CONCLUSIONS:

Benefiting from export competitiveness

Improving export competitiveness is important and challenging but it is not an end in itself. It is only a means to an end: the promotion of development. This raises the question of the benefits resulting from TNC-associated trade, beginning with improving the *trade balance*, and continuing with *upgrading* export operations and *sustaining* them over time. In each case, the issue is how host developing countries can most benefit from the assets that TNCs command. Much depends on the strategies pursued by TNCs within their international production systems, on the one hand, and local infrastructure and technological, institutional and supplier capabilities as well as the policies pursued by Governments, on the other.

A first approximation for assessing benefits and costs – although not the most important one – involves the *trade balance*. Even though export-oriented FDI helps to increase exports, foreign affiliates also import, and imports may increase significantly along with exports. In such cases, net foreign-exchange earnings may be negligible. Moreover, high export values may co-exist with low levels of local value added. This is typically the case, for example, when foreign affiliates mainly assemble imported components, reflecting the relatively unimportant role assigned to them in production systems.

Measuring the trade balance of export-oriented foreign affiliates as well as their value added, is fraught with difficulties. The data typically lump together export-oriented FDI and domestically-oriented FDI, making it difficult to determine the trade balance of export-oriented foreign affiliates separately. (Presumably, the trade balance of domestic-market-oriented FDI would be negative.) Furthermore, no systematic data exist on the composition of imports by foreign affiliates, which is relevant for understanding the implications for host economies. Scattered information suggests that the imports of parts and components were high in certain industries, such as telecommunications, electric machinery and vehicles (chapter VI), especially in countries that hosted labour-intensive activities of international production systems. Furthermore, in developing countries, one would expect that newly established affiliates (or affiliates that intend to expand their capacities) would typically need to import capital goods (just as many domestic firms do) in order to expand local productive capacities.[1] Such imports are of a different nature – more likely to be indispensable for the production of the goods or services in question to take place – than imports of components for assembly or other inputs (for which domestic alternatives may be available or capable of being developed), yet both types of imports would be counted simply as affiliate imports. Moreover, imports would be particularly high when production facilities are being set up and reliance on home-country or other foreign suppliers of inputs tends to be high, and then presumably decline (partly as a result of the growth of local linkages). The imports of foreign affiliates in China are an instructive example (although one that cannot necessarily be generalized in this respect), in that the data show that a substantial part of imports by foreign affiliates consists of capital goods (box VI.8). Although the trade balance effects of foreign affiliates' activities remain the same when the composition of imports is taken into account, the overall economic implications for China are different, as imports of capital goods add significantly to the capital stock and productive capacity of the country.

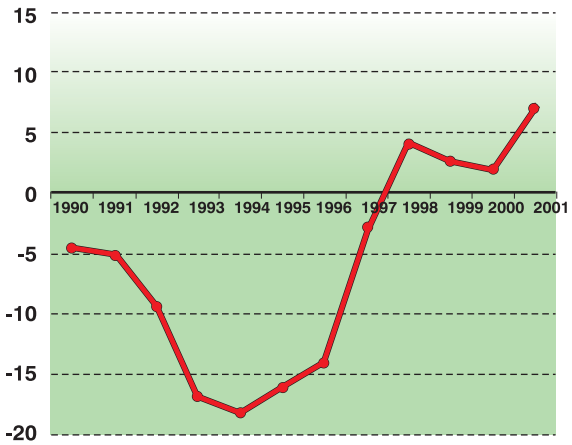
In any event, as far as the impact on a country's balance-of-payments position – often a major underlying concern for developing countries (although somewhat diminished in importance as countries' exchange-rate policies have become more flexible) – is concerned, focussing on the trade balance captures only a part of the impact of TNC activities. Additional factors that need to be taken into account are capital

Box VI.8. FDI and the trade balance: the case of China

The data on imports and exports by foreign affiliates in China show a trade deficit until 1997 and modest surpluses in more recent years (box figure 1). This may suggest that the trade-related benefits of FDI, with its high import content, are quite limited for China. The reality is, however, more complex.

Box figure VI.8.1. The trade balance of foreign affiliates in China, 1990-2001

(Billions of dollars)



Source: UNCTAD, based on data provided by MOFTEC.

An examination of the composition of foreign-affiliate imports reveals that a significant proportion consists of capital goods (i.e. machinery and related equipment) to create or expand and up-grade productive capacity in affiliates (including joint ventures). Indeed, the share of such imports was high during the 1992-1997 FDI boom (box figure 2).

Box figure VI.8.2. The share of imports of capital goods in total imports by foreign affiliates in China, 1990-2001

Source: UNCTAD, based on data provided by MOFTEC.

Source: UNCTAD.

inflows, the repatriation of earnings and capital, and other long-term impacts on the foreign-exchange earnings of foreign affiliates and associated local companies. Such an analysis of the balance-of-payments impact, which would also have to be weighed against their other (structural) effects on a country's development and welfare, falls outside the scope of the present report.[2]

The question of *upgrading* exports relates to the extent to which FDI involves higher technological content and domestic value added in host-country export production and a restructuring of exports from those based on static comparative advantage to those based on dynamic comparative advantage. The starting point is that specialization in different segments of international production systems may imply different benefits and competitive prospects. There is therefore some concern that specialization in labour-intensive segments, even of high-technology exports, may in some ways be undesirable as it may provide few benefits in training or technology and meagre spillovers to the local economy. Besides, the competitive edge of low-cost labour may disappear as wages rise. Still, labour-intensive exports are economically beneficial as long as local value added is positive at world prices, even if it does not rise at the same pace as the total value of exports. In fact, where surplus labour is unlikely to be used in more remunerative or economically desirable activities, it is in the interest of the countries concerned that it be used in production for export. Any theory of comparative advantage would suggest that such countries should specialize in simple labour-intensive processes at the beginning of their export drive; the question is whether they can subsequently upgrade and sustain their exports.

TNCs can contribute to the upgrading of a country's competitiveness by either investing in higher-value-added activities in industries in which they have not invested

before or by shifting, within an industry, from low-productivity, low-technology, labour-intensive activities to high-productivity, high-technology, knowledge-based ones.[3] The first of these processes is illustrated by a number of the winners discussed in this Part, especially those that experienced a notable shift – as a result of substantial new FDI inflows and new roles in supplier networks – from low to medium – to high-technology industries and sectors. Also rising significance is the growth of FDI-associated service exports from developing countries.

Intra-industry upgrading occurs in several ways. There is, first of all, the situation in which TNCs locate production facilities aimed at serving highly competitive national, regional and global markets in a developing country; many of the dynamic products identified in chapter VI fall into this category. TNCs need to upgrade these production facilities continually just to survive, let alone capture higher market shares for a given product. Intra-industry upgrading also involves adding or moving into higher-value products within the same industry. The success of countries such as China, Ireland, Malaysia, the Philippines and Singapore in upgrading the export competitiveness of their electronics industries is a case in point. Thus, for example, Motorola, in its own interest, substantially upgraded its facilities in China (box VI.9); Ireland convinced Intel to upgrade beyond assembling and testing to wafer fabrication; and Malaysia established long-term relationships with Matsushita Electric and Sony working with them to upgrade their export operations for colour televisions into regional manufacturing operations. But even where strong corporate self-interest is involved, government policy (often in close cooperation with TNCs) can play a role in encouraging upgrading, in particular by ensuring that the production environment allows such upgrading and that it extends to more value-added functions such as R&D. The case of Motorola in China, is a case in point.

Something similar tends to take place in the case of foreign affiliates hitherto protected by import barriers. Under pressure from trade liberalization and competition, many TNCs restructure – in their own interest – import-substitution activities into export-oriented operations, at least in countries in which a competitive base exists, or can be created. Some outstanding examples are the automotive industry in Mexico and the colour television industry in Malaysia and Thailand (UNCTAD, 2000e). Here, policies played an important role. In Mexico, it was the launch of the *maquiladora* scheme, combined with the need of the automobile industry to find low-cost production sites and the further liberalization of NAFTA with its rules of origin for the automobile industry that had a profound effect on the country's export competitiveness. The rules of origin were initially established to help United States automobile TNCs to compete better in their home market against Asian, specifically Japanese, TNCs. This worked very much in Mexico's favour as Ford, General Motors and Chrysler (now DaimlerChrysler) and their suppliers set up world-class plants there to export to the United States market. Then, Volkswagen, a German automobile TNC, established an export platform in Mexico and was obliged to bring its global suppliers into Mexico to meet the NAFTA rules of origin. The overall result was a complete restructuring of the Mexican automobile industry from a protected and inefficient import-substitution activity to a highly competitive export platform.

These are examples from some of the most dynamic export products of how the self-interest of TNCs, combined with appropriate government policy, can produce major improvements in the export competitiveness of host countries. In other situations, however, considerably stronger government efforts are required to capitalize on the assets of TNCs and what, in the absence of such efforts, may only be temporary advantages. The garment industry exemplifies why simply attracting export-oriented activities in and by itself might not be enough to move up the value-added ladder and increase national benefits.

Branded manufacturers of garments like Sara Lee and Fruit of the Loom made use of the United States' production-sharing mechanism (see chapter VII) to gain competitive advantage vis-à-vis Asian producers by establishing assembly operations in the Caribbean basin. In the context of the Multifibre Arrangement quotas, this mechanism allowed these assemblers to remain competitive in the United States market in spite of the fact that wage levels in the Caribbean basin were higher than many other garment production sites. Contrary to the experience of Mexico in respect of the rules of origin

Box VI.9. Upgrading and embedding export-oriented operations in a host economy: the case of Motorola in China

Motorola entered China in 1987. In 1992, it began production, among other things, of beep-pagers, mobile phones, two-way radios and automobile electronics. Over the past decade, Motorola increased its investments in China several times, partly by reinvesting its earnings. By the end of 2001, its total investment in China had reached $3.4 billion. Its business operations include 36 foreign affiliates, including a holding company and a number of joint ventures, with 13,000 employees and nearly $5 billion in sales in 2001. Motorola is the biggest foreign electronic company, as well as the leading high-technology producer and exporter in China. In 2001, Motorola's exports from China amounted to $1.7 billion: 34 per cent of its total sales.

Over the past decade, Motorola has increased the sustainability of its operations in several ways:

- *Investment and technology transfer*. Motorola has steadily strengthened its R&D in China. In November 1999, it set up a research institute in Beijing to oversee its 18 R&D centres (with a total of 1,000 employees by 2002). Some of the latest models of mobile phones were developed, designed and produced in China, combining wireless communications with Internet access. These products are now competing in the international market.
- *Local sourcing*. Motorola assists local suppliers in improving management, efficiency and quality control. It also brings local suppliers into contact with foreign buyers. In 1997, for example, Motorola provided 5,600 hours of training to 118 local suppliers. In 2001, Motorola and some of its affiliates outside China, purchased $1.8 billion in supplies from local sources. In 2002, the company had over 170 first-tier and 700 second-tier suppliers in China.

Motorola has also formed strategic alliances with Chinese universities, institutions and enterprises in high-technology R&D projects, including the Motorola NCIC Advanced Communications Technology Lab, the Motorola-DaTang Cooperation Project, the Motorola-Jinpeng Cooperation Project and the Motorola-Eastcom Cooperation Project.

In November 2001, soon after China's entry into WTO, Motorola established a new five-year strategy, the "2+3+3 strategy". The "2" refers to building China into a world-wide manufacturing and R&D base. The first "3" refers to three new growth areas, namely semiconductors, broadband and digital trunking systems, in which Motorola has been a technology leader in the world market. The second "3" refers to the following three $10-billion goals by 2006: annual output to reach $10 billion, accumulated investment in China to reach $10 billion; and accumulated local procurement to reach $10 billion.

The Motorola manufacturing base in Tianjin is scheduled to be transformed into two parts: a semiconductor production centre and an Asian communications production base. The semiconductor centre, one of the biggest in the world, will mainly produce advanced semiconductors to support wireless communication, automobile electronics and advanced consumer electronics. The Asian communications production base is being expanded to produce high-quality, latest-model mobile phones and related digital technology. Motorola also plans to increase its R&D expenditures to a cumulative $1.3 billion by 2006 and recruit 4,000 researchers.

Located initially in an economic development zone in Tianjin, Motorola enjoyed various kinds of preferential treatment, particularly incentives that encouraged export oriented and high-technology FDI. Business facilitation by the local government has also been instrumental for nurturing the required industrial cluster and in building investment infrastructure for Motorola. Motorola Tianjin, in turn, has become an "anchor" to attract sequential and associated FDI to the country.

Source: UNCTAD, based on various sources of information about Motorola China.

of NAFTA, this mechanism did not allow host countries to progress by increasing local content, raising value added or upgrading the industry. This is because the tariffs applied to value added outside the United States discourage the use of local inputs. For that reason, Costa Rica, for example, chose to focus on electronics and other industries. With the impending implementation of the WTO Clothing and Textile Agreement, many host countries specializing in garment exports will have great difficulties in facing competition from Asia, especially from China. In anticipation of this, some of these branded manufacturers are cutting back on their international production systems and relying more on full-package suppliers and contract manufacturers. The nature of the production-sharing mechanism that restricted the upgrading of the local operations beyond low-wage

assembly has left these export platforms in difficult circumstances. Corrective national policy action is urgent in cases like this (Mortimore, 2002).

This underlines the importance of ensuring the *sustainability* of export-oriented foreign affiliates. For such affiliates not to be ephemeral, they need not only to upgrade, but to be progressively embedded in host economies through strong backward linkages.[4] This requires policies aimed at fostering local capabilities, and, in particular technological capabilities, human resources and a competitive domestic enterprise sector. Where these policies are successful, they are likely not only to make the exports involved more sustainable and beneficial for the host countries involved, but also to increase the competitiveness of the domestic enterprise sector, the bedrock of economic development. In the end, some of these domestic enterprises may become TNCs in their own right and contribute to the development of their home countries through their own global activities. The success of a number of (mainly Asian) countries in attracting export-oriented TNC activities as part of a broader national industrialization strategy offers a model for others.

* * *

TNCs play an important role in the exports of many developing countries and economies in transition. Indeed, for the most dynamic products in world trade, TNCs are central for enabling these countries to reach world markets, and they provide some of the "missing elements" that developing countries need to upgrade their competitiveness in export markets. The potential benefits of TNC export activity are still far from fully exploited and they are growing. Technologies are changing. Processes and functions are increasingly divisible, and the boundaries of what is internal and external to firms are shifting. The "death" of distance – or its diminishing cost – is stretching location maps. New activities are likely to join the globalization surge, including many from developing economies. The challenge for countries that would like to improve their export competitiveness in association with TNCs is how to link up with the international production systems of these firms and how to benefit from them.

The spread of TNC activity offers host countries opportunities to expand exports and move into higher value-added activities. Capitalizing fully on static benefits and transforming them into dynamic and sustainable advantages requires pro-active government support. To benefit most from TNC-associated export competitiveness, developing countries must make continuous efforts to root TNC activities in host economies, raise the level of local content, increase the value added by these activities, upgrade them into more sophisticated areas and make them sustainable. TNCs, in a number of circumstances, will take initiatives of their own, in their own self-interest. But national policy efforts – and the policy space to pursue them – are critical for both attracting export-oriented FDI and ensuring its sustainability in order to advance development.

Notes

1 In the absence of the financing of capital-goods imports by FDI, countries seeking to build productive capacities would presumably have to spend foreign exchange to acquire them.

2 For a brief discussion of the balance-of-payments effects of FDI on ASEAN countries, see *WIR97*, chapter II.

3 For an analysis of the role of TNCs in competitiveness in general, see *WIR95*, especially chapter V, focusing on industrial restructuring in host economies.

4 See *WIR01* for an examination of how more and deeper linkages can be encouraged by government policies.