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## **PART TWO**

### **INTEGRATED INTERNATIONAL PRODUCTION**

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A major feature of the world economy over the past decades has been the growing integration of national economies. International trade in goods and services grew faster than gross domestic product (GDP), links between national financial markets strengthened, more people moved across borders, foreign direct investment (FDI) expanded rapidly, and so did the activities of transnational corporations (TNCs). Policy changes by Governments, particularly the opening of previously closed industries to foreign corporations, the move towards stronger and wider regional trading blocs, the liberalization of restrictions on financial flows and the long-term effects of the lowering of tariff barriers have both ratified and fostered the trend to integration.

Integration can take two main forms. “Shallow” integration occurs largely through *trade* in goods and services and international movements of capital. “Deep” integration extends to the level of the *production* of goods and services and in addition, increases visible and invisible trade. Linkages between national economies are therefore increasingly influenced by the cross-border value-adding activities within TNCs and within networks established by TNCs.

As with shallow integration, changes in government policy help to foster deep integration. Yet the private sector has the lead role. By their very nature, TNCs are the agents that organize the cross-national production of value-adding activities via ownership (foreign direct investment) or other means of control. In this manner, the activities of TNCs create new parameters for Governments and, in many instances, lead rather than follow Government actions. The chapters that follow describe the evolution of the strategies and structures of TNCs and how this evolution has contributed to the growth of international economic integration.

Transnational corporations adopt *strategies* to achieve both short-term and long-term objectives—whether those be a target rate of profit on invested capital, a rising market share, or growth in shareholder value—all in the context of the economic and policy environment in which they operate.<sup>1</sup> The choice of strategy will differ across firms to the extent that they have different strengths, different objectives, and operate under different conditions. Transnational corporations adopt or modify organizational *structures* to carry out their basic strategies.<sup>2</sup> Organizational structures define lines of authority, coordinate flows of resources and establish

mechanisms of accountability. Structures define how the different functional and geographical units that operate under the scope of common governance of the firm are linked together.

One example of the link between strategies and structures is the way that the multi-plant and multi-divisional organizational structures adopted by many manufacturing corporations in the United States in the first half of the twentieth century were a response to the need to manage production for a large and diverse home market (Chandler, 1962). Their successful application of the multi-divisional structure gave them a competitive advantage in managing cross-border production as they expanded abroad (Caves, 1982, pp. 74-81).

Part Two presents an analysis of both the strategies adopted by firms and the organizational structures brought about by the evolution of strategies. Chapter V describes at what is causing the cross-border integration of functions and the changing geographical scope of corporate strategies, in particular the growth of complex corporate strategies and their causes. Chapter VI analyses changes in the organizational structures of TNCs and discusses how their evolution produces a more complex and more integrated form of international production. Chapter VII discusses how the changing strategies and structures of TNCs contribute, at the aggregate level, to an increasing integration of national economies, and what this means for host developing countries in particular.

### Notes

- 1 For analyses of strategies of transnational corporations, see Lecraw and Morrison (1993).
- 2 For analyses of structures of transnational corporations, see Hedlund (1993).

# CHAPTER V

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## STRATEGIES OF TRANSNATIONAL CORPORATIONS

### A. The functional scope of international production

#### 1. The functions of the firm

Firms exist in order to organize the production and distribution of goods and services. In the absence of firms, production and distribution would be organized largely through arm's-length transactions between the owners of productive assets, labourers, distributors and consumers. Many of those transactions are handled within the firm. The extent to which a firm internalizes any of those transactions depends upon (a) its ability to achieve economies of scale in production and distribution, and (b) its ability to achieve "coordination economies". In many industries, the growth of internalized activity suggests the presence of substantial efficiency gains.<sup>1</sup>

A company's various functions can be described as comprising its value chain (box V.1). The firm purchases, hires and trains productive inputs, combines those inputs to create goods and services, and distributes and markets those goods and services to its customers. Corporations have departments or divisions to handle these functions, under such headings as procurement, human resource management, marketing etc. (figure V.1). In addition, large corporations require several managerial functions, including capital budgeting, cash management, accounting, information systems, strategic planning, legal and government relations.

Most firms start by serving national or sub-national markets. They build upon the competitive advantages gained at home to serve international markets, either via exports or by investing to produce abroad; the latter—called *international production*—includes all activities organized and controlled by transnational corporations (TNCs) within host economies that contribute to the value of the firm's output, including the creation of

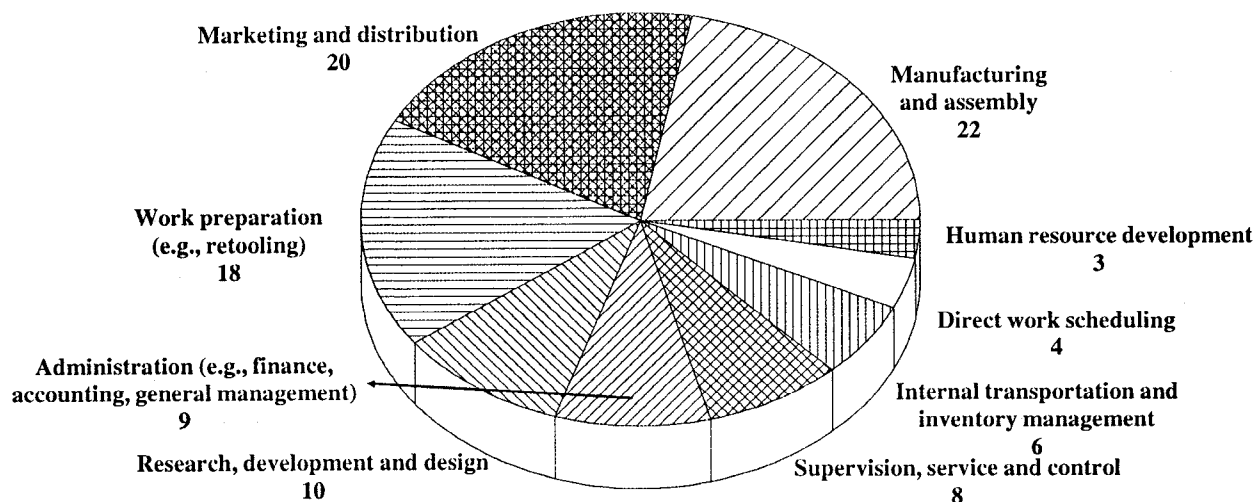
### Box V.1. The value chain of a firm

A value chain describes how a firm organizes and performs the discrete activities that add value to the goods and services it produces and sells. Some of those activities are linked together vertically and sequentially; others occur at any and all points and are linked horizontally.

Using the framework developed by Michael E. Porter (Porter 1990, pp. 40-44; Dunning, 1993, chap. 7), vertically linked activities include inbound logistics (for example, site selection), operations (for example, assembly in manufacturing), outbound logistics (for example, movement of products), marketing (for example, advertising and sales) and after-sales services. Horizontally linked activities include human resource management, research and development, procurement, finance, accounting and other management functions, sometimes called firm-wide infrastructural functions. Although every firm performs all those activities, their importance varies across companies and across products. Thus, operations and after-sales services are more important in automobiles and consumer electronics than in food and detergents. Furthermore, services firms define operations in a quite different way from manufacturing firms because the production and consumption of the service typically takes place at the same time. In addition, the importance of horizontal and vertical linkages may differ from one company to the next. The ability of a firm to identify and exploit those activities and linkages that matter most for its performance is frequently seen as a source of success (Porter, 1990, chap. 2; Prahalad and Hamel, 1993).

The activities comprising a value chain can be linked in different ways and can be more or less closely integrated, combining intra-firm, extra-firm and cross-border linkages. A corporation's strategy, its organizational structure, the external environment, demand for its output, public policies—all determine the form and closeness of the linkages.

**Figure V.1. Distribution of labour costs, by function, for the global operations of Swedish manufacturing firms<sup>a</sup>**  
(Percentage)



Sources: UNCTAD, Programme on Transnational Corporations, based on Gunnar Eliasson, *et al.* (1990), and from survey data from the Industrial Institute for Economic and Social Research, Stockholm.

<sup>a</sup> Data are for 1986, based on the global operations (domestic and foreign) of Swedish manufacturing firms, or divisions, with more than 200 employees. Percentages are approximate.

both goods and services and intermediate and final products. The choice between exporting or international production depends on a firm's assessment of its competitive advantages, the gains to be made from a particular location and the potential gains from internalizing cross-border activities within the organizational structure of the firm (Dunning, 1988, pp. 41-70). And the choice will often be strongly influenced by host country policies, including the degree and nature of trade barriers.

It is important to note that international production includes both goods and services. The services sector has grown rapidly throughout the world, and foreign direct investment (FDI) in services has expanded more rapidly than that in other sectors; it now accounts for over half the stock of outward FDI held by the five largest home countries. Moreover, services activities, such as research and development and marketing, are contributing a growing share of value-added within many primary and secondary industries (figure V.1). Since many services are not tradable and can be consumed only at the point where they are produced, the delivery of services via international production has grown rapidly. International production, then, involves not just the creation of goods in manufacturing processes, but all cross-border value-adding activities in extractive, manufacturing and services industries.

Firms engaged in international production need strategies and organizational structures that are suited to this form of economic activity. Strategies for organizing the cross-border production of goods and services involve choices about the international location of different activities and the degree of integration among the various entities that fall under the common governance of the firm. The range of possible strategies and structures has grown over time, as TNCs have responded differently to major changes in the international economic, technological and policy environment (table V.1). There is, however, a trend among TNCs in many industries to adopt strategies and structures that involve closer integration of their functional activities. Sometimes this involves giving primary responsibility for a corporate-wide function to an affiliate rather than the parent. Integration also

**Table V.1. Evolution of the strategies and structures of transnational corporations**

<i>Form</i>	<i>Types of intra-firm linkages</i>	<i>Degree of integration</i>	<i>Environment</i>
Stand-alone, e.g., multi-domestic	Ownership, technology	Weak	Host country accessible to FDI; significant trade barriers; costly communications and transportation
Simple integration e.g., outsourcing	Ownership, technology, markets, finance, other inputs	Strong at some points of value chain, weak in others	Open trade and FDI regime, at least bilaterally; non-equity arrangements
Complex international production, e.g., regional core networks	All functions	Potentially strong throughout value chain	Open trade and FDI regime; information technology; convergence in tastes; heightened competition

increases as the performance of corporate-wide functions is shared. For example, two or more affiliates may jointly do product-development work, which is then linked with process research and development by the parent.

## 2. Strategies

### (a) *Stand-alone strategies*

One common form of TNC strategy is the establishment of *stand-alone affiliates*—affiliates that operate largely as independent concerns within the host economy. The main link between a parent and its foreign affiliates is control through ownership; other links include transferring technology and the supply of long-term capital (box V.2). The parent may exercise very little control over the affiliate, so long as the latter is profitable. In general, a stand-alone affiliate is responsible for most of the value-added chain in its output, though it may develop substantial links with local suppliers and subcontractors. It may also hire local workers and managers, borrow and lend with local financial intermediaries and engage in international trade with other countries. Large TNCs can control many stand-alone affiliates, each serving a separate host economy.

A stand-alone affiliate can be seen as a smaller version of the parent firm (figure V.2). It might be in manufacturing, especially where the host economy can provide resource inputs and where imports of materials and components are difficult or expensive. However, stand-alone affiliates are particularly common in services. Since many services are not tradable, affiliates need to operate as self-contained units, replicating the production organization of their parents.

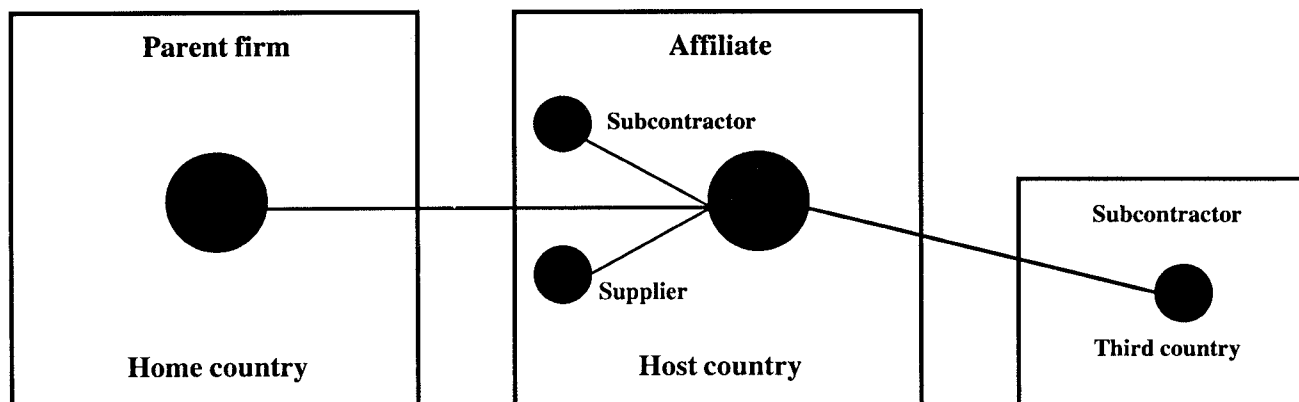
#### **Box V.2. An analysis of strategies of transnational corporations**

While the strategies of most TNCs have evolved over time, this evolution does not always follow similar or precisely defined paths. The categories of functional and geographical integration described in the text are meant to capture the essence of the processes under way. But these processes are complex and no set of categories can be all encompassing.

Few stand-alone affiliates are wholly independent of their parent TNCs. In fact, many begin as closely integrated affiliates, with the parent controlling most aspects of their operations and defining their objectives. However, it can be difficult to integrate many functions owing to trade barriers and limits on the movement of resources. In addition, the absence or high cost of the appropriate technology, especially information technology, can hamper the maintenance of close linkages. An affiliate may become more independent over time, in part as it becomes more profitable. Changes in government policies can also affect the links between affiliates and their parent firms: examples include trade barriers and exchange controls. And major political events, such as wars, may push an affiliate to achieve greater independence from its parent.

Clearly, the ability to stand alone depends on the range of an affiliate's competence. If it can produce components for a parent firm's manufacturing operations, but does not perform its own research and development, raise its own financing or do its own marketing, it will remain dependent on the parent. The purpose of the categories introduced in the present chapter—stand-alone, simple integration, complex integration, multi-domestic, regional and global—is to highlight the fundamental elements in the way that TNC strategies evolve towards greater functional and geographic integration both within and across firms.

Figure V.2. Stand-alone strategy

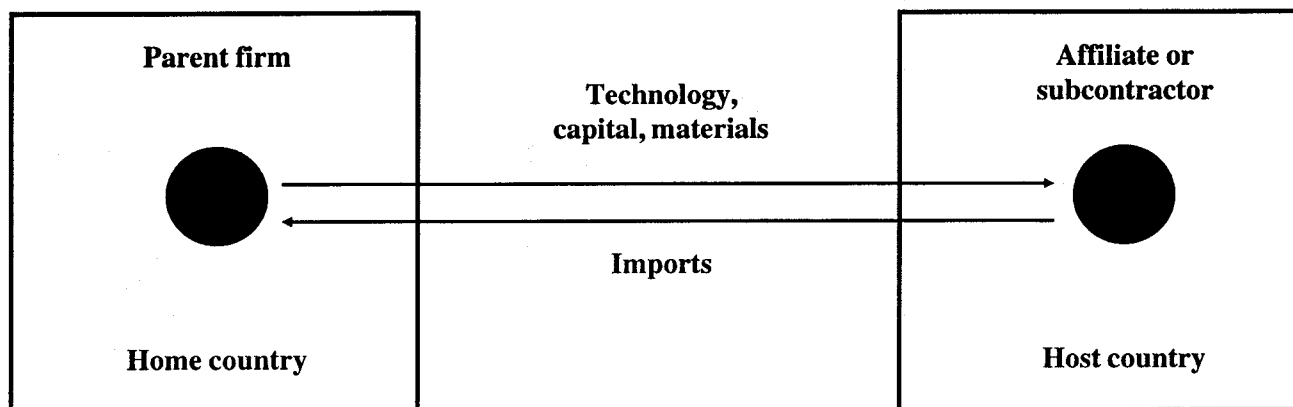


*(b) Simple integration strategies*

For some TNCs, their main involvement in international production is via outsourcing—some activities being performed in host countries and linked to work done elsewhere, mainly in the home country (figure V.3). In manufacturing, the clothing industry provides many examples of outsourced international production: large retail chains, such as Montgomery Ward (United States) and Marks and Spencer (United Kingdom), rely heavily on outsourced production from developing countries. In services, too, some TNCs use foreign affiliates or subcontractors to process data or write software<sup>2</sup>, services that have become tradable due to advances in telecommunications and computer technology.

Outsourced international production represents a transfer of some value-adding activities to locations other than the home country and the primary country or countries of final sale. The primary motive for outsourcing is to utilize the locational advantages of a host country with respect to a portion of a TNC's value chain. Outsourced production is controlled by the parent TNC either through ownership of the affiliate or through non-equity arrangements with local firms, such as subcontracting, which enables a TNC to concentrate on certain parts of the value chain while subcontractors specialize in the production of other usually labour intensive parts. In effect, subcontracted firms are linking themselves with TNCs or their affiliates, thus becoming part of the production system of TNCs. Components, for example, may not only be produced by a subcontractor; they may also be designed by it according to the specification of the TNCs. The extent and nature of linkages depends on where and how the outsourced production fits into a parent firm's value chain. Firms related to the parent firm through subcontracting arrangements often cannot stand alone, but must be integrated into the parent firm's value chain through the establishment of functional linkages. Thus, *integration* of some corporate functions is required to manage outsourced international production.

Figure V.3. Outsourcing



Outsourcing is predicated on the absence, reduction or elimination of trade barriers between home and host countries, on TNCs being able to invest in host countries and on transport costs being only a small proportion of the value of outsourced output. Since policy and technology are working to bring all these conditions about, the scope for outsourced international production is increasing considerably. Export-processing zones are often the base for outsourced production: the *maquiladoras* along the border between Mexico and the United States are an excellent example.

To a significant extent, outsourcing is cost-driven. Nike (United States), for example, subcontracts the manufacture of its athletic shoes and clothing to 40 separate locations, mostly in South and South-East Asia.<sup>3</sup> Design and marketing are done by the parent firm, with new designs relayed by satellite to a computer-aided design/computer-aided-manufacturing (CAD/CAM) facility run by a subcontractor in Taiwan Province of China. Prototypes are constructed and modified, and final plans are sent by facsimile to subcontractors throughout the region, where some Nike employees are present to ensure quality control. The output is sold world-wide. Since individual subcontractors are dependent upon the parent for design, standards and marketing, they are not capable of standing alone.

In recent years, Nike has been expanding in China, Indonesia and Thailand, which offer substantial savings on labour costs. As a result—and despite big improvements in manufacturing productivity—most subcontractors in the Republic of Korea have been unable to retain Nike's business. Nike is constantly introducing new products and operates in many price-sensitive markets. It therefore has both the opportunity and the need continually to seek out lower-cost suppliers. For some products, however, as in the electronics industry, the technological aspects of competitiveness are beginning to outweigh the cost considerations (box V.3).

(c) *Complex integration strategies*

In recent years it has become clear that, for some firms, international production can occur at almost any point on the value chain. *Complex integration strategy* is based upon a firm's ability to shift production or supply to wherever it is most profitable. Under complex integration, any affiliate operating anywhere may perform, either by itself or with other affiliates or the parent firm, functions for the firm as a whole. Each operation is judged in terms of its contribution to the entire value chain. Complex integration requires a willingness to locate various functional activities—not just production, but also research and development, finance, accounting etc.—wherever they can be done best to fulfil the firm's overall strategy (box V.4).

Under complex integration, there is substantial functional integration among the different processes and the different locations, although not every element of the value chain will be integrated to the same degree (figure V.4). Many firms have begun to undertake some functions in an integrated manner (box V.5).

Examples include:

- *Research and development.* A growing number of TNCs have been locating a small (but rising) portion of their research-and-development activities outside their home country. One reason is to take advantage of the skills available abroad. For example, the research by IBM on high temperature superconductivity was done in Switzerland. The growing importance of research and development has also led to more of it being located near factories and near markets. The big Japanese automobile producers, for example,

**Box V.3. Outsourcing and integration in semiconductors and electronics**

Outsourcing has been common in semiconductors and other electronics products, but its nature has been changing in recent years. United States-based merchant semiconductor companies expanded their output in the 1960s and 1970s in an increasingly competitive environment, so took to outsourcing in various Asian countries (UNCTC, 1986; Henderson, 1989). They did so largely through wholly-owned affiliates, as parent TNCs sought to retain close control over the underlying technology which, in this industry, is a major source of firm-specific advantages. Most corporate functions remained within the parent firm. Wafers manufactured in the United States were air-freighted to Asia, where they were assembled into circuits. The circuits were then air-freighted back to the parent firm for testing and distribution. In some cases, local firms developed the manufacturing skills and acted as subcontractors. Over time, and especially when Japanese semiconductor TNCs expanded into Asia, the Asian industry attracted more sophisticated parts of the process, including research and development and wafer fabrication. Some local firms, such as those from the Republic of Korea, have themselves become competitors in world markets.

The dissemination of semiconductor-based electronics throughout some manufacturing industries has been accompanied by widespread use of outsourcing. Contract electronics manufacturing (CEM), in which firms make semiconductor-based electronics components for use in automobiles, consumer durables, computers and other products, has grown rapidly and involves sophisticated products and manufacturing methods<sup>a</sup>. Many large TNCs use CEM as part of an outsourcing strategy to cut costs, but also to take advantage of the technical competence of the participating firms. Some of the producers are themselves TNCs, some are defence-contractors seeking new markets and others are high-technology start-ups. The development of CEM suggests that outsourcing may be a continuing feature of the technological division of labour, driven initially by cost considerations based on specialization.

a Paul Taylor, *et al.*, "Contract electronic manufacture", Financial Times Survey, *Financial Times*, 16 March 1993.

#### **Box V.4. Integrated international production in accounting: the case of Swissair**

In January 1993, Swissair started to transfer its revenue accounting (the calculation of amounts earned from and owed to other airlines by the carrier, which takes place on the basis of flight coupons collected) to Bombay, India, as part of its overall cost-reduction and results-enhancement programme. This activity is now undertaken by a newly established affiliate, Airline Financial Support Services India Pvt. Ltd., 75 per cent of which is owned by Swissair and the remaining 25 per cent by a local company, Tata-Consulting-Services TCS, Bombay.<sup>a</sup>

Airline revenue accounting involves the processing of flight coupons. Each document sold (a ticket for passenger services or an airbill for cargo services) becomes a flight coupon (sales record), which is passed on to Swissair's general ledger (formerly located at headquarters). Within the ledger, a liability per ticket number is recorded to the office issuing the document. Once the passenger/shipment is aboard, a copy of the flight coupon is picked up and sent to the general ledger, where it is recorded and processed in accordance with each step of the flight-services rendered (usually, one-way or roundtrip). Since revenues are only earned once the actual service is delivered, that is, when the flight actually takes place, each step is credited automatically to the account of the branch that originally sold the ticket, thus reducing the liability of the issuing branch.

Formerly, this accounting for documents sold was done locally in each branch, with the coupons shipped to headquarters in Zürich both in hard-copy form and via a direct electronic transmission. Beginning in October 1992, the transfer of accounting for coupon-transactions commenced with the training of personnel at the new affiliate in India. In January 1993, the affiliate began performing the revenue accounting for cargo services; it is expected to take over all passenger-related transactions in July 1993. The coupons are air-shipped to the affiliate in Bombay (either directly from each branch or via Zürich headquarters), where the entry into the general ledger is undertaken and credits and liabilities are processed. The affiliate transfers the results of these transactions to a central processing unit in Switzerland, which, while keeping the overall records, informs each branch with regard to its accounts. The Bombay office also takes care of the decodification of flight coupons (which are coded when issued with the agency/branch number, the International Air Transportation Association code and the sales personnel identification code).

In addition, the affiliate undertakes the inter-airline transfers and transactions. Since approximately 25 per cent of Swissair tickets are used on other airlines and approximately 20 per cent of Swissair flights are sold by other airlines, a considerable amount of the flight coupons are not Swissair tickets. Rather, they are issued by other airlines with which Swissair has an inter-airline cooperation agreement (currently, there are some 900 agreements in operation). These transactions require interline invoicing (debiting and crediting). While the recording of those transactions is now being processed in Bombay, the financial part takes place at the International Air Transportation Association inter-airline clearing-house in London. For example, a typical Swissair cooperation agreement involves some \$2 million in debts by Swissair to another carrier and \$1.5 million in credits to Swissair each month. The difference of \$500,000 is being paid through the International Air Transportation Association clearing-house in London. The coupon transfer is still based on the actual delivery of coupons to the other airline's offices. Only a few airlines are currently linked electronically and can exchange coupon information on-line. Swissair's central balancing system, however, remains at its headquarters in Zürich. The central processing unit still monitors all transactions and provides data analysis, that is, further value-adding services based on flight coupons (such as branch performance evaluation). The sales part of the transaction (the money collection) remains a function of each branch office, which transfers its results and surpluses to the headquarters in Zürich.

The move of revenue accounting to the Indian affiliate involved a substantial transfer of know-how and technology to that affiliate and subcontracting of software development to local software companies. In particular, the know-how transfer to the Indian affiliate included writing working-orders, education of personnel and continuing support to facilitate independent operations, as well as the implementation of the necessary electronic data-processing equipment (local data-capturing systems, international communication installations for data-transfer and information exchange). The software used for the establishment of the new electronic link between Bombay and Zürich was principally developed by Oracle Corporation, California.

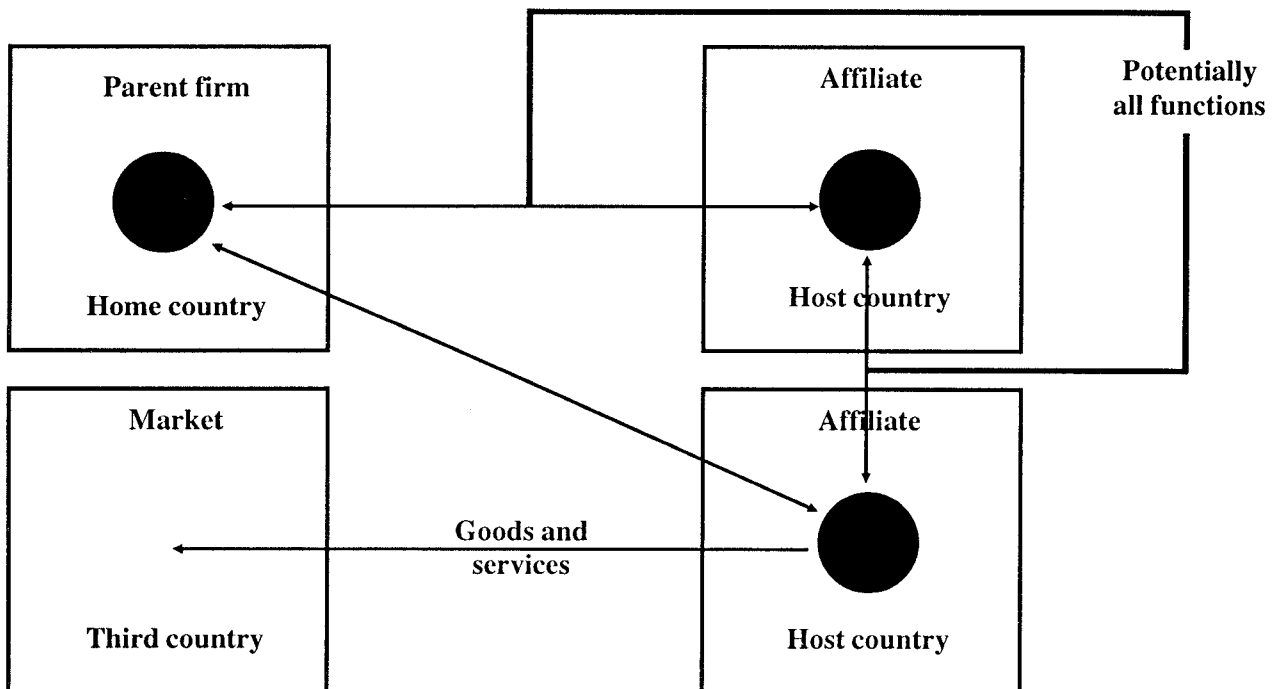
Once fully operational, the Indian affiliate will be more than a pure data-entry operation. It will also involve considerable value-adding services (proration, debiting and crediting of branch accounts, inter-airline transfer processing and billing, and decodification). While those operations are still at an infant stage, it is conceivable that these services will be sold to other airlines in the future, with the Bombay operation itself becoming a profit centre.

<sup>a</sup> Swissair press release No. 32/91 (Zürich, 10 July 1991) and information obtained from the company.

do some of their research and development in the United States, where they have begun to design models for world-wide sales. Ford has taken this kind of integration a step further with its Mondeo model, assembling a research, development and design team headed by Ford of Europe and linked to numerous sites in Europe and North America via computer-communication networks (see chapter VI). However, some research-and-development activities are harder to integrate. Rhône-Poulenc (France) has found that its pharmaceutical research is best done on a relatively small scale, and not linked with research and development in its affiliates.

- *Procurement.* ITT (United States), a producer of yellow-pages directories in eight countries, has centralized its world-wide procurement function for paper (its major input) in an affiliate in Belgium. This has enabled the firm to plan its world-wide purchasing and inventories of paper to take advantage of price fluctuations.
- *Manufacturing.* Automobile TNCs have adopted complex integration in the manufacture of components and the assembly of final products. Toyota has a network of parts and component producers in four ASEAN countries. Ford and General Motors have established cross-national networks within Europe, building on previously stand-alone affiliates which tended to be geared to a single country. Honda, Nissan and Toyota have established networks in North America and, in Nissan's case, Mexico as well. Parts and component-makers are more closely bound into the parent firm's strategies, supporting just-in-time

Figure V.4. Complex integration



inventory systems, sharing research and development initiatives and being linked via information technology.

- *Accounting.* Owing to differences in national rules, accounting needs to be performed at the national level. However, information technology has allowed significant integration of accounting activities. For example, Swissair transferred its revenue accounting work to an affiliate in Bombay, India (box V.4). The affiliate, using technology supplied by Swissair, tracks earnings and receivables for the airline world-wide, based on the sum of coupons collected in daily operations.
- *Finance.* Liquidity management and other aspects of the finance function are, for many TNCs, being located where they best meet the needs of the firm as a whole. Taking advantage of innovations in information technology, the integration of the finance function can occur either at a home country location or with a foreign affiliate. For example, Pirelli (Italy) coordinates and guarantees its global financial commitments from a Swiss affiliate which is responsible for financing activities for the TNC as a whole. The United States affiliate of Siemens (Germany) transmits daily financial information to headquarters, where system-wide financial management occurs.
- *Training.* As one aspect of complex strategies, TNCs often try to transfer skills between parents and foreign affiliates and between affiliates. Ford (United States) and Mazda (Japan) have sent production workers from their jointly operated factory in Hermosillo, Mexico, to Japan and to Ford factories in Europe for training. The engineering team that set up the production line for Ford's Mondeo in Belgium performs the same function in the United States, and trains local engineers in the process. Motorola

#### **Box V.5. The evolution of complex integration: the case of Xerox**

At the beginning of the 1980s, Xerox (United States) essentially operated a multi-domestic strategy. Its major foreign affiliates were often joint ventures with local investors (for example, Rank Xerox in the United Kingdom and Fuji Xerox in Japan); foreign affiliates had substantial autonomy to apply the basic copying technology that had given the firm its world-wide competitive advantages. Individual affiliates controlled their own product design, supplier networks, assembly operations and marketing and distribution, usually with little regard for any corporate-wide objectives.

During the 1980s, Xerox began to feel intensified competition from lower-cost and more flexible producers in Japan, especially Canon and Ricoh. In response, it restructured some of its key functions in order to lower costs and increase operational efficiency. Research and development on products is done by functionally and geographically integrated teams, which have responsibility for developing and introducing new products in all of Xerox's sales areas. The company connected design, engineering and manufacturing activities through local area networks, so that teams with members from each of those areas could focus on a single product. Procurement is done by a group drawn from all Xerox affiliates, which reduced the number of suppliers from 5,000 to 400 (as of 1992). Xerox introduced greater standardization into manufacturing operations, so as to facilitate cross-plant cost and efficiency comparisons, and to ensure the use of best-practice techniques. The company used information technology to improve supply integration across national boundaries, and is experimenting with artificial intelligence techniques to integrate after-sales service. If successful, these techniques will allow customers to perform initial diagnostic tests via links with some central facilities, rather than relying solely on their local repair teams.

Xerox's restructuring appears to have been successful. The firm was able to recapture much of the market share lost to competitors and its cost growth slowed while revenue growth accelerated. Xerox is continuing to develop new, integrated structures, as it seeks to create greater efficiencies in product development and reduce the time and cost of introducing new models (Hoole, 1992; Howard, 1992; Dickson, 1992).

(United States), as part of its expansion in China, is sending Chinese engineering recruits to Motorola facilities in Hong Kong, Singapore and the United States for training, and is rotating top management trainees for its Chinese affiliate through almost all of its semiconductor manufacturing operations world-wide.

- *Corporate planning.* Asea Brown Boveri (ABB) (Sweden and Switzerland) conducts corporate planning through a 13 member executive committee, including the chief executive officer and 12 executives, each responsible for a business segment, a region or a corporate-wide function, and many working out of an affiliate. The committee meets every three weeks in different locations. ABB's matrix structure, with each unit reporting simultaneously to a business segment headquarters and a country headquarters, and its use of a company-wide management information system, permit a rapid two-way flow of information and allows key aspects of corporate-wide planning to take place in regional and product headquarters in host countries.
- *Legal.* General Electric (United States) has integrated its legal activities to conform with the integration of its main lines of business. Legal activities are located within the headquarters of major business segments, both in the home country and in major regions. A legal office in London handles firm-wide coordination, including international acquisition activity.

### 3. Complex integration and the world economy

Transnational corporations have been adopting complex integration strategies because of major changes in the world economy. These include advances in information technology, some cross-national convergence in demand patterns and an intensification of competition world-wide.

#### (a) *Information technology*

Advances in informatics and telecommunications have increased the capacity to process and communicate information, and have reduced costs. For example, the price of a computer with a processing power of 4.5 million instructions per second fell from \$4.5 million in 1980 to \$100,000 in 1990 (current prices), with a projected price of \$10,000 in the year 2000 (Morton, 1991, p. 9). Such changes have allowed information technologies to be decentralized within TNCs and used throughout the value chain, which paves the way for the spread of flexible production technologies and new management and research-and-development practices.

Information technologies are also critical in coordinating activities throughout the value chain. In rather the same way as multi-plant and multi-divisional strategies created the need for greater coordination and a bigger managerial structure, so the development of complex integration strategies has increased the need for TNCs to manage their cross-border networks. Examples include Benetton (Italy) and Levi Strauss (United States) in the clothing industry and IKEA (Sweden) in the furniture industry. These are all TNCs that have used information technologies to match production more closely to demand in all the countries in which they operate. Research and development, especially in such industries as aerospace, automobiles, electronics and biotechnology, is dominated by the new information technologies.

Information technology also allows the value chains of firms under separate ownership to become more integrated. For example, one firm's shipping department may be linked electronically with another firm's purchasing department to speed the flow of goods between them. With communications technology, TNCs can combine key resources in order to pursue certain strategic objectives.

New information technologies both facilitate and require new forms of organization. The speed, ease and cheapness of communication are helping to undermine hierarchical reporting systems and have increased possibilities for horizontal communications across functional and geographical lines. To take advantage of the new technologies, firms need more flexible reporting and organizational systems; this is especially true of research and development and financial management.

**(b) *The role of demand***

Some TNCs have shifted to complex integration because they want to serve world-wide markets. Growing consumer demand and some cross-national convergence of *consumer tastes* have contributed to that trend. As a result, an increasing number of products of identical or similar design are being sold in many markets. Examples include clothing, electronic goods, cameras and recorded music. Other products, including some automobile models, are often sold in different markets with only minor alterations.

The tendency for demand patterns to converge is due partly to a convergence in income levels since the Second World War in the more advanced economies, leading to a greater similarity in spending patterns, partly to the spread of communications technologies and an increase in tourism and educational and cultural exchanges, which increase the cross-national visibility of national consumption patterns, and partly to marketing efforts by TNCs. As products become more standardized across countries, the ability of firms to be present in multiple markets increases. It also becomes necessary for firms to be present in these markets to challenge competitors and strengthen their own positions throughout the world (Ohmae, 1985).

Despite the convergence of consumer tastes, many products remain differentiated owing to important differences in culture, economic conditions and government regulations across countries. For example, the rationalization of the white goods industry within Western Europe has been limited by differences in demand patterns with respect to the size and design of household appliances. In addition, the growth of flexible production technologies has made it possible for firms to tailor output to niche markets without suffering large penalties in terms of higher costs, as happened under mass production. Such differences in demand and production suggest that national and regional factors will continue to influence the future strategies of TNCs (box V.6).

**(c) *Intensified competition***

One powerful force driving complex integration has been the intensification of international *competition*. Over the past 45 years, the sustained decline in tariff barriers and the spread of productivity growth have intensified competition across countries and brought many new competitors onto the world scene. The number of TNCs and their foreign affiliates has expanded enormously, and they come from an ever wider range of home countries. In 1968-1969, almost 60 per cent of the 7,000 TNCs from 14 developed economies came from just two home countries, the United Kingdom and the United States. At the beginning of the 1990s, four home countries—the

Federal Republic of Germany, Japan, Switzerland and the United States—accounted for 49 per cent of the 24,000 TNCs based in the same 14 developed economies; the United Kingdom was seventh in importance as a home country. The TNCs from developed economies concentrate their FDI mainly in other developed economies, creating a substantial TNC network that includes large amounts of intra-industry cross-investments (TCMD, 1993c).

These trends have pushed TNCs to seek new ways of gaining international competitive advantages. They have increased their efforts to cut costs by locating abroad and by paying close attention to different elements of their value chains. One example is the centralizing of procurement, often made possible by innovations in information technology. Studies indicate that TNCs with integrated procurement achieve greater long-run cost savings, through improved quality and shorter product-development schedules (Monczka and Trent, 1992). Similarly Japanese TNCs pioneered the integration of suppliers and subcontractors more closely with production and assembly, to achieve just-in-time inventory management and quality-control objectives. Now TNCs are increasing their ties with suppliers to foster a two-way flow of technological innovation. It is precisely pressures of this kind, combined with the opportunities offered by information technologies, that foster the growth of complex corporate strategies.

#### **Box V.6. Marketing by transnational corporations: global products and local tastes**

In response to an increasing uniformity of tastes for some products, TNCs sometimes opt for a concerted marketing strategy. Global brand names, such as Coca Cola (United States), McDonald's (United States), Nestlé (Switzerland), Philip Morris (United States), Procter and Gamble (United States), Toyota Motor Co. (Japan), Kellogg Co. (United States) and Unilever (United Kingdom/Netherlands) are advertised world-wide, often using the same (or a slightly modified) theme (Klein, 1991). Nestlé, for example, has restructured its operations along product lines and created a strategic business unit for each of its global brands (Nescafé, Nestlé, Friskies and Buitoni). The Buitoni unit provides guidance on marketing, including the advertising of its products to all its affiliates.<sup>a</sup>

Quest International, a food ingredients affiliate of Unilever that operates independently of its parent, used to have separate sales forces in each country. As its customers changed their demands, however, Quest International's various units in different countries started to work together. The company provided marketing services and intelligence to local managers selling its products, including information on new product launches (Jenster and Hover, 1992).

Even for internationally known products, however, global marketing strategies sometimes need to be modified to suit local or regional tastes. In advertising, for example, Coca-Cola has developed a pan-European television campaign with a new logo for the European market.<sup>b</sup> Toyota allows distributors in each country to manage their own sales efforts (with the exception of the marketing of Lexus, a luxury car, for which a more unified marketing approach was adopted).

<sup>a</sup> Suzanne Bidlake, "Nestlé adopts the personal touch", *Marketing*, 19 November 1992, pp. 24-26.

<sup>b</sup> Alison Fashey and Jennifer Lawrence, "Coke thinks regional in the U.S.", *Advertising Age*, vol. 62, Issue 50 (25 November 1991), pp. 1 and 36.

## B. The geographical scope of international production

### 1. Multi-country strategies

In these strategies, an affiliate primarily serves the host country market while the parent TNC controls several affiliates in different markets (box V.7). The existence of trade barriers, including high local content requirements, has frequently required TNCs to adopt such strategies in order to enter specific host economies. In some industries, for example retailing and food production, these strategies are adopted because of the difficulty in achieving economies of scale and the persistence of particular national tastes and habits. Many services TNCs adopt multi-domestic strategies because what they are selling is essentially non-tradable. In addition, small and medium-size firms often concentrate their efforts on serving markets close to home.

In recent years, technological advances in transport and communications have reduced the costs of cross-national coordination. As trade barriers have been reduced and regional economic groupings formed, some TNCs have turned affiliates that previously served single countries into part of a more integrated production network to serve a larger market. That has occurred within the European Community as part of the transition to the Single Market. It has also happened in the four-nation Southern Cone Common Market—Argentina, Brazil,

#### Box V.7. Multi-domestic strategies of transnational corporations

Multi-domestic strategies remain important for many TNCs within the overall context of greater cross-national integration, frequently as a component of complex strategies. Unilever (United Kingdom, Netherlands), for example, seeks a balance in food, its largest product group, between centralized activities, such as research, finance and packaging, and the need to stay close to local markets. In some instances, this has been achieved by buying a local company to obtain access to a market niche. In France, Unilever acquired Boursin, to operate in a specialty-food area with a strong national base. Boursin has remained largely autonomous within the Unilever corporate structure. At the same time, while Unilever has organized its detergent business on a regional basis in Europe and North America, it has kept a national structure in Asia, largely to meet differences in consumer tastes (Maljers, 1992).

Transport costs loom large in some product areas, leading to multi-domestic manufacturing operations. Nestlé (Switzerland) has adopted global strategies for marketing its highly visible brand names. However, it manufactures chocolate in 23 countries for local distribution, due to the high cost of transporting raw materials, particularly milk and sugar (Yip and Coundouriotis, 1991). Government rules on procurement also foster multi-domestic operations. Asea Brown Boveri (Sweden and Switzerland) builds locomotives for government contracts that are designed for alpine terrain to meet stringent environmental standards in Switzerland. Yet Asea Brown Boveri also manufactures locomotives in India to comply with that country's local content requirements for government suppliers (Taylor, 1991). In the food industry, multi-domestic manufacturing is often required to satisfy national regulations.

Multi-domestic strategies are also followed to gain or protect market shares in host countries. In the case of ABB, its organizational structure allows affiliates to compete as if they were national companies in industries where local presence is helpful, while drawing upon the parent firm in such areas as core technologies, design, component manufacturing, managerial expertise and finance. The firm is organized into a matrix structure, in which affiliates are responsible to both a global manager of the business area and the head of the local affiliate. Global managers are based throughout the world—for example, the power transmission business, headquartered in Germany, oversees 25 factories in 16 countries—and are responsible for firm-wide strategies on exports, manufacturing capacity, employee development etc. At the same time, nationally-based managers are responsible for proving themselves competitive within their market areas.

Paraguay and Uruguay—in Latin America: Ford (United States) and Volkswagen (Germany) are two examples.<sup>4</sup> Transnational corporations are integrating affiliates in Mexico into a North American production network, in anticipation of a North American Free Trade Area.

## 2. Regional strategies

Many TNCs have production networks that are organized primarily along regional lines (box V.8). *Regionalized international production* includes affiliates located in various host countries within a single region, along with non-affiliated companies acting as suppliers and subcontractors. Final assembly can occur anywhere within the region, and the major market for the product is the same region. Regional networks of TNCs exist in Europe (Central and Eastern, as well as Western Europe), in North America (especially with the growth of FDI into Mexico in recent years) and in East Asia (UNCTC, 1991a, pp. 44-53). They are also reflected in FDI stocks and flows to developing countries from the three Triad regions—the European Community, Japan and the United States—which suggest a clustering of FDI along regional lines (chapter VII). United States TNCs are the biggest investors in much of Latin America and the Caribbean, Japanese TNCs are increasingly dominant in Asia, and TNCs from the European Community are strongest in Central and Eastern Europe and much of Africa (TCMD, 1992a, pp. 32-46). Similar clusters exist for strategic technology alliances (Hagedoorn and Schakenraad, 1991).

Changes in *policies* have spurred TNCs to adopt regional strategies, especially in Europe and North America. The lowering of tariff barriers, the liberalization of FDI regimes, the deregulation of many industries (especially in services) and the privatization of state-owned companies—all have helped to boost FDI. The establishment or strengthening of regional integration agreements covering both trade and FDI—including the European Community's Single Market, the European Economic Area and the North American Free Trade Agreement—have increased the incentives for TNCs to develop regional strategies. However, the regional strategies of TNCs in East Asia have largely developed in the absence of intergovernmental agreements; instead, they have been fostered by the lowering of trade barriers in the region, the increasing competitive strengths of many East-Asian countries and the shift of Japanese TNCs towards lower-cost locations after the yen rose sharply in the mid-1980s (Ostry, 1992b).

In some circumstances, regional integration agreements may also impose limits on TNC regional strategies. Regionally integrated production requires free movement of capital, technology and people, not just free movement of goods and services. On its own, trade liberalization is not enough to stimulate the fuller integration of production that could result from TNCs strategies.

## 3. Global strategies

Transnational corporations have often been described as having *global strategies*. According to Peter Dicken (1992, p. 1), globalization “implies a degree of functional integration between internationally dispersed economic activities”; globalization “is a more advanced and complex form of internationalization”, which, in turn, involves “the increasing geographic spread of economic activities across national boundaries”. The term

also describes the approach of many TNCs that want to be in all the world's largest markets, in order to take advantage of the growth and convergence of demand, as well as to compete effectively with other corporations.

### **Box V.8. Regional strategies of transnational corporations**

In Europe, many TNCs have adopted regional strategies, partly in response to the Single Market initiative, which have led to considerable restructuring and concentration of production. Unilever (the Netherlands and the United Kingdom) rationalized the manufacture of toilet soap in Europe, cutting the number of factories from 13 to four between 1973 and 1989. Its four key units, located in Austria, France, Italy and the United Kingdom, supply the entire European market and each has a separate line of products (Howelles and Wood, 1991, pp. 77-78). Unilever has also combined its 16 separate affiliates into a single cleaning and hygiene business, Lever Europe, which is responsible for product development, sales and distribution. With the new structure, Lever Europe's first new product was available almost simultaneously in 17 European countries (Williamson, 1992, p. 74). Euro-facilities were also created in food production; for example, Unilever's frozen meals are manufactured in Italy and distributed across the region.

Thomson (France) rationalized television manufacturing on a regional basis. Its plant in Germany concentrates on high feature, large-screen television sets, the one in France on high-volume products, and those in Spain and the United Kingdom assemble low-cost, smaller sets. The regional strategy adopted by Thomson separates manufacturing from marketing and distribution. The four assembly plants do not sell to retail customers. Instead, they hand their products to a separate regional marketing and distribution organization. Sourcing of raw materials and components has also often been reorganized on a regional basis. For example, Hoechst (Germany), facing the problem of lack of company-wide standards for materials and components, established a central European purchasing unit, which supplies its European affiliates.

Similar moves have also been made by non-European TNCs to reorganize their operations in Europe. Procter & Gamble (United States) coordinated its affiliates in Europe by setting up Euro Brand Teams. Each team is headed by the general manager of the affiliate that has special competence in that business. Product and advertising managers come from other affiliates, and the managers in finance, procurement and product development operate from European headquarters. Quaker (United States) created a European headquarters in Brussels, which fully integrated some functions, such as finance and procurement (including the entire supply chain). Marketing is done by individual affiliates, and adapted to local conditions. Yet, the regional headquarters is responsible for coordinating the group's strategy and does the market surveys.

Japanese TNCs follow regional strategies, mainly in the manufacturing of automobiles and electronics (Miller and Armstrong, 1992). For example, Toshiba has established a holding company in the United States, Toshiba America Inc., which has control of all affiliates there. Affiliates report both to it and to product managers in the head office. Since 1992, affiliates in Canada and Mexico also report to the President of Toshiba America, Inc.

In automobile production, Japanese firms have built a system of regional networks. In South-East Asia, some Japanese TNCs are investing in an intra-ASEAN manufacturing system. A typical case of parts procurement within the region is Mitsubishi Motors, operating in Thailand, but incorporating parts produced by Mitsubishi plants in various ASEAN countries. Nissan and Toyota have similar cross-supply arrangements. Those investments have been encouraged by the ASEAN secretariat.

The regional approach is also evident in research and development. For most TNCs, basic research laboratories are based at home and supported by smaller applied research laboratories in the major production plants abroad (Warrant, 1991, pp. 85-91). In some cases, regional units specialize in certain scientific fields or stages in the research-and-development process. For example, Du Pont (United States) has moved the headquarters of its agricultural research to Switzerland. Glaxo (United Kingdom) was able to coordinate the development of a new drug with joint research at its different sites in the United States and some European laboratories. Fujitsu develops computer systems business (hardware and applications software) from its research and development facility in the United Kingdom to serve the European market, and is planning to strengthen this function in the United States. Toyota's research-and-development organization, headed by the technical centre at Toyota headquarters, has been extended throughout Europe, Japan, and the United States. The regional centres support global product development through an exchange of information with design centres in Japan.

However, the world-wide spread of products and brand names is not necessarily accompanied by a similar geographic spread of all the activities in the value chain. Indeed, some TNCs initially aim to meet global demand by producing most of their output at home and then selling it abroad. Even then, some functions (such as finance) may be done on a globally-integrated basis.

Transnational corporations are frequently able to serve global markets with networks that are concentrated on a regional or subregional basis. Prominent examples include the largest Japanese TNCs in the automobile industry. Honda, Nissan and Toyota are all establishing regional networks for the production and distribution of automobiles in each of the major Triad regions. Each network is linked to the parent corporation through ownership and technology, and obtains materials and components from affiliates and non-affiliated firms outside its region. All sell some of their output outside their regions, and their products are quite similar across regions. However, the bulk of the value added remains within the primary region of operations. Thus, these TNCs are meeting global objectives through a regional organization of their value chains. At the same time, these same firms are introducing elements of cross-regional integration into their regional networks.

Over time, the pressures of competition are likely to ensure that TNCs spread their activities more widely across the world. At present, however, relatively few firms are integrating production beyond the regional level, and for only a limited number of corporate functions. The establishment of regional economic arrangements, in some cases with barriers to extra-regional trade, may be restricting the growth of global strategies.<sup>5</sup>

### C. Conclusions

The present chapter has described the evolution of TNC strategies from those involving simple functional and geographical links between parent firms and their foreign affiliates towards those involving broader and more complex forms of integration. This evolution continues, as TNCs seek to protect existing competitive advantages and develop new ones. Older strategies remain, however, represented, for example, by stand-alone affiliates. And in some countries, local-content requirements mean that TNCs must serve a host country market via a multi-domestic strategy. But the same firms may serve another market through a regional strategy with complex integration of the main corporate functions.

Looking ahead, various developments could lead to less, not more, integration. For example, the spread of flexible production systems has allowed firms to use small-batch production to a much greater extent, providing a shield from global competitive pressures. Small-batch production requires less integration of manufacturing processes, reduces the minimum size of market required for profitable operations and permits firms to exploit niche strategies. Since small-batch production works well for small and medium-size firms, it is a counterweight to the forces pushing towards integrated international production. The same is true of non-tariff barriers to trade.

The picture, therefore, is mixed. Strategic evolution will not necessarily lead to most functions or most TNCs going global. The evolution of strategies is linked to changes in organizational forms, which are discussed in chapter VI. A related issue, presented in chapters VI and VII, is the link between the development of integrated strategies and structures and the growing integration of the world economy.

## Notes

- 1 The classic statement of the economic rationale of the firm, originally published in 1937, is Coase (1988).
- 2 Sanita Wadekar Bhargava, "Software from India? Yes, it's for real", *Business Week*, 18 January 1993.
- 3 Mark Clifford, "Spring in their step", *Far Eastern Economic Review*, 5 November 1992, pp. 56-57.
- 4 Geri Smith and John Pearson, "The new world's newest trade bloc", *Business Week*, 4 May 1992, pp. 50-51.
- 5 John Griffiths, "Toyota reveals names by key European car parts supplies", *Financial Times*, 11 December 1992.