



# Chapter III

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## INTERLINKAGES

It has been noted in the introduction that the global pattern of foreign-direct-investment stocks and flows, along with the global patterns of trade, technology transfer and financial flows, is one of the most significant

structural characteristics of the international economy. All four dimensions are interlinked to a significant extent through the activities of the transnational corporation.

### A. Foreign direct investment and international trade

#### *1. The relationship between foreign direct investment and international trade*

Transnational corporations engage in international transactions through trade with firms in foreign markets, through international production or through some intermediate form involving agreements with foreign parties that fall short of full ownership and control. Since international production and international trade are frequently seen as alternative means of delivering goods

(and certain services) to foreign markets, the question is often raised whether international production is a substitute for trade. This question does not have an obvious answer. International production can have both direct and indirect effects on trade, they can differ for home and host countries and they can vary across sectors.

To the extent that foreign production is a response to actual or expected trade barriers, it can be seen as a substitute for international trade. A recent illustration of this is the

growth of foreign direct investment in the United States by Japanese transnational corporations in automobiles, consumer electronics, machine tools and other industries. However, to the extent that a large portion of those export markets would have been lost due to rising trade barriers, international production is filling a gap, and is not replacing exports.

At the same time, international production via foreign direct investment or non-equity arrangements by transnational corporations can complement trade, to the extent that foreign trade is either a component, or an outgrowth, of international production strategies by transnational corporations. Some foreign direct investment is specifically designed to take advantage of host country production conditions in order to export to home-country markets. The bulk of foreign direct investment occurs in developed market economies, and much of this involves cross-national vertical integration by firms with a consequent increase in the international trade of components and finished products. In addition, as discussed below, the establishment of successful international operations increasingly involves trade by affiliates of transnational corporations operating in host countries and selling to third-country markets.

The impacts on trade are also complex in the case of import-substituting international production. The effect on home-country exports involves both a substitution effect, as host-country production replaces home-country exports, and an expansion effect, since the growth of host-country production invariably involves the importation of components and related products or services. To the extent that host-country production in-

volves greater efficiencies, for example through the ability of transnational corporations to gain from greater internalization, a larger market share could result and the expansion effect could outweigh the substitution effect.

There are also sectoral differences in the impact of international production on trade. Foreign direct investment in primary sector industries is frequently oriented towards export markets. In services, on the other hand, non-tradability is an issue and international production is frequently the only way to serve foreign markets. In manufacturing, the costs of serving markets and the structure of international linkages within firms and between firms are likely to be important determinants of the degree to which international production is a complement or substitute with respect to international trade.

## *2. Impact of foreign direct investment on home- and host-country trade*

Available evidence on the impact of international production on the trade of home countries is mixed. Some studies have found a net substitution of international production for trade, while other studies found no effect or an increase in exports from home countries. One study of Swedish transnational corporations found that the expansion effect was considerably larger than the substitution effect, leading to a net increase in exports from parent companies to host countries following increases in foreign production in those same host countries. 55/

In the case of host countries, there are a number of indirect effects that are potentially important in evaluating the impact of international production on foreign trade. When

foreign transnational corporations operate in host countries, they often integrate local firms into their international supplier networks which, in turn, eases the way for those firms to enter world markets. Foreign transnational corporations can increase competition within host economies, stimulating local firms to become more competitive. In addition, spillover benefits from international production in host countries — technology, labour skills, infrastructure — can also contribute to enhanced international competitiveness on the part of local firms. On the other hand, to the extent that foreign transnational corporations dominate local markets, or conduct their operations within enclaves isolated from the host economy, those potential benefits would be minimized.

Transnational corporations have come to be responsible for a substantial share of world exports and imports; in the case of the United States, for example, at least 80 per cent of the country's trade was undertaken by transnational corporations in 1988, including parent companies in the United States, foreign affiliates of United States transnational corporations and United States affiliates of foreign transnational corporations. If only trade that passes through foreign affiliates of home-country transnational corporations is considered, the role of transnational corporations is still quite important. To use again the example of the United States, in 1988, approximately half of United States merchandise trade passed through either the foreign affiliates of United States transnational corporations or the United States affiliates of foreign transnational corporations. At the same time, more than a third of United States trade represented intra-firm transactions, between foreign affiliates and their parent

corporations (see table 12). 56/

The decline in the share of imports into the United States accounted for by foreign affiliates of United States-based transnational corporations between 1977 and 1982 is largely due to changes in ownership structure in a number of industries. For example, the expansion of national ownership in both upstream and downstream facilities in petroleum served to reduce the proportion of imports into the United States originating in the foreign affiliates of United States transnational corporations. The expansion of final assembly facilities within the United States by foreign transnational corporations contributed to an increase in imports by foreign corporations. At the same time, the competitive strength of United States firms in many foreign locations contributed to their strong export performance.

Japanese transnational corporations have a smaller share of world international trade than firms from the United States, but the role of Japanese corporations in trade is growing. As of 1983, Japanese transnational corporations — including both parents and foreign affiliates — accounted for 10 per cent of the world's exports of manufactures, up from 7.4 per cent in 1974, while United States-based transnational corporations have accounted for 17-18 per cent of those exports at least since 1966. 57/ However, almost all of this trade by Japanese transnational corporations involves exports by parent companies from their home-country production locations. The foreign affiliates of Japanese transnational corporations accounted for less than 1 per cent of world manufacturing exports in 1986, compared with a share of close to 9 per cent for the foreign affiliates of United States transna-

**Table 12.** Percentage of United States merchandise exports and imports accounted for by transnational corporations, 1977-1988

| Year               | Exports from the United States           |  |          |                     | Imports into United States               |  |          |                     |
|--------------------|--|--|----------|---------------------|--|--|----------|---------------------|
|                    | United States affiliates of foreign TNCs | Foreign affiliates of United States TNCs | All TNCs | Intra-firm all TNCs | United States affiliates of foreign TNCs | Foreign affiliates of United States TNCs | All TNCs | Intra-firm all TNCs |
| 1977               | 20.6                                     | 33.8                                     | 54.4     | 36.5                | 28.9                                     | 27.3                                     | 56.2     | 41.8                |
| 1978               | 22.7                                     | ..                                       | ..       | ..                  | 32.2                                     | ..                                       | ..       | ..                  |
| 1979               | 24.0                                     | ..                                       | ..       | ..                  | 29.7                                     | ..                                       | ..       | ..                  |
| 1980               | 23.3                                     | ..                                       | ..       | ..                  | 30.4                                     | ..                                       | ..       | ..                  |
| 1981               | 27.0                                     | ..                                       | ..       | ..                  | 31.0                                     | ..                                       | ..       | ..                  |
| 1982               | 28.5                                     | 26.8                                     | 55.3     | 33.8                | 34.0                                     | 20.8                                     | 54.8     | 37.8                |
| 1983               | 26.7                                     | 28.5                                     | 55.2     | 35.7                | 30.3                                     | 19.8                                     | 50.1     | 36.6                |
| 1984               | 26.5                                     | 30.2                                     | 56.7     | 37.8                | 30.2                                     | 19.0                                     | 49.2     | 37.0                |
| 1985               | 26.1                                     | 32.2                                     | 58.3     | 40.7                | 33.5                                     | 20.2                                     | 53.7     | 40.2                |
| 1986               | 22.2                                     | 31.8                                     | 54.0     | 37.8                | 34.1                                     | 17.8                                     | 51.9     | 40.3                |
| 1987               | 19.2                                     | 31.5                                     | 50.7     | 34.4                | 35.0                                     | 18.5                                     | 53.5     | 41.2                |
| 1988 <sup>a/</sup> | 18.7                                     | 29.8                                     | 48.5     | 32.5                | 33.5                                     | 19.5                                     | 53.0     | 41.2                |

Sources: United States, Department of Commerce, Bureau of Economic Analysis, *U.S. Direct Investment Abroad*, various annual issues; and *Foreign Direct Investment in the United States*, various annual issues.

<sup>a/</sup> Preliminary.

tional corporations. The surge in Japanese foreign direct investment in the 1980s has probably led to an expansion of the world export share attributed to the foreign affiliates of Japanese transnational corporations. As mentioned earlier, foreign direct investment-related sales of manufactured goods from developing countries in Asia to Japan have been growing, though overall the volumes involved are still relatively low. However, in some industries (such as general machinery, electrical machinery, transportation and precision equipment), about three quarters of Japanese imports from Asia in 1986 were shipped by Japanese affiliates. <sup>58/</sup>

### 3. Transnational corporations and developing-country trade

Transnational corporations have helped stimulate exports from developing countries, either through their affiliates or through links with national companies. In the case of newly industrializing countries in Latin America and Asia, transnational corporations from Japan, Sweden and the United States have helped stimulate exports in manufacturing industries. <sup>59/</sup> Several Asian developing countries have become major exporters, in part by drawing upon the technology, organizational skills and marketing

networks of transnational corporations from developed market economies to produce components, become original equipment manufacturers and exporters of their own branded products in developed country markets.

The growth of non-equity arrangements between transnational corporations and host country producers also contributes to the expansion of developing country exports. Non-equity arrangements, such as franchising, licensing and subcontracting, have become an important component in the strategies of transnational corporations to serve local markets and to export from host country locations, while limiting their capital commitment and reducing their risk.

Differences in the contribution of foreign affiliates to international trade may reflect differences in the role of foreign direct investment in different host economies. Some foreign direct investment is primarily oriented towards serving the local market, and would not play a large role in international trade. In other instances, production within host countries by foreign transnational corporations may represent a small proportion of domestic output, perhaps because local restrictions have limited foreign involvement. And a substantial amount of foreign trade occurs through the aid of non-equity arrangements between parent companies and national companies within the host country; that would lead to an understatement in the share of bilateral trade attributed to home-country transnational corporations.

Overall, the contribution of transnational corporations to the export performance of developing countries as a group has been

limited. The vast bulk of foreign direct investment to developing countries from the developed market economies has been directed to a small number of countries (see table 4). It is, therefore, not possible to generalize for all developing countries from the experience of transnational corporations in the newly industrializing countries.

#### *4. Third-country exporting by transnational corporations*

Transnational corporations are also involved in trade between their host country production locations and third-country markets. In 1988, third-country sales by foreign affiliates of United States-based transnational corporations were almost 70 per cent as large as all merchandise exports from the United States; the intra-firm portion of those third-country sales has been rising, from 44 per cent in 1985 to more than 50 per cent in 1987 and 1988. <sup>60/</sup> As discussed above, exports to third-country markets by the foreign affiliates of Japanese transnational corporations are an important component of those firm's regional core network strategies.

The growth of third-country exports by foreign affiliates of United States transnational corporations may reflect an evolution of the trade patterns of transnational corporations which goes beyond the traditional patterns linking home and host countries. In many instances, exporting to third countries is a component of the original strategy of transnational corporations in making their foreign investments, and can be seen as part of the development of regional core networks.

For example, component manufacturing facilities in a host country have been established to supply final assembly plants in third countries. Third-country exporting can reflect the importance of host country locational advantages in all world markets, not just *vis-à-vis* home countries. The closer integration of national economies within regions will also be a stimulant of third-country exporting. In addition, the growth of foreign affiliates of transnational corporations as global exporters may be part of a life-cycle pattern of foreign affiliates, which develop important comparative advantages in host country production locations over time, and then apply those enhanced advantages in a wide range of markets, in response to developments in exchange rates and national rates of growth of demand.

For example, third-country exporting has become an important element in the international production strategies of transnational corporations in the automobile industry. An example, mentioned above, involves the production of engines by General Motors (United States) in Mexico for inclusion in auto assembly in Japan. The recent expansion of foreign direct investment into the United States provides additional examples of the growth of third-country exporting. Honda (Japan) exports from its United States locations to Taiwan Province of China, as well as back to Japan, while Nissan (Japan) has announced plans to export from its United States assembly locations to Canada, to replace exports to Canada from Japan. Japanese transnational corporations in automobiles and other industries are developing, as discussed above, regional core networks using third-country exporting.

### 5. Trade clusters and foreign-direct-investment clusters

It is perhaps partly owing to the inter-relationships between foreign direct investment and trade that a certain similarity exists between trade and foreign-direct-investment patterns. The importance of the three major regions of the Triad as centres for international trade has recently been examined by GATT. <sup>61</sup>Data on the importance of each Triad region in the bilateral trade of host developing countries indicate some overlap between the clustering of host countries with respect to foreign direct investment from the Triad and the increasingly regional clustering of trade relationships. In almost all instances in which a host country is linked to one or more of the Triad countries in terms of stocks of foreign direct investment, the home Triad member is also one of the major trading partners of the host country (see table 13).

To the extent that a coincidence in both trade and foreign-direct-investment patterns can be observed, it may be primarily the result of common causes, such as geographical proximity or historical ties. At the same time, a more direct link between the activities of transnational corporations and bilateral trade relations is certainly possible. The foreign affiliates of United States-based transnational corporations make a significant contribution to bilateral trade in a number of economies that are part of the United States foreign-direct-investment cluster, including Mexico, Hong Kong, the Philippines and Singapore, while their contribution to trade in the case of other members of the cluster, such as Venezuela, Taiwan Province of China and Thailand, is

**Table 13.** Pattern of bilateral trade between the Triad and developing countries/territories, 1988

| <i>EC cluster</i>   |   |  | <i>Japan cluster</i>   |  |   |
|---|---|--|--|--|---|
| <i>Economy</i>  | <i>EC percentage share of country's trade (exports plus imports)</i>            | <i>EC rank among trading partners</i>            | <i>Economy</i>   | <i>Japanese percentage share of country's trade (exports plus imports)</i> | <i>Japanese rank among trading partners</i> |
| Venezuela   | 44  | 1  | Indonesia  | 35   | 1   |
| Nigeria   | 43  | 1  | Republic of Korea  | 25   | 2   |
| Kenya   | 40  | 1  | Thailand   | 22   | 1   |
| South Africa  | 31  | 1  | Taiwan Province of China   | 21   | 2   |
| Argentina   | 30  | 1  | Malaysia   | 20   | 1   |
| Pakistan  | 28  | 1  |  |  |   |
| Brazil  | 26  | 1  |  |  |   |
| Paraguay  | 25  | 2  |  |  |   |
| Uruguay   | 23  | 1  |  |  |   |
| India   | 21  | 1  |  |  |   |
| Bangladesh  | 17  | 1  |  |  |   |
| Viet Nam  | 13  | 2  |  |  |   |
| Singapore   | 12  | 3  |  |  |   |
| Malaysia  | 4   | 3  |  |  |   |
| <i>United States cluster</i>                                |   |  |  |  |   |
| <i>Economy</i>  | <i>United States percentage share of country's trade (exports plus imports)</i> | <i>United States rank among trading partners</i> | <i>United States affiliate percentage share of bilateral trade</i> |  |   |
| Mexico  | 63  | 1  | 27   |  |   |
| Venezuela   | 44  | 1  | 8  |  |   |
| Ecuador   | 40  | 1  | 14   |  |   |
| Colombia  | 38  | 1  | 17   |  |   |
| Taiwan Province of China                                    | 35  | 1  | 6  |  |   |
| Philippines   | 28  | 1  | 19   |  |   |
| Peru  | 23  | 1  | 10 <sup>a/</sup>   |  |   |
| Bolivia   | 21  | 2  | ..   |  |   |
| Chile   | 20  | 2  | 11   |  |   |
| Singapore   | 20  | 1  | 36   |  |   |
| Hong Kong   | 17  | 2  | 23   |  |   |
| Thailand  | 17  | 2  | 9 <sup>a/</sup>  |  |   |
| Argentina   | 15  | 3  | 17   |  |   |
| Pakistan  | 12  | 2  | ..   |  |   |
| <b><i>Other countries, not in United States cluster</i></b> |   |  |  |  |   |
| Nigeria   | 27  | 2  | 25   |  |   |
| Brazil  | 24  | 1 (tied with EC)                                 | 34   |  |   |
| Malaysia  | 18  | 2  | 47   |  |   |

Sources: United Nations trade tapes and International Monetary Fund, *Direction of Trade Statistics, Yearbook* (Washington, IMF, 1990).

Note: The placing of a country within a cluster is determined by its placing with respect to the stock of foreign direct investment in 1987 (table 11A, Group I and Group II). Where two Triad members have competing shares of the stock of foreign direct investment in a host country (table 11A, Group II), the country is listed twice.

<sup>a/</sup> 1986.



much smaller. In addition, the foreign affiliates of United States transnational corporations are important in the bi-lateral

trade with countries that are outside of the United States cluster, including Brazil, Malaysia and Nigeria.

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Overall, the clustering of developing countries with respect to foreign direct investment is close to, but not identical with, the clustering of those same countries with respect to international trade. In addition, a large number of developing countries are not included in the clustering pattern with respect to foreign direct investment, owing to the lack of relevant data. The overlap that exists may reflect causal links from the international strategies of transnational corpora-

tions to the trading behaviour of firms in host developing countries; conversely, it could reflect links from historically determined trading patterns to patterns of foreign direct investment. But, to the extent that foreign direct investment is increasingly undertaken as part of regional core network strategies of transnational corporations, trade and foreign direct investment will become increasingly linked and complementary phenomena.

## **B. Transnational corporations and technology transfer**

It is widely accepted that technology is increasing in importance as a determinant of economic growth and change. Transnational corporations are the principal generators of new technologies through research and development, and they play a major role in the international transfer of technology. It is difficult, however, to measure the international flow of technology and the proportion of that flow attributable to the activities of transnational corporations. A substantial amount of technology is embodied in goods and services, especially capital goods. In 1988, world-wide trade in capital goods approached \$700 billion (see table 14). In so far as trade in capital goods is an important mechanism for the transfer of technology, transnational corporations contribute to the process through their participation in trade. Transnational corporations also play a large

role in international trade in high technology products, including, for example, computers, semiconductors, synthetic and composite materials and biotechnology. 62/

Technology is also transferred through the creation of new productive facilities and the expansion or restructuring of existing ones. Thus, foreign-direct-investment flows, which amounted to \$196 billion in 1989, are an important source of technology transfer, a source that is dominated by transnational corporations. In addition, the operation of foreign production facilities by transnational corporations involves the utilization of management skills, new methods of organizing production and various technical skills of a work force. Those various manifestations of "soft" technology are typically transferred through the learning of skills by host country workers and suppliers; their transfer through

**Table 14.** Indicators of technology-transfer flows in 1988 and growth rates, 1980-1988

| <i>Item</i>  | <i>Value of flows<br/>(Current prices in<br/>billions of dollars)</i> | <i>Compound annual growth rate<br/>(Percentage)</i> |
|--|---|---|
| Capital goods exports <i>a/</i>                              | 701   | 7.9   |
| Foreign direct investment                                    | 161   | 13.9  |
| Technology payments to developed<br>market economy countries | 48  | 13.9  |
| Technical cooperation grants                                 | 13  | 8.0   |
| World output   | 17 265  | 5.1   |
| World exports  | 2 684   | 4.1   |

*Sources:* UNCTAD, "Transfer and development of technology in a changing world environment: the challenges of the 1990s" (TD/B/C.6/153), table 1; updated data from UNCTAD; International Monetary Fund balance-of-payments tape; International Monetary Fund, *Direction of Trade Statistics Yearbook*, various issues.

*a/* Capital goods exports from Central and Eastern Europe are not included.

foreign direct investment is particularly important in the services sector, because of the limited tradability of many services and the need, therefore, to replicate home-country operations as fully as possible.

Beyond foreign investment, the rapid growth of strategic alliances among transnational corporations (which often include national firms) represents an additional avenue for the international transfer of technology. Strategic alliances frequently occur in product areas where research costs are very high, and companies seek to share risks. One such area is telecommunications, where the rapid introduction of micro-electronic technologies, and the deregulation of many national markets, have changed competitive conditions and raised the costs of new investments. Strategic alliances involve the sharing of product and production technologies for specific products, but not necessarily across

the entire range of the participating firms' activities. 63/

Naturally, technology is also transferred directly, through cross-border sales of plans and blueprints and the licensing of processes and inventions. In 1988, payments for such technology transfers amounted to approximately \$50 billion world-wide. For the United States, the bulk of payments associated with such direct technology transfer occur through transnational corporations. The United States received \$11 billion in receipts of royalty and licence fees in 1988, which are, in effect, payments for the sale of technology by United States firms to foreign purchasers. Of that total, 78 per cent occurred through transnational corporations, with the bulk (76 per cent of the total) representing payments from foreign affiliates to their United States parents. In the case of purchases of technology by the United States,

which totalled over \$2 billion in 1988, 55 per cent of payments of royalties and licence fees were transactions involving transnational corporations, with 50 per cent of the total representing payments from United States affiliates of foreign transnational corporations to their parents. 64/ In the United Kingdom and the Federal Republic of Germany, between 65 and 85 per cent of payments for the purchase of technology in the period 1975-1985 were paid by affiliates to their foreign parents. 65/ Thus, for countries for which data are available, direct technology transfers take place primarily within the framework of transnational corporations.

For developing countries, limited data suggest a similar pattern for the sale and licensing of technology. As of the mid-1980s, some 80 per cent to 90 per cent of technology payments by developing countries to the Federal Republic of Germany and the United States took the form of payments from affiliates to their parent companies, that is, were directly associated with foreign direct investment. 66/ From 1980 through 1985 (the most recent period for which data are available), technology payments from developing countries to developed market countries as a group averaged \$2 billion per year. Of greater importance, technical cooperation grants from developed market economies to developing countries jumped from \$8 billion per year in 1984-1985 to more than \$12 billion in 1988, a growth rate of 15 per cent per year. 67/

Technology transfers to developing countries that occur through the intra-firm activities of transnational corporations most directly affect the foreign affiliates of those firms operating within the host economy. However, the impact of such technology transfer frequently spreads into the local

economy. National firms which supply the affiliates of transnational corporations must meet the production standards established by the latter by the importation of new technologies, while firms which compete with the affiliates of foreign transnational corporations are forced to upgrade their own technology. Other mechanisms of spillover include the training of local managers who later work with local enterprises, the hiring and training of local workers and the upgrading of local education systems to meet the needs of the transnational corporations. The effective application of technology spillovers in host developing countries may, however, require substantial local investments. 68/

The three private sector channels of technology transfer — capital goods exports, foreign direct investment and direct payments — indicate a concentration of technology flows to the newly industrializing economies of Asia (table 15); at the same time, developing Asian economies (for example, the Republic of Korea) are becoming technology exporters. 69/ It is likely that transnational corporations from Japan, as well as from some of those developing countries, have played a prominent role in that development. Official technology assistance flows — the smallest of the four technology transfer channels — have been more evenly distributed among various developing country recipients than have private flows. For many developing countries, technical cooperation grants form virtually the only source of technology transfer. Given the growing importance of technology flows to economic development, the uneven distribution of aggregate technology flows among developing countries indicates the presence of a substantial barrier to improved development prospects for a large number of countries.

| <b>Table 15.</b> Distribution of technology flows to developing countries, 1988<br>(Billions of dollars, current prices) |                              |  |                                     |
|--|------------------------------|--|-------------------------------------|
| <i>Region / type of flow</i>   | <i>Capital goods imports</i> | <i>Foreign-direct-investment inflows</i> | <i>Technical cooperation grants</i> |
| All developing countries   | 144                          | 28.7                                     | 12.6 <sup>a/</sup>                  |
| Africa   | 17                           | 2.1                                      | 4.9                                 |
| Asia   | 87                           | 14.9                                     | 2.9                                 |
| Latin America and the Caribbean  | 36                           | 11.4                                     | 2                                   |
| Memo: Least developed countries  | 4                            | 0.1                                      | 2.6                                 |

*Sources:* UNCTAD, "Transfer and development of technology in a changing world environment: the challenges of the 1990s" (TD/B/C.6/153), table 2; updated data from UNCTAD; International Monetary Fund balance-of-payments tape.

<sup>a/</sup> Grants not allocated to individual countries are included in total, but not in regional group.

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All four channels of international technology transfer — capital goods exports, foreign-direct-investment flows, direct payments on royalties and fees and technical cooperation grants to developing countries — grew more rapidly than international trade and world output in the period from 1980 to 1988, providing some indication of the growing role for technology transfer in the world economy. The two channels of technology transfer that

grew the most rapidly — foreign-direct-investment flows and technology sales — are both dominated by the activities of transnational corporations, while those corporations also play a substantial role in capital goods exports. Thus, it seems reasonable to conclude that transnational corporations, through their important role in the transfer of technology, are having a growing impact upon economic growth and change.

### C. Transnational corporations and financial flows

One reason the flow of technology to developing countries has been so low is that most developing countries have lacked the

financial resources to engage in substantial international purchases. A decade of high debt burdens among developing countries has

contributed to a lowering of growth rates, relative to earlier periods, and to a financial squeeze; indeed, for much of the 1980s, the aggregate net flow of financial resources to developing countries was negative. Traditionally, transnational banks have been the principal sources of private international financial flows; but bank lending to developing countries was severely curtailed in the wake of the debt crisis. Accordingly, transnational corporations have increasingly been seen as a source of financial flows to developing countries, both through direct inflows of foreign direct investment and, indirectly, to the extent that larger foreign-direct-investment flows stimulate other forms of financial inflows.

Foreign-direct-investment flows in and by themselves represent a significant share of international financial flows. In fact, the net resource transfer due to foreign direct investment to developing countries has been positive since the mid-1980s, providing a slight offset to the large negative net transfers of private credit. Foreign-direct-investment flows accounted for 75 per cent of total long-term capital flows from private sources (excluding private non-guaranteed credit) to developing countries during the period 1987-1989. 70/

The linkages between foreign-direct-investment flows and private credit flows, both bank and non-bank, have not been fully established. An increase in foreign direct investment by transnational corporations may be financed through transnational banks or via international credit markets, thereby expanding the flow of credit to the host country. The financing of exports from host countries by transnational banks may be linked to exporting by host-country affiliates of foreign

transnational corporations, or by joint ventures or enterprises linked to transnational corporations via non-equity arrangements. In addition, the expansion of international production in host countries can serve to improve the country's prospects for receiving private credit. On the other hand, host country policies have sometimes favoured foreign direct investment over credit, for instance, by requiring a higher proportion of new equity in a project than might be preferred by the foreign investor.

The evidence that exists does suggest the importance of two-way linkages between foreign direct investment and other financial flows. A cross-national statistical analysis of more than 50 developing countries found positive relationships between inflows of foreign direct investment and inflows of both private credit and official assistance. 71/ This link may be due to the positive impact financial flows have on a developing country's balance of payments, domestic growth and international credit rating, making it a more favourable location for international production. A negative linkage occurred during the 1980s. The drying up of private credit flows to developing countries, in large part due to the debt crisis, led to austerity policies and contributed to the inability of most developing countries to increase their inflows of foreign direct investment, despite an extensive liberalization of their policy and regulatory environments.

A second form of financial flows to developing countries is official development assistance (ODA). Flows from Government to Government or from international agencies to developing countries are not, of course, undertaken through transnational corporations. There is evidence, however, of a coin-

cidence in the distribution of ODA flows when compared with the pattern of foreign direct investment, as well as some indications that the location of foreign production by transnational corporations has an influence on ODA given by major home countries.

The distribution of ODA from two of the major home regions appears to follow a pattern similar to the distribution of the stock of foreign direct investment (see table 16). Five of the six countries that are part of the Japanese foreign-direct-investment cluster in terms of stocks of foreign direct investment in the late 1980s also received the largest single portion of their bilateral ODA from Japan in 1987. (Data for the sixth country are not available.) In the case of the EC, of the 13 countries that are part of the EC foreign-direct-investment cluster, 8 of the 11 countries for which data are available received the largest share of their bilateral aid from the EC, while for the other 3, the EC was the second largest donor within the Triad. Only for the United States among the Triad home regions is the importance of ODA for host countries different from the distribution of stocks of foreign direct investment. One possible reason for that disparity is the exclusion of military aid from the data on ODA. Military aid to developing countries is larger for the United States than for the EC or Japan; its inclusion might yield a clustering pattern for the United States that is closer to the patterns observed with respect to foreign direct investment and international trade. The absence of an overlap in the patterns for ODA and trade and foreign direct investment for the United States could also be the result of additional factors, not considered in this analysis.

The similarity in the ODA and foreign-direct-investment patterns may be coincidental. It may reflect the same underlying patterns of geographical proximity or historical ties that were noted with respect to the clustering patterns for foreign direct investment and international trade. There are indications, however, that donor country Governments see ODA as one among a number of connections between their economies and developing-country economies, and that some policies regarding ODA have been formulated with the objective of strengthening certain of those connections. <sup>72/</sup> To the extent that there is a similarity of clustering patterns for ODA and foreign direct investment, it may not be just the result of historical coincidence.

One further linkage of a financial nature can be found in currency relationships. Under the Bretton Woods system, most countries, developed and developing, tied their currency to the United States dollar. Over the past two decades, developing countries appear to be moving towards a system in which their currencies appear to be linked, more or less closely, with the currencies of major home regions, depending upon the strength of their trade, investment and financial relationships. Thus, a dollar bloc appears to exist, composed largely of countries in Latin America and the Caribbean, along with a few other countries, such as some oil-exporting countries whose ties to the dollar are undoubtedly due to the fact that the world price of oil is quoted in dollars. In most cases, those countries operate a managed float versus the dollar, or a float tied to economic indicators which are themselves linked to the dollar. <sup>73/</sup>

**Table 16.** Official development assistance: relative importance of Triad home regions in recipient economy inflows, by Triad cluster, 1987

| <i>EC cluster</i>        |                | <i>Japan cluster</i>     |                   | <i>United States cluster</i> |                           |
|--------------------------|----------------|--------------------------|-------------------|------------------------------|---------------------------|
| <i>Recipient economy</i> | <i>EC rank</i> | <i>Recipient economy</i> | <i>Japan rank</i> | <i>Recipient economy</i>     | <i>United States rank</i> |
| Argentina                | 1              | Indonesia                | 1                 | Argentina                    | 2 (T:J)                   |
| Bangladesh               | 2              | Malaysia                 | 1                 | Bolivia                      | 2                         |
| Brazil                   | 1              | Republic of Korea        | 1                 | Chile                        | 1 (T:EC)                  |
| India                    | 1              | Taiwan Province          | ..                | Colombia                     | 3                         |
| Kenya                    | 1              | of China                 | ..                | Ecuador                      | 3                         |
| Malaysia                 | 2              | Thailand                 | 1                 | Hong Kong                    | 3                         |
| Nigeria                  | 1              |                          |                   | Mexico                       | 1                         |
| Pakistan                 | 1              |                          |                   | Pakistan                     | 2 (T:J)                   |
| Paraguay                 | ..             |                          |                   | Peru                         | 2                         |
| Singapore                | 2              |                          |                   | Singapore                    | 3                         |
| South Africa             | ..             |                          |                   | Taiwan Province              |                           |
| Uruguay                  | 1              |                          |                   | of China                     | ..                        |
| Viet Nam                 | 1              |                          |                   | Thailand                     | 3                         |
|                          |                |                          |                   | Venezuela                    | ..                        |

*Source:* Organisation for Economic Co-operation and Development, *Geographical Distribution of Financial Flows to Developing Countries* (Paris, OECD, various annual issues).

*Note:* Clusters are determined by stock of foreign direct investment in 1987 (see table 11). Countries that were judged to be in more than one cluster are listed twice. Rank is determined by the percentage of bilateral ODA received from each Triad region. The letter "T" denotes a country for which two Triad members are roughly tied.

The existence of a franc bloc among a number of African countries, the growing importance of the European Monetary System, the opening up of the Japanese financial system and the growth in the use of the yen in international trade and finance suggest the

possibility that many developing countries will seek stronger currency links with the EC and Japan. 74/ That would further reinforce emerging tendencies towards linkages among trade, foreign direct investment and financial flows.

#### **D. The integrating agents: transnational corporations**

The evidence presented above shows that there are, indeed, substantial linkages between foreign direct investment, on the one hand, and trade, transfers of technology and financial flows on the other. Since virtually all foreign direct investment and substantial shares of trade, technology transfers and (private) financial flows are undertaken by transnational corporations, frequently on an intra-firm basis, they all respond, to varying degrees, to the same strategic needs of those corporations. They are, in other words, different facets of the efforts of transnational corporations to enhance their positions in a competitive global environment, in order to ensure their growth and profitability in international markets. Transnational corporations are, therefore, the agents that integrate trade, technology transfer and financial flows for the purpose of international production in the context of the firms' strategy.

The mechanism by which the transnational corporation integrates those various elements is often through foreign direct investment; to the latter must be added means other than ownership by which transnational corporations exert control over cross-border economic activity, such as strategic alliances, foreign licensing and subcontracting. Thus, the concept of transnational corporations as integrating agents is best seen in the context of the firm's overall activities related to international production. And the considerably faster growth of foreign direct investment (as an imperfect, underestimating measure of international production) compared to that of trade and output (see table 1 and figure I) seems to suggest that international production is, in fact, assuming a leading role in

international economic relations, and that transnational corporations are increasingly important agents of international economic activity.

To the extent that transnational corporations are, indeed, assuming such a role, it can be expected that an increasing proportion of trade, technology transfers and private financial flows would be linked to international production and transnational corporations. In the area of trade, the emergence of regional core networks in several parts of the world implies that an increasing share of intra-regional trade in those areas will be controlled by transnational corporations from one or more of the three Triad members. In the area of technology transfers, the importance of transnational corporations is enhanced by the facts that the know-how required for the production of most services — which comprise the largest economic sector in all developed market economies and the majority of developing countries — can in most cases only be transferred through foreign direct investment (or certain non-equity linkages with transnational corporations) and that, more generally, the transfer of soft technology, for service and industrial operations alike, can best be achieved through foreign direct investment. Finally, to the extent that international production grows in importance, the financial flows associated with it — be they in the form of direct investment flows, indirect flows resulting from related trade and technology transactions, or flows connected with the financial activities of transnational corporations — can be expected to play a larger role in international financial transactions in general.



Thus, international transactions are increasingly dominated by transnational corporations. This trend carries important implications for the character of the world economy. One implication of such a development is that the global patterns of trade, technology transfers and private financial flows could tend to converge on the foreign-direct-investment pattern, making the latter a principal force in structuring the world economy. Another implication is that transnational corporations are increasingly important actors in the economies in many countries since, as pointed out in chapter I, foreign direct investment is a growing component of many host countries' economies, and is particularly important in developing countries.

The linkages described above — between foreign direct investment, trade, technology and financial flows — would seem to imply that transnational corporations can play a considerably important role in economic growth and development. In so far as the activities of transnational corporations con-

tribute to host countries' competitiveness, they enhance that country's overall economic performance. Foreign direct investment can stimulate economic growth to the extent that it directly increases capital formation, stimulates exports and upgrades the host country's economic performance with new technologies, organizational techniques and adaptations to market changes. Further investigation is needed to understand the conditions under which such beneficial impacts might occur, and the degree to which the current wave of foreign direct investment has actually resulted in the economic growth of host nations. But the fact that international production is increasingly a means of structuring international economic relations and of transmitting flows of trade, technology and finance, suggests that Governments would be well advised to accord the role of foreign direct investment — and the activities of transnational corporations, both inward and outward — centre stage in their national and especially international economic policies, an issue explored in chapter IV below.