facilities. Furthermore, the presence of advanced manufacturing TNCs also attracts a host of foreign investors in modern services, which create valuable new skills in finance, marketing, accounting, shipping and infrastructure.

Nevertheless, host countries cannot rely on TNCs to meet their broader or emerging skill needs. TNCs use the technologies that are appropriate to local education levels and train mainly to create efficient operators of such technologies – they tend not to invest in creating the skills needed for higher levels of technologies as these emerge. Such investments are generally more expensive and long-term, and here it is educational institutions that have to meet the needs. In other words, the upgrading of the general skill level and provision of high-level specialized training is something that host countries have to do for themselves. Indeed, such upgrading itself can be used to attract higher-quality inward FDI and to induce existing investors to move into more complex activities.<sup>8</sup> Moreover, TNCs from the developed world tend to concentrate in industries with more advanced technologies, leaving a wide range of simpler activities in which skill creation has to depend on local firms. TNCs from other developing countries do enter into simple labour-intensive activities, but these tend not to invest heavily in training. In essence, industrial enterprises, however attuned to training, cannot replace the education and training provided by the national education system, and this remains a vital area of host government policy.

Organizational change is as much a part of competitiveness today as technological progress proper; indeed, many new, flexible and information-based technologies could not be used efficiently without accompanying changes in organization and management. Enterprise hierarchies are tending to become “flatter”; there is much more interaction and cooperation between vertically linked firms in the value-added chain; networking and information-sharing are becoming more vital for achieving the full economies of specialization and innovation; flexible automation and just-in-time techniques require teamwork and multi-skilled workers.

As with skill creation, TNCs can make a valuable contribution to the upgrading of management and organization systems in host countries, with beneficial spillover effects on local firms (suppliers, buyers and competitors). This has been particularly noted for Japanese TNCs investing in other OECD countries, but it is also true of developing host countries where foreign investors have often triggered the adoption of modern management techniques.

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<sup>8</sup> On how the Government of Singapore used skill creation to induce upgrading by TNCs in the hard disk drive industry, see Wong (1997).

Nevertheless, the introduction of new organizational techniques has a life of its own. It is pursued independently by local firms, who learn about them overseas and use consultants to help them: the introduction of just-in-time, total quality control and other systems now has a momentum unrelated to FDI inflows. One important source of improving quality management has been the increasing use of ISO 9000 systems; ISO certification is increasingly becoming a *sine qua non* of all export activity to the developed world and is likely to spread to intra-developing country trade.

To sum up: this review confirms that it is very difficult to evaluate the effects of TNCs on host developing economies in general, and on industrial competitiveness and restructuring in particular. What is clear is that TNCs, as they lead a processes of technological advance and integration of production systems across countries, are bound to assume increasing importance in industrial development. What is also clear is that some of the restrictive FDI policies used by developing countries in the era of import-substitution were not conducive to their industrial growth and competitiveness; few analysts would disagree with the proposition that the greater openness to FDI observed today can enhance efficiency. Within this broad consensus, however, there is room for differences of opinion on how FDI can and should be used in the national interest. This debate is very different in spirit and content from that which took place some two decades ago, showing greater acknowledgement of the contributions that TNCs can make to host countries' economic development.

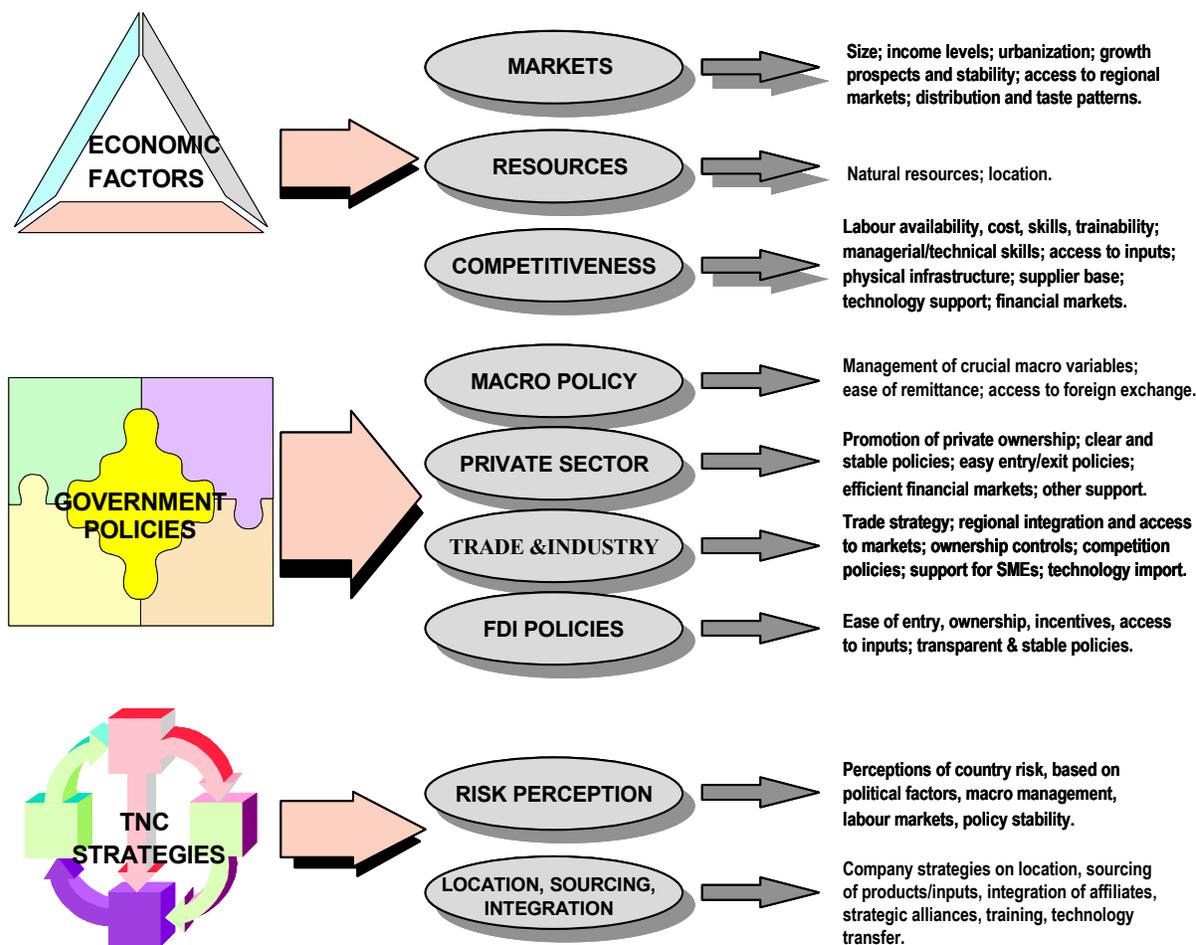
The main impact of TNCs on industrial competitiveness is related to their advanced technologies and skills, access to capital and final product markets, and participation in globalized systems of production and exchange. With the shrinking of economic space and economic liberalization, these become increasingly significant for industrialization in host developing countries. Moreover, the growing synergy between industry, services and infrastructure (particularly those concerning the generation and transmission of knowledge) and the rapidly increasing role of TNCs in these sectors, implies that participation in international economic life requires adaptation in policies and rules. Many local firms in developing countries are becoming transnational themselves, and are striking alliances with major players directly. There is a convergence over time of FDI policies across countries (though differences still exist in the interpretation and application of rules), and intensifying competition in attracting TNCs.

However, TNCs do not have a uniformly beneficial effect on developing host economies. Their role is context-specific, varying by industry and technology, and by the level of industrial and entrepreneurial development of the host country. These effects can be highly concentrated by both sector and destination. Therefore, Governments need to intervene in the FDI process, to maximize the beneficial impact on their economies, to induce better-quality inward investments, to foster the growth of national enterprises and capabilities, and to guard against potential negative impact. Thus, both theory and practice provide strong grounds for a proactive role for the host Government.

## 1.6 Attracting FDI

Figure 1.3 shows schematically the main economic determinants of FDI in developing countries. It also illustrates that there is a two-way relationship between FDI and competitiveness. While TNCs can improve host economy competitiveness, the competitiveness of the economy is also one of the most important factors in attracting more, and better-quality FDI. Thus, improvements in the competitiveness of the host economy are becoming an important tool for FDI promotion. With growing globalization, better information on economic conditions and a convergence of FDI incentives across host countries, the process of attracting FDI has become more professional and sophisticated. In the most effective FDI promotion agencies, efforts are increasingly targeted by activity and investor, with detailed follow-up services and surveys on investor perceptions and satisfaction (Wells and Wint, 1990). Incentives are shifting away from general front-loaded benefits such as across-the-board tax holidays to performance-based measures.

**Figure 1.3. Determinants of FDI in developing host countries**



Source: UNCTAD.

As part of this evolving approach, Governments are tailoring their factor markets and investment conditions to the needs of particular investors, backing this up by offering grants in addition to fiscal benefits (grants are used much more in the developed than the developing world). For instance, Ireland's success in attracting FDI into electronics has been due largely to its ability to create a skilled human resources base to allow TNCs to set up efficient world-class plants there, and to target the world's leading electronics firms. Singapore and Malaysia have used a similar approach. Costa Rica recently has experienced success with targeting Intel: it has attracted a major semiconductor assembly and testing plant to Latin America in the face of intense competition from larger, more industrialized countries (Spar, 1998). This illustrates the mutual feedback between FDI and competitiveness strategies.

### **1.7 TNC strategies**

The pattern, extent and impact of FDI on competitiveness depend not just on the circumstances and policies in host countries, but also on the strategies pursued by TNCs. There are differences between firms from a given home country, as well as some national differences in the attitudes of TNCs, and some of these show up in the country studies below. This section considers some recent general trends in TNC strategies that may affect industrial competitiveness. (For an elaboration, see UNCTAD, 1993.)

There is an emerging process of "deep integration" in TNC operations in sophisticated services, high-technology industries and in engineering activities with significant scale economies. This stands in contrast to traditional strategies of stand-alone affiliates and "simple integration", in which only part of the production chain is integrated (figure 1.4). Traditional strategies still predominate in many industries in which TNCs operate, and there are large differences between firms in their attitudes to integration; however, it is the emerging trends that are worth noting.

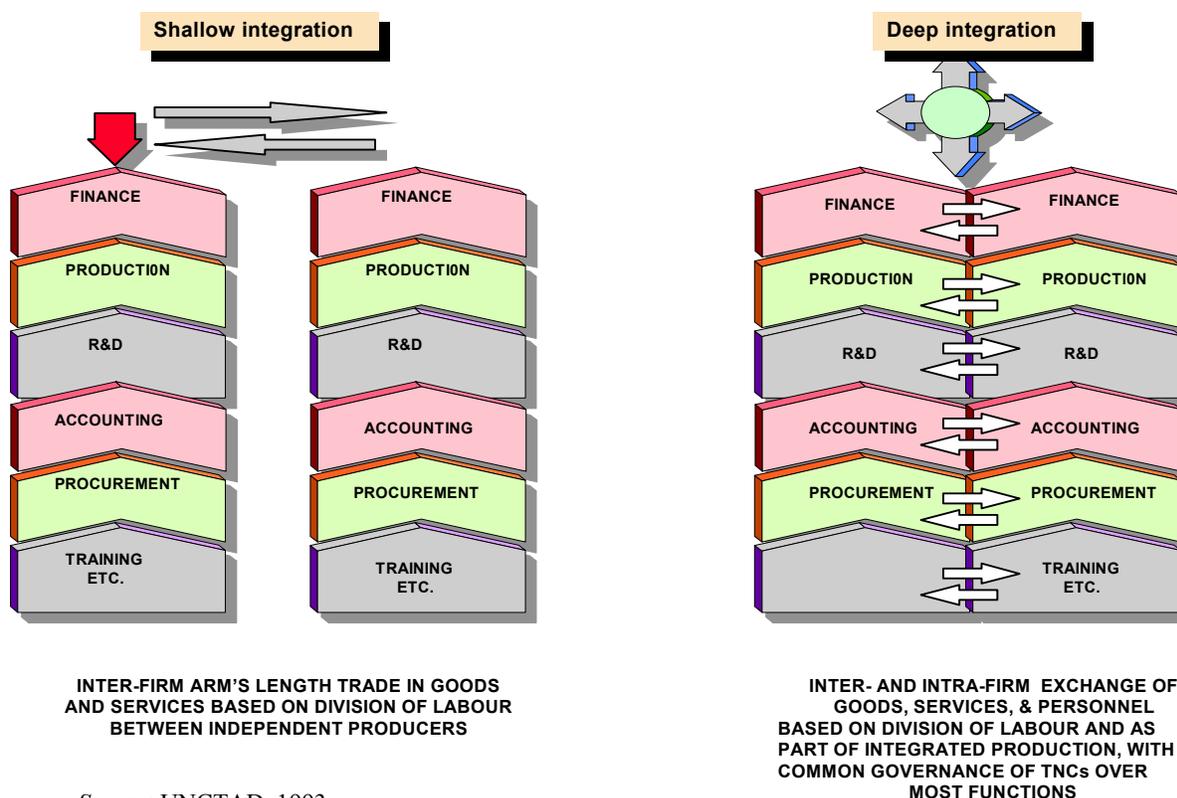
It can be argued that it is in the most dynamic industries that deep integration strategies are gaining at the expense of more traditional strategies (UNCTAD, 1993). There are many reasons for this, most of them to do with technological change and intensifying competition. This change may have sweeping and important implications for the international economy, at a time when many developing countries are choosing to participate more fully in trade and investment.

"Transnational corporations are pursuing complex integration strategies in response to competitive pressures in the expectation of greater efficiency. The overall size of the integrated international production system that is emerging is difficult to gauge, but a number of indications suggest the emergence of transnational corporations that are visibly global in their operations in industries such as automobiles, microelectronics, consumer electronics, household appliances, office machinery, instruments, pharmaceuticals and financial services... . In these industries, the value-added chain is, in whole or in part, geographically fragmented; but the individual functions of the chain, whether internalized or externalized, remain under the control and coordination of the major transnational corporations. In these

industries, the leading firms have — or strive to have — a direct presence in each of the three Triad members. Within those areas, production and distribution are being rationalised and restructured, particularly where, as in the case of the European Union, internal barriers to the flow of factors, as well as intermediate and final products, are being dismantled. In the process, the nature of the world economy is undergoing a profound change: from being a collection of independent national economies linked primarily through markets, the world economy is becoming, for the first time, an international production system, integrated increasingly through numerous parts of the value-added chain of production.”<sup>9</sup>

What are the implications of this emerging structure for the location and sourcing decisions of TNCs in developing countries? “The result is a broader range of opportunities for host countries to attract TNC activities, but also higher requirements in terms of human resources and infrastructure as well as open frameworks for trade and investment” (UNCTAD, 1993, p. 174). This can have favourable implications for the development of competitiveness in the host economies concerned.

**Figure 1.4. Types of integration between parent firms and affiliates of TNCs**



Source: UNCTAD, 1993.

<sup>9</sup> UNCTAD (1994, pp. 144-145). The “Triad” refers to three groupings of developed economies: the United States and Canada, Europe and Japan.

However, as with some of the other skill and technological benefits noted in the previous section, it is likely that relatively few developing countries will be involved in deep integration into TNC global networks. Most are not, and the unequal spreading of integration may render the weaker economies even more peripheral to the emerging system. In an open trade and investment system, the ability to attract TNC production, increase exports, create local linkages and foster greater training for local employees would depend on making all these profitable by providing efficient factor markets. To quote UNCTAD:

“Those developments make it more important than ever for developing countries to build up their own human and physical infrastructure. In addition to providing the basis for industrialization and development of the domestic economy, it would allow national enterprises to join up with transnational corporations on a more equal basis. It would raise the quality and sophistication of the FDI a host country could attract, and would strengthen the prospects for technology acquisition. It would also enable host developing countries to build up supplier capabilities that are sometimes a precondition for the location of multinational enterprise activities and which, moreover, add to the economic and technological spillovers from foreign affiliates. The building up of such capabilities has been an essential feature of developing countries, including those in Asia and Latin America, that have succeeded in restructuring both their international and domestic production sectors towards higher-value-added activities (UNCTAD, 1993, p. 177).

These trends in technology, investment, competitiveness and TNC strategies appear to be mutually reinforcing, leading to the uneven pattern of FDI flows that recent years have witnessed. The liberalization of FDI policies will certainly help the less-developed countries to attract TNCs, but by itself it is unlikely to even out and dynamize the process of foreign investment and competitiveness development.

TNC strategies have important implications for the case studies in this volume. It is possible, for instance, that affiliates in the same host country, or in different countries, are given different resources to upgrade their capabilities according to the perceptions and tactics of their parent firms. For this reason, the case studies collect and analyse information on relations between parent firms and affiliates and on how the latter fit into emerging global TNC strategies.

## **1.8 Methodology of case studies**

The case studies presented in this volume illustrate divergent outcomes of industrial restructuring. Each case study describes the background to the industry, notably the pattern of world competition and the role of TNCs. The studies consider the policy framework for FDI in the host country and provide information on inflows and the structure of foreign activity in industries.

They report the findings of interviews with firms in terms of the impact of TNC activity on industrial restructuring, exploring four main areas: physical investment, human capital investment, technology upgrading and supplier linkages. The presentations vary by country, depending on the information and data available. The objective of these case studies is to draw out pertinent policy implications for industrial restructuring and TNCs.

## 1.9 Choice of countries and industries

Eight countries were selected to illustrate the impact of TNCs on restructuring in industrial activities, and to reflect the differences observed among countries and regions:

- Chile
- Costa Rica
- Dominican Republic
- Malaysia
- Mexico
- Morocco
- Thailand
- Zimbabwe

The analysis is organized around the following four industries:

- **the colour TV industry**, analysed for Malaysia, Thailand and Mexico (chapter 3);
- **the automotive industry**, examined in Mexico, Argentina and Brazil, and Malaysia and Thailand (chapter 4);
- **the garment industries** in Costa Rica, the Dominican Republic and Morocco (chapter 5); and
- **natural resource-based industries** in Chile and Zimbabwe (chapter 6).

These industries were selected as they represent different types of technology:

- Relatively simple labour-intensive technologies (garments);
- Resource-based activities using a mixture of simple to complex technologies;
- Skill- and scale-intensive engineering technologies (automobiles); and
- R&D-, skill- and scale-intensive electronics technologies (TV receivers).

Several of the countries are active across the whole range of technologies, but the study focuses on special aspects of their industrial development. The spread of industries studied is fairly broad, so as to be of relevance to most developing countries. They also capture a range of technological aspects and TNC activity. The selected industries, with the exception of the natural resource-based ones, are among the most dynamic in world trade, and three – excepting garments – are those in which the 100 largest TNCs typically have significant presence. These industries are central to the globalization process, and the accelerated restructuring and intensified competition that accompany it.

The nature of TNC participation differs by activity, host country and the level of technology deployed in the countries. TNCs offer more to competitiveness and restructuring in some activities than in others, and the way that developing countries can take advantage of the resources offered by TNCs varies according to their initial endowments, strategies and location. The international strategies of TNCs vary within a given industry, according to their perceptions of the technological and competitive challenges facing them, and their reactions to the national policies and strategies of host countries. As a consequence, their impact on host developing countries differs largely, as do the policy implications for these countries. The four case studies aim to analyze these different implications; the final chapter synthesizes the implications of the case studies for policy.