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Chapter V

TRANSNATIONAL CORPORATIONS, CAPITAL FORMATION AND ECONOMIC GROWTH

A. Capital formation and economic growth

One of the most widely accepted principles in the analysis of economic growth is that countries should devote substantial efforts to increasing the quantity and improving the quality of their stock of physical capital. An emphasis on the contribution of capital to growth is, of course, not new. It was central to nineteenth century classical political economy. The Harrod-Domar growth model of the 1940s, which provided intellectual stimulation for several generations of thinking on the subject of economic growth, gave central importance to increasing the share of output a country devoted to savings and transformed into physical capital. [1] Empirical work on economic growth has built upon the growth accounting framework introduced by Robert Solow and extended by Edward Denison and others. [2] This empirical literature has increasingly emphasized the importance of technology and human capital, while the stock of physical capital continues to play a large role as a component of growth for both developed and developing countries.

More recently, theories of growth have focused on the interrelationships among the various determinants of growth. For example, technological advance has been linked to capital accumulation, either because advances in technology can make capital more productive and provide an incentive for new investment, or because technology is frequently embodied in new plant and equipment and therefore

enters an economy in the form of new capital. [3] The accumulation of capital also represents a force for growth, in part because it can be a conduit for various additional factors that determine growth. Control of capital signifies control over decision-making regarding production. Thus, the various channels that determine growth may be linked to capital accumulation, at least in part because they are all influenced by the decision-making processes of firms.

Research on economic growth in developing countries has also emphasized that, while capital is an important determinant of growth, its importance will vary across countries and over time, according to both economic factors, such as the presence of other determinants of growth, and non-economic factors, such as the political and cultural framework within which the economic elements operate. [4] Thus, both general principles and specific historical and institutional analyses are needed to assess the growth experience and prospects in individual economies.

Transnational corporations are important contributors to world-wide savings and investment. They generate savings through retained earnings and, since TNCs are among the largest firms in their home economies, that contribution is likely to be substantial. In addition, they are themselves investors, utilizing both their internally-generated savings and the savings of others, which they obtain through borrowing and the issue of equity.

The focus in the present chapter is on how TNCs might influence the quantity and quality of physical capital formation in host developing countries, thereby affecting the ability of domestic investment to contribute to economic growth. Capital formation is a complex process involving many interrelationships. The primary concern here is how TNCs influence the savings available to, and the quantity and quality of investment in, host developing economies.

B. Sources of savings for host developing countries

Most savings are generated domestically. Research on savings behaviour in developing countries has tended to focus on the household sector, but savings can also be generated by business firms and from foreign sources, and can be affected by government policies. The primary determinants of household savings patterns are demographic variables, such institutional factors as the effectiveness of the financial system, macroeconomic conditions and policies. [5]

Given the importance of economy-wide variables in determining savings behaviour, there are few ways in which TNCs would have a direct impact upon household savings. To the extent TNCs add to domestic employment, there would probably also be an increase in savings. In addition, the wages and salaries paid by TNCs and the income earned by local suppliers of TNCs undoubtedly alter the distribution of income in favour of savers, although such effects are likely to be limited. As employers, TNCs can encourage savings by, for instance, establishing pension plans, instituting direct deposit into savings accounts and offering payroll deductions for purchasing insurance.

Corporations, both those that are domestically owned and those that are affiliates of foreign firms, can also contribute to savings in host countries through retained earnings. Information from balance-of-payments accounts for Brazil and Mexico, which are among the few developing countries for which data on reinvested earnings of TNCs are available, shows substantial annual fluctuations in the share of FDI inflows accounted for by reinvested earnings. Over a 23-year period (1967-1989), reinvested earnings by TNCs accounted for between 15 and 90 per cent of annual inflows of FDI for those two large developing countries. [6] For the United States, approximately a third, and in 1990 almost a half, of flows of FDI to developing countries took the form of reinvested earnings during the period 1982-1990. [7] Over a longer time period (1967-1989) and looking at all FDI outflows, not only those going to developing countries, reinvested earnings accounted for 43 per cent of outflows for the United Kingdom and 17 per cent for the Federal Republic of Germany. [8]

Developing countries have long sought foreign savings as an important contributor to capital formation; since the onset of the debt crisis, they have placed renewed emphasis on attracting FDI to augment domestic savings, among other reasons, to avoid debt-creating sources of finance. National savings rates in both developed and developing countries have been lower since the middle of the 1970s than they had been in previous years. [9] The importance of TNCs in generating savings and as sources of investment spending in host developing countries appears to have been growing, especially in the second half of the 1980s (see chapter II). Thus, for a number of host developing countries, FDI may be filling an important gap (box V.1).

An analysis of FDI as a source of foreign savings also must deal with repatriated earnings. It has been argued that repatriation represents a deduction from host country savings. [10] That may be possible where TNCs have a high degree of monopoly power within the host economy, and are able to appropriate rents that would otherwise contribute to domestic income and savings. Generally, if TNCs have any positive impacts upon growth, exports or the profits of domestic enterprises, their presence will generate additional income and savings. Repatriated profits, then, will be a deduction from a higher level of savings, which they are partly responsible for generating in the first place. Moreover, some repatriation of earnings may be necessary as an inducement for TNCs to enter, or remain in, a host developing economy.

Governments of host countries affect savings through budgetary policies and via tax and regulatory policies. [11] One reason why national savings rates have generally declined since the 1970s is that, as Governments have incurred larger budget deficits, government savings rates have declined. Transnational corporations can contribute to government revenues directly via tax payments, contractual fees, etc., and indirectly through taxes paid by their employees and suppliers. Direct tax payments by the foreign affiliates of United States-based TNCs to foreign Governments amounted to approximately $100 billion in 1989, or about 10 per cent of their foreign sales. [12] The contribution of TNCs to host-country tax revenues will tend to vary across countries, depending upon host country tax rates, enforcement policies and the proportion of international production that is subject to taxation. In addition, TNCs can practise various forms of tax avoidance, as well as require government subsidies or government outlays. [13] For the foreign affiliates of United States-based TNCs, tax payments contributed more than 5 per cent to

revenues of Governments of a number of host countries in 1989, although the proportion is smaller for most countries (table V.1). If data for TNCs from other home countries were available, the contribution to revenues of Governments of host countries would be considerably higher.

Box V.1. The contribution of foreign savings to domestic savings

Recent research has suggested that foreign savings may not have been an important source of savings for both developed and developing countries over the past few decades, and that domestic capital formation is largely limited by domestic sources of savings. That conclusion is based upon the finding of high correlations between domestic investment and domestic savings, expressed as shares of gross domestic product, for a large cross-section of countries. In the original research, only OECD countries were studied, but follow-up work has included developing countries with similar results. The conclusion from this work is that countries attract relatively little foreign capital to augment domestic savings, and that international capital mobility is not high. Since those conclusions challenge much conventional wisdom regarding capital mobility, international financial integration and the importance of foreign capital for developing countries in particular, they have been subject to extensive debate.

High correlations between domestic savings and investment, however, do not mean that developing countries are limited to themselves with respect to raising capital. The studies show that the correlations between domestic savings and domestic investment have declined over time, from the 1960s through the mid-1980s, suggesting that foreign savings are growing in importance. Moreover, several studies found lower correlations for developing countries than for developed countries, suggesting that foreign savings may be more important for financing investment in the former than in the latter. In addition, the importance of foreign savings in financing domestic investment also appears to be larger under flexible exchange rate regimes, and to be sensitive to government policies with respect to current account imbalances.

Net foreign savings is the sum of long-term capital inflows into host countries (including FDI) less corresponding outflows. Net foreign savings can be small even when the size of inflows is large relative to domestic savings. There are examples of developing countries that rely heavily on foreign sources of savings, while simultaneously exporting capital. Foreign savings, including FDI, have made significant contributions to domestic savings in a number of instances, such as in the United States in the late nineteenth century. Rather than focusing attention on net inflows, it may be more important to look at how various components of inflows can be affected by changes in incentives. The contribution of FDI to domestic savings will vary across countries, and will not necessarily be identical with the contribution of capital flows as a whole. For example, since greenfield FDI can add to domestic savings and investment simultaneously, its impact can be more direct and larger than alternative forms of external savings.

Sources: Martin Feldstein and Charles Horioka, "Domestic savings and international capital flows", *Economic Journal*, vol. 90 (June 1980), pp. 314-329; Martin Feldstein and Phillipe Bacchetta, "National savings and international investment", National Bureau of Economic Research Working Paper No. 3164 (Cambridge, Massachusetts, National Bureau of Economic Research, November 1989); Norman S. Fieleke, "National savings and international investment", in *Savings and Government Policy*, Conference Series No. 25 (Boston, Massachusetts, Federal Reserve Bank of Boston, 1982), pp. 138-157; Stanley W. Black, "Discussion", op. cit., pp. 158-161; Michael Dooley, Jeffrey Frankel and Donald Mathieson, "International capital mobility: what do savings-investment correlations tell us?" *International Monetary Fund Staff Papers*, vol. 34, No. 3 (September 1987), pp. 503-530; Tamin Bayoumi, "Why are saving and investment rates correlated across countries?", *Finance and Development*, vol. 27, No. 2 (June 1990), pp. 18-19; Linda Tesar, "Saving, investment and international capital flows", *Journal of International Economics*, vol. 31, Nos. 1/2 (August 1991), pp. 55-78; Mira Wilkins, *The History of Foreign Investment in the United States to 1914* (Cambridge, Massachusetts, Harvard University Press, 1989).

Increased tax revenues from TNCs can help Governments raise funds, reduce borrowing requirements and make more savings available for both private and public investment. However, taxes can also be a disincentive to international production within a host country to the extent that their size and incidence cause potential foreign investors to locate elsewhere. Taxes can create incentives for investors to shift resources among sectors and industries, which can be beneficial to the extent activities with high social costs are made more costly for private decision makers, but can also lead to inefficiencies in resource allocation to the extent investors "chase" tax benefits. Thus, while there might be scope for expanding the revenue raised from TNCs for the financing of public investment, there are also limits to how far that can go. Moreover, the evaluation of the impact of government policies on savings may also depend upon how the government revenue is used. For example, tax revenue that is used for infrastructure might be classified as savings, while the same revenue used to pay administrative costs might be considered as consumption.

Even where foreign savings represent a sizeable share of domestic savings, there is the possibility that this could occur at the expense of domestic savings. A number of studies have indicated that increases in foreign savings are accompanied by declines in domestic savings in developing countries. Recent econometric work, using multivariate, multiple-equation models, has found that the regression coefficient of foreign savings on domestic savings is negative, but between zero and one. This implies that foreign savings represent a net addition to national savings in host developing countries.[14]

Not all of the components of foreign savings, including FDI, need behave in the same manner as foreign savings as a

Table V.1. Tax payments by foreign affiliates of United States transnational corporations, as a percentage of total government revenue of the host country, 1989

(Millions of dollars)

Country	*Tax payment*	*Government revenues*	*Percentage*	*United States FDI as share of total inward stock of FDI*
Chile	192	8 500	2.3	49[a]
China	16	62 428	-	16[b]
Ecuador	18	1 288	1.4	54[b]
Egypt	6	20 547	-	
Guatemala	78	504	15.5	22[c]
India	98	39 671	0.2	21
Indonesia	866	16 190	5.3	6[a]
Korea, Republic of	138	38 202	0.4	28[a]
Malaysia	619	9 141	6.8	6[b]
Mexico	1 266	27 448	4.6	64
Peru	174	1 425	12.2	29
Philippines	362	6 716	5.4	56
Thailand	910	12 321	7.4	24[b]
Trinidad and Tobago	151	1 168	12.9	
Total	4 894	245 549	2.0	

Sources: United States, Department of Commerce, *U.S. Direct Investment Abroad: 1989 Benchmark Survey* (Washington, D.C., United States Government Printing Office, 1991); International Monetary Fund, *International Financial Statistics Yearbook, 1991* (Washington, D.C., International Monetary Fund, 1992).

a 1988.
b 1987.
c 1985.

whole. One econometric study that separated FDI from foreign savings in general yielded contradictory results, with the stock of FDI having a negative relation to economic growth in developing countries, while the flow of FDI had a positive relation. [15] Other studies have looked at all private capital inflows, FDI plus debt, and found generally positive impacts upon growth. [16]

C. Transnational corporations and financial intermediation

The contribution of financial intermediation to capital formation and economic growth in developing countries has been the subject of an extensive theoretical and empirical literature. [17] Transnational corporations are themselves intermediaries in that they mobilize savings from their home countries or international markets (for example, retained earnings, new equity, bank loans, bond flotations), which are then invested in host countries. To the extent that TNCs are simultaneously savers and investors within host economies, they reduce the potential for crowding out.

Not all FDI leads to increases in the host country capital stock. Some foreign capital enters a host country in search of a financial advantage, such as favourable tax treatment. While the phenomenon of tax-haven investment is well known, adjusting for it in data on FDI is difficult. Some foreign affiliates utilize capital from their parent corporations to reinvest in a third country, as when foreign affiliates in Hong Kong invest in China. In addition, there is a need to distinguish between greenfield investment, which increases both savings and investment in a host country; mergers and acquisitions by TNCs, which do not directly increase investment; investment by TNCs financed within the host economy, which may increase investment, but competes for domestic savings; and FDI financed within the home economy or on world markets, which can increase both savings and investment for the host economy. Several of those issues will be discussed below in section D; all are plagued by severe measurement problems.

Since transnational banks (TNBs) are themselves TNCs, the role of those firms as intermediaries is broadened. In general, financial intermediation (or "financial deepening") in a host economy can contribute to development, and specifically to greater efficiency in mobilizing savings, so long as it does not lead to excessive speculation or become an instrument of rapid inflation. The issue here is whether TNBs contribute to the intermediation function by, for example, extending banking services, establishing or strengthening markets for securities or foreign exchange, or widening the menu and/or reducing the risks of financial assets.

Studies of financial services in host developing countries have found that, because TNBs have frequently faced restrictions on their activities, their presence in developing countries has been rather small. In a sample of 21 developing countries, the median share of banking assets accounted for by TNBs was 6 per cent. [18] Transnational banks operating in host developing countries have tended to specialize in serving other TNCs and large domestic clients, in part because the international expansion of banks was initially fuelled by the international expansion of FDI. Even when restrictions on their activities have been reduced, TNBs have tended not to compete with domestic financial institutions. [19] Thus, while TNBs may play a substantial role in mobilizing savings internationally, they typically appear to have

assumed little or no role in the domestic intermediation process. It is certainly possible, however, that a further removal of restrictions on their activities within host economies may increase the incentives for TNBs to extend their role.

Financial intermediation also occurs through financial markets. Recent examples of financial liberalizations in developing countries appear to have enhanced capital inflows. A number of developing countries have established domestic markets for equity and debt instruments, or have opened previously existing markets to foreign participation. In larger developing economies with broadly-based private sector firms, such as Mexico and the Republic of Korea, those markets have attracted significant amounts of foreign capital as they provide a mechanism for trading shares and a means for valuing company assets. In many countries—the United States is a prime example among developed economies—markets for capital are also markets for corporate control, as effective control over firm decision-making can be acquired through market purchases of equity. In other countries, such as Japan, the legal and institutional structure places control in the cross-holdings of equities among firms and in financial institutions, not equity markets. To the extent that the establishment of, and the granting of access by foreign investors to, markets in corporate securities in developing countries also establishes a market for corporate control, those markets can become a means for converting portfolio capital inflow into direct investment, as potential foreign investors accumulate equity. [20]

The activities of TNCs, both in terms of FDI and non-equity arrangements, can stimulate additional flows of financial resources. Transnational banks frequently lend more easily to projects with some involvement of transnational corporations, [21] and donor-country policies towards bilateral official development assistance has, in some instances, favoured host countries with a significant presence of TNCs from the donor country. [22]

D. The contribution of foreign direct investment to host country investment

1. Aggregate data

Foreign direct investment, as a measure of the inflow of foreign-owned physical capital, can represent a contribution to host country investment and to host country capital stock. Available evidence, summarized in chapter II, indicates that FDI represents a modest addition to domestic capital in most host developing countries. For the 89 countries for which data are available for the period 1986-1989, only in 35 (39 per cent) did FDI account for more than 5 per cent of gross domestic capital formation (annex table 6). For the 16 developing countries for which data on capital stock are available for 1988 (or latest available year), the foreign share was greater than 5 per cent in 63 per cent of the cases, or 10 countries (annex table 7). For most developing countries for which data are available, the share of FDI in gross domestic capital formation grew in the late 1980s as compared with the early part of the decade.

In some instances, that growth reflected a continuing stagnation in domestic investment; but for most developing countries, a substantial growth in FDI inflows accounted for the rise in the share.

Data on FDI do not, however, accurately reflect real investment by foreigners. Foreign direct investment includes acquisitions of existing assets by foreign firms within host economies. To the extent that mergers and acquisitions are an important means of entry into host developing countries, the data on FDI inflows would overstate the contribution of foreign firms to host country capital formation, although the data would still be a measure of the extent of foreign ownership within the host economy. Mergers and acquisitions represent the bulk of FDI inflows for host developed economies. For developing countries, the establishment and opening of securities markets to foreigners (discussed in section C above), as well as efforts by Governments to include foreign investors in privatization plans (see chapter III), suggests that mergers and acquisitions may become a more important mode of entry in the future. Until now, however, mergers and acquisitions do not appear to be nearly as important for developing countries as they are for developed countries.

On the other hand, data on FDI inflows usually do not include reinvested profits, which, on the basis of reporting by a few large host developing countries and a few large home developed countries, appear to be an important source of funds for foreign firms in developing countries (see section B above). Reinvested earnings can be expected to be highest in host economies in which there have been substantial foreign investment for some time, as mature foreign affiliates tend to generate a larger stream of profits, and tend to have established patterns of reinvestment, as compared to newer affiliates.

Thus, while hard evidence on the quantitative importance of those two sources of bias in FDI data is not available, and while cross-national differences in the size of mergers and acquisitions and the reporting of reinvested earnings can be important, it does appear that the understatement of new investment is more important than the overstatement.

The contribution of FDI to domestic capital formation may be more important in terms of impacts on growth than the aggregate data suggest. In many host developing countries, FDI is concentrated in a relatively few industries, and those may be among the most important in terms of their contribution to economic growth. As a result, FDI tends to represent a larger share of host economy investment for private fixed investment than for investment as a whole and for investment in the manufacturing and services sectors as compared with economy-wide investment (table V.2). In part, that reflects the importance of government investment and housing investment in total capital formation for many countries.

Those observed differences also may reflect the attraction of rapidly-growing and high value-added sectors for foreign capital, as well as the potential importance of foreign capital in stimulating growth in those sectors. In the Republic of Korea, a high-growth developing economy where FDI represents a low share of domestic investment (1.6 per cent in the period 1986-1988), FDI has been particularly important in electrical machinery and transportation equipment, two of the leading industries in that country's export-led growth performance. By one estimate, foreign firms contributed almost half the new capital in those industries in the period 1984-1986. [23] A separate study of the role of FDI in the Republic of

Korea concluded that the direct contribution to economic growth by TNCs was significantly higher than the share of those firms in domestic investment would have suggested. During the mid-1970s (1975-1978), the share of the growth of value-added accounted for by foreign production ranged from 5 to 14 per cent, while the foreign share of the growth of value-added in manufacturing was 16 to 45 per cent. [24] Adding the indirect contribution, through spillovers and linkages, would raise the foreign contribution above those figures.

In India, a study of 28 manufacturing industries in 1977-1978 found that, in nine industries, including motor vehicles, electrical machinery, metal products, plastics, chemicals and pharmaceuticals, the foreign ownership share was greater than 20 per cent. [25] A second study of TNCs in India found that foreign-owned firms accounted for more than 30 per cent of sales in manufacturing in 1975-1976 and 1980-1981. [26] Foreign direct investment as a share of gross domestic investment has been very small in India, at 0.1 per cent in the period 1976-1980 and only slightly higher—0.2 per cent—in the late 1980s.

In addition to FDI in host developing countries being more important than suggested by aggregate data, TNCs have been engaging in other forms of involvement as they expand their international activities. Foreign direct investment implies control over production through either majority or a substantial minority ownership. Production can also be controlled through non-equity arrangements, such as franchising, licensing, long-term subcontracting and non-equity joint ventures in which TNCs may contribute technology or management in their relationships with host country firms. It is difficult to obtain

Table V.2. The contribution of foreign direct investment to domestic capital formation, selected countries

	Foreign-owned share in					
Economy	*GDCF* [a]	*Private fixed investment*	*Assets* [b]	*Manufacturing investment*	*Assets* [b]	*Services assets* [b]
Hong Kong	19		18	..	..	..
Korea, Republic of	2	..	..	19-31 [c]	..	..
Malaysia	10	5-10 [c]	19 [d]	..	..	..
Mexico	9	..	..	..	76	34
Philippines	9	..	19 [e]	..	32 [e]	21 [e]
Taiwan Province of China	4	4 [f]	..	6 [f]	..	..
Thailand	5	4-10 [g]	16	..	83	43

Sources: Annex tables 6 and 8; Transnational Corporations and Management Division, *World Investment Directory* (New York, United Nations, 1992); Chung H. Lee and Eric Ramstetter, "Direct investment and structural change in Korean manufacturing", and Chi Schive and Jenn-Hwa Tu, "Foreign firms and structural change in Taiwan", both in Eric Ramstetter, ed., *Direct Foreign Investment in Asia's Developing Economies and Structural Change in the Asia-Pacific Region* (Boulder, Colorado, Westview Press, 1991), pp. 112 and 150.

a 1986-1989. b 1986. c 1984-1986. d 1988
e 1987. f 1987-1988. g 1986-1988.

data on non-equity arrangements that are comparable with FDI, but studies indicate that such arrangements have been growing. Their growth does constitute further evidence for the position that FDI data understate the importance of TNCs within host economies.

It is possible that the presence of FDI can have a deleterious affect upon domestic capital formation, to the extent that foreign firms effectively crowd out domestic producers. That could occur if foreign firms take over markets previously occupied by domestic producers, or if foreign firms use their competitive advantages to obtain key resources, such as minerals or relatively scarce skilled labour. A recent series of case studies of Asian developing economies, including Malaysia, Singapore, Taiwan Province of China and Thailand, found little evidence of crowding out. [27] In addition, a simultaneous equation model of Taiwan Province of China, which explicitly tested for a quantitative link between FDI and domestic investment, found a statistically significant positive relationship, suggesting, at a minimum, that FDI and domestic investment respond to similar conditions within the host economy but also implying that the two are complements and not substitutes. [28]

2. Linkage effects

The presence of foreign-controlled production facilities in a host developing country has the potential to provide a variety of additional benefits. Transnational corporations establish linkages with the host economy, for instance, as they purchase goods and services from local producers or hire local firms as subcontractors. They can also generate forward linkages to the extent that they widen access to markets, both domestic and foreign, or provide resources that can be used in further production within the host economy. Linkages established by TNCs are important for technology transfer, development of human resource and foreign trade.

Linkages are created because TNCs provide something to a host economy—demand for an input, supply of an output, a particular skill or resource—that did not exist before. [29] Empirical studies of TNCs in host countries have found that local sourcing by TNCs tends to increase over time, as affiliates become more aware of, and involved with, local producers. [30] For example, in 1988, Japanese affiliates procured more than 40 per cent of their inputs locally in Asia and 30 per cent in Latin America (table V.3). Procurement levels were high for such medium and high R&D-intensive industries as chemicals, general machinery, electric machinery and transport equipment. Comparing the local procurement levels for those industries, it is apparent that they generally are higher for the newly industrializing economies than for other Asian countries, particularly in more technology-intensive industries. This indicates that existing local technological capabilities influence the extent of procurement.

Some case studies show that affiliates of TNCs have made extensive use of supplier linkages in host countries and impart considerable training and technical and financial assistance to their local suppliers. For example, a recent survey of 63 large foreign affiliates operating in Mexico's manufacturing sector found an extensive use of local subcontracting: almost two thirds of the foreign affiliates subcontracted locally. Of those firms, nearly one third subcontracted more than 25 per cent of their total

production value. That outcome was the result of a combination of performance requirements, the existence of a capable supplier network and industry-specific corporate strategies. The survey also found that the local subcontracting of inputs in Mexico by affiliates of TNCs to a large extent was motivated by efficiency considerations, which assumed a greater role in the calculus of TNCs as the country shifted from an import-substitution regime to an export-oriented regime of liberalized trade policy. [31]

In Asian developing economies, studies have found that the extent and effectiveness of TNC linkages depended upon local conditions. A case study of FDI in Singapore concluded that foreign firms had successfully stimulated local suppliers to become effective exporters, and had generated a substantial number of spin-offs as employees of TNCs became successful entrepreneurs, and often became suppliers to their former employer. [32] In both the Republic of Korea and Taiwan Province of China, foreign firms have increased the share of their procurement which is met through local purchases, supporting the general proposition that local procurement rises as firms become more established in a foreign location. [33] In addition, while foreign firms in Taiwan Province of China increased their local purchases over time, recent foreign investors tended to start with higher levels of local sourcing than did earlier investors, suggesting that the economy's ability to support local sourcing had improved. [34] In both Singapore and Taiwan Province of China, a synergistic relationship has been observed as the growth of foreign

Table V.3. Local procurement of Japanese affiliates, by region and industry, 1981 and 1988
(Percentage of total procurement)

Industry	*Latin America*		*Asia*		*Asian newly industrializing economies* [a]
	1981	*1988*	*1981*	*1988*	*1988*
All industries	28	30	27	44	43
Manufacturing	48	51	52	47	50
Food	93	100	93	87	78
Textiles	88	94	61	49	55
Wood and pulp	100	99	61	82	35
Chemicals	69	94	57	60	69
Iron and steel	66	67	29	29	29
Non-ferrous metals	31	100	73	69	83
General machinery	20	63	47	44	46
Electric machinery	27	50	45	44	46
Transport equipment	45	33	54	48	61

Source: Japan, Ministry of International Trade and Industry, *Wagakuni Kigyo no Kaigai Jigyo Katsudo,* No. 12-13 (Tokyo, Toyo Hoki Shuppan, September 1984), p. 96, and No. 18-19 (Tokyo, Okura-sho Insatsu-Kyoku, March 1990), pp. 86-87 and 94-95.

a Hong Kong, Republic of Korea, Singapore and Taiwan Province of China.

production stimulates local entrepreneurship, while "the growing availability of local suppliers attracts more foreign investment".[35]

In Indonesia, however, it seems that affiliates of TNCs used local inputs primarily because of government pressure.[36] In response, most foreign affiliates have preferred to manufacture in-house and subcontract only a few insignificant and non-essential items. Consequently, the technical, managerial and financial linkages between TNCs and their subcontractors have generally been weak. To a significant extent, that is owing to the absence of competitive domestic supplier industries. Similarly, in Malaysia, relatively few local linkages have been observed, a situation attributable to the absence of a strong entrepreneurial class and the concentration on export-oriented FDI within free trade zones. In such situations, TNCs must cross a border in order to source locally, and they may prefer to source in neighbouring countries.[37]

Linkages between TNCs and host country firms can also be important in other areas of business activity. It recent years, the realization that the international success of many Japanese TNCs is based largely upon their ability to organize production more efficiently than their competitors both within their home country and in regional and global networks, has led to an increased emphasis on the organizational features of firms.[38] Since many aspects of "lean" production methods involve less use of labour inputs and a greater concentration of both final and ancillary production facilities within the larger markets, it has been feared that the spread of the new methods will place many developing countries at a competitive disadvantage in world markets. Initial indications are that the new methods, at least in industries such as automobiles, have begun to spread to developing country producers. Further research is needed, however, to evaluate the mechanisms promoting or retarding such a spread.

E. The contribution of transnational corporations to the effectiveness of host country investment

The presence of TNCs as producers within host economies is likely to have impacts upon firms and upon the efficiency of investment within the host economy. Those qualitative impacts, which could aid or impinge upon the competitiveness of host country firms, may be of even greater importance than the quantitative impacts in evaluating the role of TNCs in host country growth.[39]

The entry of TNCs into host developing countries as producers of goods and services is often thought to have substantial impacts on the efficiency of domestic firms, and therefore on the effectiveness of domestic investment. A substantial amount of research has analysed the relative performance of foreign and domestic firms in host developing countries. In general, that research has concluded that the presence of foreign firms tends to be associated with greater industrial concentration, that foreign firms are more technology- and capital-intensive, and make extensive use of marketing, financial and managerial assets, and that foreign firms have higher rates of labour and total factor productivity than domestic firms in the same industry.[40]

In addition, some studies have found that foreign firms are more profitable than their domestic counterparts. However, the differences are not always large or statistically significant and in a few studies, the domestic firms have higher rates of profit. Moreover, profits of foreign firms may not be measured accurately, given the possibility that TNCs can use transfer pricing to shift reported profits out of host economies. [41]

Two recent statistical studies of Brazil and Mexico found positive correlations between the foreign share of an industry, measured as foreign production in relation to total production, and indices of concentration. [42] Those results reinforce earlier research on Brazil, Chile, Malaysia, Mexico and Peru. [43] It would not necessarily be correct, however, to conclude that the presence of TNCs results in an increase in monopolization and a decline in the efficiency of domestic investment. Research has not been able to distinguish between a situation in which TNCs dominate an industry and reduce its competitiveness, versus a situation in which those firms are attracted to an industry because existing entry barriers or economies of scale allow firms to earn above average returns.

It would also not necessarily be correct to conclude that even when TNCs are linked to greater concentration, the result is a decline in productive efficiency. Transnational corporations can bring new products, technology and methods of organization, which can change an industry's cost structure and lead to fewer producers, yet also be associated with substantial positive spillovers and linkages with domestic producers. That may be particularly the case where TNCs bring a new product and create demand for local inputs and labour services that did not exist previously. In addition, TNCs can widen the market and be potential competitors for the products of a host country industry by linking the host economy more closely with world markets, leading to greater competition even as there might be greater local concentration.

The inability to isolate cause and effect in evaluating the relation between FDI and industrial structure is made more difficult by the motivations behind investment by TNCs. In general, firms engage in production outside of their home country in order to exploit the profit opportunities from a firm-specific asset and/or the economies available from internalizing cross-border transactions. It should not be surprising, therefore, that foreign firms may be able to earn higher returns or achieve higher levels of productivity than domestic competitors, since, if foreign firms did not perceive that they held some significant advantage over host country firms, they would not have engaged in foreign investment in the first place. The foreign affiliates of TNCs can bring non-competitive forms of behaviour, including predatory pricing, restrictive business practices and transfer pricing. Their access to the financial, technological and managerial resources of their parent companies gives them greater scope to engage in non-competitive activities than their host country competitors. At the same time, it should be noted that TNCs tend to operate within oligopolistic structures in their home economies and that studies have noted a similarity in structures when industries in home and host countries are compared. [44] This implies that cost and demand conditions, and not just the presence of foreign firms, play a large role in determining market structure in both home and host countries. Thus, both sides of this issue have received empirical support.

Most of the empirical studies examine industrial performance and structure at a point in time, while the key issue is what impact foreign firms have on domestic efficiency over time. Case studies of individual country experience provide some information on impacts over time. For example, a study of TNCs in Kenya found that the entrance of foreign firms tended to weaken the competitive position of previously existing domestic firms, as the foreign firms employed their advantages in product and process technology and in marketing. [45] The weakening and even disappearance of host country firms, however, is not necessarily evidence that TNCs have an adverse effect on host country efficiency. To the extent the freed resources are employed more effectively elsewhere, a situation that apparently did not occur in Kenya, the host economy can benefit.

F. Assessment

The present chapter has presented evidence on the role that TNCs play in affecting the quantity and quality of physical capital formation in host developing countries. Since capital formation is an important determinant of economic growth, and to the extent that TNCs have a positive influence on the formation of capital in host developing countries, they can also have a positive influence on economic growth in those countries.

Capital formation involves savings, financial intermediation and additions to the stock of plant and equipment. Transnational corporations do not have a large impact upon domestic savings in developing countries, although inflows of FDI have been important, especially in periods when other sources of foreign savings inflows are limited. The contribution of TNBs to the intermediation process in host developing countries has been limited both by government restrictions and competitive conditions.

The evidence indicates that FDI inflows make a positive contribution to the quantity of new physical capital in developing countries, and that this quantitative contribution appears more significant in industries that are crucial to growth and development, such as manufacturing. Local purchasing by TNCs has, in many host developing countries, provided a stimulant to local investment. Evidence on the qualitative contribution of TNCs to host country investment is less clear-cut. It is not clear how the presence of TNCs affects industrial structure and the allocative efficiency of host country investment. And TNC management practices provide a model for efficient organization of production that can be learned by host country producers.

The evidence on TNCs and host countries suggests that the benefits from the presence of TNCs may depend as much upon host country conditions as upon the assets brought by foreign firms. For example, TNCs can more effectively expand their local purchasing to the extent that the domestic economy is conducive to local entrepreneurship. When TNCs produce largely in export processing zones, their ability to stimulate domestic investment is reduced.

The general conclusion is that TNCs have had a positive influence on domestic capital formation in host developing countries. It needs to be recognized, however, that the evidence for such a conclusion

is drawn from a small number of developing countries, most of which are large and have had some success in stimulating economic growth. Where FDI does play a positive role—as, for example, in Taiwan Province of China—that role appears to be substantial. Thus, the experiences of countries that have had a degree of success both in generating growth and utilizing the contribution of TNCs can provide a window on the possibilities that exist for a larger group of countries.

It also should be recognized that the international expansion of TNCs may make FDI central to growth not just because of the growth-inducing benefits from capital formation, but also as the primary linkage to the remaining channels by which growth is enhanced. Transnational corporations organize production across borders and can improve overall efficiency to the extent that such organization can be carried out more effectively within a TNC instead of among separate national firms linked through arms-length market-based trade. The economies of common governance practiced by TNCs are a source of both efficiency and profitability, and are themselves derived from the ability of TNCs to undertake production across borders.

Since the international activities of TNCs involve the application of firm-specific assets in host country locations, the benefits TNCs impart to host economies are strongly related to the presence of foreign production. Thus, FDI, along with non-equity arrangements, represents a conduit for technology spillovers, training of host country nationals and access to international markets, issues that are discussed in more detail below (chapters VI, VII and VIII).

G. Some policy implications

In many instances, the contribution of TNCs to domestic capital formation is enhanced by the capabilities of host country institutions. Policies adopted by host countries can reinforce those capabilities and increase the likelihood that the host country will benefit from the presence of TNCs.

The evidence indicates that TNCs can stimulate local investment through their purchasing from local enterprises. In many cases, policies can support this linkage, especially policies that support and encourage local entrepreneurship. These could include a reduction of administrative restrictions on new business formation, establishment of programmes to provide training in business skills to potential new-business entrants and employees in small and medium-size enterprises and greater scope for TNCs operating in special enterprise zones to purchase locally.

The general area of industrial policy also provides scope for host countries to enhance the benefits they receive from TNCs with respect to capital formation. In formulating such policies, the issue of whether TNCs can make a significant contribution to the host economy has become more relevant. As such, it may be important to include such firms in any overall industrial strategy. A related area is anti-monopoly policy. With the growing importance of international markets, the global competitiveness of an industry is becoming more important than its competitiveness within a single economy. It cannot be ruled out that TNCs bring with them a degree of monopolistic behaviour when they produce within

host developing countries. But if TNCs bring additional benefits, such as a high exporting propensity and access to new markets, or a significant transfer of production technology, any decline in local competitiveness may be minor. On the other hand, if TNCs bring few additional benefits, or even impose costs, such as a decline in environmental quality, the competitiveness issue becomes more important.

Although the evidence does not assign to TNCs a major role in savings or in financial intermediation, and it is not likely that such a role will emerge, policies can improve the ability of TNCs to contribute in this area. Countries that have opened their financial markets to foreign participation have seen an increased inflow of foreign capital. And lifting some of the restrictions on TNBs could lead to a greater use of such enterprises as domestic intermediaries. However, the most important actions a host country can take to attract foreign capital is to maintain a strong domestic economy through monetary and fiscal policy and through policies to support domestic capital formation, both physical and human, in a manner that does not create barriers against FDI.

Notes

[1]Nobel laureate W. Arthur Lewis "saw the problem of raising the rate of growth as that of raising [the rate of savings]", in Nicholas Stern, "The determinants of growth", *The Economic Journal*, vol. 101 (January 1991), p. 124.

[2]Robert M. Solow, "Technical change and the aggregate production function", *Review of Economics and Statistics*, vol. 39, No. 3 (August 1957), pp. 313-320; Edward F. Denison, *Trends in American Economic Growth, 1929-1982* (Washington D. C., The Brookings Institution, 1985).

[3]Maurice Scott, *A New View of Economic Growth* (Oxford, Oxford University Press, 1989); Paul M. Romer, "Increasing returns and long-run growth", *Journal of Political Economy*, vol. 94, No. 5 (1986), pp. 1002-1037; "Economic growth: explaining the mystery", *The Economist*, 4 January 1992.

[4]See, for example, W. Arthur Lewis, "The state of development theory", *American Economic Review*, vol. 74, No. 1 (March 1984), pp. 1-10, and Nicholas Stern, "The economics of development: a survey", *The Economic Journal*, vol. 99 (September 1989), pp. 597-685.

[5]Two recent surveys are Mark Gersovitz, "Saving and development", in H. Chenery and T. N. Srinivasan, eds., *Handbook of Development Economics*, volume I (Amsterdam, North Holland, 1988), pp. 381-424, and Angus Deaton, "Saving in developing countries: theory and review", in *Proceedings of the World Bank Annual Conference on Development Economics*, 1989, pp. 61-96.

[6]Data from International Monetary Fund balance-of-payments tape, retrieved in January 1992.

[7]"U. S. direct investment abroad: detail for historical-cost position and balance of payments flows, 1990", *Survey of Current Business*, vol. 71, No. 8 (August 1991), table 4, and earlier annual articles.

[8]Calculations of the Transnational Corporations and Management Division, based upon cumulative outflows of FDI and reinvested earnings, from IMF balance-of-payments tape, retrieved in February 1992. The higher share of retained earnings in outflows for the United Kingdom relative to the Federal Republic of Germany may reflect the fact that foreign affiliates from the former country would tend to have been established in their host economies for a longer period and are likely to have established higher levels of cash inflow. In addition, domestic profitability in the Federal Republic of Germany has been higher than in the United Kingdom, giving parent companies in the Federal Republic of Germany more resources to invest abroad.

[9]Bijan B. Aghelvi and James M. Boughton, "National savings and the world economy", *Finance and Development*, vol. 27, No. 2 (June 1990), pp. 2-5. The decline in savings rates in developing countries since the mid-1970s has been far from uniform; those countries with the highest growth rates and lowest inflation rates have tended to maintain higher savings rates.

[10]For example, Chinyere Emmanuel Egbe, *The Impact of Foreign Private Investment on the Growth of GNP and Investment in Nigeria*, unpublished PhD dissertation, Washington State University, 1984.

[11]Vittorio Corbo and Klaus Schmidt-Hebbel, "Public policies and saving in developing countries", *Journal of Development Economics*, vol. 36 (July 1991), pp. 89-115, based on a cross country study for 1980-1987, concluded that higher government savings are offset only partially by a decline in private savings, leading to a net increase in national savings.

[12]United States, Department of Commerce, *U. S. Direct Investment Abroad: 1989 Benchmark Survey, Preliminary Results* (Washington, D. C., United States Government Printing Office, October 1991), table 31. The 1989 benchmark survey reported data on taxes paid by affiliates of United States TNCs out of income, as well as tax payments that were considered as business expenses, such as import duties, property taxes etc.

[13]The ability of TNCs to shift a portion of their tax burden to low tax jurisdictions or, in some instances, to avoid taxes altogether, has long been the subject of debate and analysis, including, most recently, in the United States. Walter Darnall Vinyard Jr., "Higher taxes, stricter audits lie in wait", *Financial Times*, 22 August 1990, and Patrick Harverson, "US to tighten tax avoidance rules for foreign companies", *Financial Times*, 17 June 1991.

[14]Pradumna B. Rana and J. Malcolm Dowling, Jr., "The impact of foreign capital on growth: evidence from Asian developing countries", *The Developing Economies*, vol. XXVI, No. 1 (March 1988), pp. 3-11, reviewed the literature and presented a two-equation model in which foreign savings are a net addition to domestic capital formation. Similarly, Kanhaya L. Gupta and M. Anisul Islam, *Foreign Capital, Savings and Growth: An International Cross-Section Study* (Dordrecht, the Netherlands, D. Reidel Publishing Company, 1983) concluded that, while foreign savings has a negative effect on domestic savings, this effect is substantially smaller than shown by earlier studies.

[15]Colin Stoneman, "Foreign capital and economic growth", *World Development*, vol. 3, No. 1 (January 1975), pp. 11-26. For a critique of these results, see Gupta and Islam, op. cit., ch. III.

[16]Gupta and Islam, op. cit., chap. IV.

[17]See, for instance, Maxwell J. Fry, "Financial development: theories and recent experience", *Oxford Review of Economic Policy*, vol. 5, No. 4 (Winter 1989), pp. 13-28; Ronald I. McKinnon, *Money and Capital in Economic Development* (Washington, The Brookings Institution, 1973); and Edward S. Shaw, *Financial Deepening in Economic Development* (New York, Oxford University Press, 1973).

[18]Alan H. Gelb and Silvia B. Sagari, "Banking", in The World Bank and UNCTC, *The Uruguay Round: Services in the World Economy* (Washington, D.C. and New York, The World Bank and UNCTC, 1990), pp. 49-59.

[19]"Role of transnational corporations in services, including transnational banks: role of transnational corporations in other services", (E/C.10/1991/6, 20 February 1991), paras. 14 and 15.

[20]The threshold level when portfolio equity holdings by a single foreign investor become direct investment holdings varies across countries.

[21]There is also the issue of whether FDI and other forms of foreign savings are substitutes or complements. For a discussion, see Constantine Michalopoulos, "Private direct investment, finance and development", *Asian Development Review*, vol. 3, No. 2 (1985), pp. 59-71. At least one empirical study suggested that FDI and private financial flows were complements. See UNCTAD, "Transfer and development of technology in a changing world environment: the challenges of the 1990s" (PHD/B/C.6/153, 25 January 1991), p. 5.

[22]UNCTC, *World Investment Report, 1991: The Triad in Foreign Direct Investment* (United Nations publication, Sales No. E.91.II.A.12), pp. 78-80.

[23]Chung H. Lee and Eric Ramstetter, "Direct investment and structural change in Korean manufacturing", in Eric Ramstetter, ed., *Direct Foreign Investment in Asia's Developing Economies and Structural Change in the Asia-Pacific Region* (Boulder, Colorado, Westview Press, 1991), pp. 107-112. The impact of foreign ownership in the electronics and automobile industries in Malaysia, Singapore, Taiwan Province of China and Thailand was analysed in Linda Y. C. Lim and Pang Eng Fong, *Foreign Direct Investment and Industrialization in Malaysia, Singapore, Taiwan and Thailand* (Paris, OECD, 1991), chaps. 4 and 5.

[24]Bohn Young Koo, "The role of foreign direct investment in Korea's recent economic growth", in Walter Galenson, ed., *Foreign Trade and Investment: Economic Growth in the Newly Industrializing Asian Countries* (Madison, Wisconsin, The University of Wisconsin Press, 1985), pp. 176-216.

[25]Sanjaya Lall and Sharif Mohammad, "Multinationals in Indian big business", *Journal of Development Economics*, vol. 13 (1988), table A.1. Foreign presence was measured as the ratio of dividends paid abroad to all dividends paid by firms in the respective industries. Lall and Mohammad recognized that, to the extent foreign firms earn greater profits on their invested capital than domestic firms, this ratio would be biased upward. It would also be biased to the extent foreign and domestic firms differ in the proportion of profits that are reinvested, although the degree and direction of bias is uncertain. However, even if this estimate were biased upward, the "true" figure would undoubtedly be substantially higher than the share of FDI in aggregate capital formation in India.

[26]Nagesh Kumar, *Multinational Enterprises in India* (London and New York, Routledge, 1990), p. 29.

[27]Lim and Fong, op. cit., pp. 95-6.

[28]Chi Schive and Jenn-Hwa Tu, "Foreign firms and structural change in Taiwan", in Ramstetter, *op. cit.*, pp. 142-171.

[29]Richard E. Caves described such linkages as "many cells of an input-output table of a developing country are empty" and that the presence of TNCs can fill in these cells, thereby improving the ability of the remaining cells to add to output. See *Multinational Enterprise and Economic Analysis* (Cambridge, Cambridge University Press, 1982), p. 271.

[30]Caves, op. cit., pp. 270-272.

[31]UNCTC, *Foreign Direct Investment and Industrial Restructuring in Mexico*, UNCTC Current Studies, Series A, No. 18 (United Nations publication, Sales No. E.92.II.A.9).

[32]Lim and Fong, op. cit., p. 92.

[33]Lim and Fong, *op. cit.*, p. 94; Chi Schive, *The Foreign Factor: The Multinational Corporation's Contribution to the Economic Modernization of the Republic of China* (Stanford, California, Hoover Institution Press, 1990), chap. 6; Bohn Young Koo, "The role of direct foreign investment in Korea's recent economic growth", in Galenson, op. cit., p. 195.

[34]Schive, op. cit., p. 76-77.

[35]Lim and Fong, op. cit., p. 94.; see also Schive, *op. cit.*

[36]Hal Hill, *Foreign Investment and Industrialization in Indonesia* (New York, Oxford University Press, 1988).

[37]Lim and Fong, op. cit., pp. 87-89.

[38]For examples from the automobile industry, see Kurt Hoffman and Raphael Kaplinsky, *Driving Force: The Global Restructuring of Technology, Labor, and Investment in the Automobile and Components Industry. A UNCTC Study* (Boulder, Colorado, Westview Press, 1988); and James P. Womack, Daniel T. Jones and Daniel Ross, *The Machine that Changed the World* (New York, Macmillan, 1990).

[39]"As has been pointed out by many other studies in this and other volumes, the provision of capital through [FDI] is probably much less important than the supply of management skills, technology, market access, and access to finance." Mari Pangestu, "Foreign firms and structural change in the Indonesian manufacturing sector", in Ramstetter, op. cit., p. 48.

[40]For summaries of this literature see Caves, *op. cit.*, chapter 4; Rhys Jenkins, "Transnational corporations, competition and monopoly", *Review of Radical Political Economics*, vol. 21, No. 4 (Winter 1989), pp.12-32; Richard Newfarmer and Claudio Frischtak, "Introduction", in Richard Newfarmer and Claudio Frischtak, eds., *Transnational Corporations, Market Structure and Industrial Performance. United Nations Library on Transnational Corporations* (London, Routledge, forthcoming). Newfarmer and Frischtak include a number of articles relevant to the issue in their collection.

[41]Rhys Jenkins, "The impact of foreign investment on less developed countries: cross-section analysis versus industry studies", in Peter J. Buckley and Jeremy Clegg, eds., *Multinational Enterprises in Less Developed Countries* (London, Macmillan, 1991). For a state-of-the-art review of the literature on transfer pricing and a collection of the major writings in this respect, see S. Plasschaert, ed., *Transnational Corporations: Transfer Pricing and Taxation. United Nations Library on Transnational Corporations* (London, Routledge, forthcoming).

[42]Larry Wilmore, "Determinants of industrial structure: a Brazilian case study", *World Development*, vol. 17 (October 1989), pp. 1601-1617; Magnus Blömstrom, "Multinationals and market structure in Mexico", *ibid.*, vol. 14 (April 1986), pp. 523-530. Both articles are reprinted in Newfarmer and Frischtak, op. cit.

[43]Newfarmer and Frischtak, "Introduction", op. cit.

[44]Caves, op. cit., p. 102; Newfarmer and Frischtak, "Introduction", op. cit.

[45]Jenkins, op. cit.