Corporations from Developing Countries

Impact on Their Home Countries



Transnational Corporations and Management Division Department of Economic and Social Development

Transnational Corporations from Developing Countries

Impact on Their Home Countries







NOTE

The Transnational Corporations and Management Division of the United Nations Department of Economic and Social Development serves as the focal point within the United Nations Secretariat for all matters related to transnational corporations and acts as secretariat to the Commission on Transnational Corporations, an intergovernmental subsidiary body of the United Nations Economic and Social Council. The objectives of its work programme include to further the understanding of the nature of transnational corporations and of their economic, legal, political and social effects on home and host countries and in international relations, particularly between developed and developing countries; to secure effective international arrangements aimed at enhancing the contribution of transnational corporations to national development goals and world economic growth; and to strengthen the negotiating capacity of host countries, in particular developing countries, in their dealings with transnational corporations.

The term "country" as used in this Report also refers, as appropriate, to territories or areas; the designations employed and the presentation of the material do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. In addition, the designations of country groups are intended solely for statistical or analytical convenience and do not necessarily express a judgement about the stage of development reached by a particular country or area in the development process.

The following symbols have been used in the tables:

Two dots (..) indicate that data are not available or are not separately reported. Rows in tables have been omitted in those cases where no data are available for any of the elements in the row;

A dash (—) indicates that the item is equal to zero or its value is negligible;

A blank in a table indicates that the item is not applicable;

A slash (/) indicates a financial year, e.g., 1988/89;

Use of a hyphen (-) between dates representing years, for example, 1985-1989, signifies the full period involved, including the beginning and end years.

Reference to "dollars" (\$) means United States dollars, unless otherwise indicated.

Annual rates of growth or change, unless otherwise stated, refer to annual compound rates.

Details and percentages in tables do not necessarily add to totals because of rounding.

The material contained in this volume may be freely quoted with appropriate acknowledgement. Comments should be sent to the Director, Transnational Corporations and Management Division, United Nations Department of Economic and Social Development, United Nations, Room DC2-1220, New York, NY 10017, United States.

Telephone: (212) 963-2990; Fax: (212) 963-2146; Telex: 661062 UNCTNC.

ST/CTC/133

UNITED NATIONS PUBLICATION Sales No. E.93.II.A.8

ISBN 92-1-104410-3

Copyright © 1993, United Nations
All rights reserved
Manufactured in the United States of America

PREFACE

As the recognition has spread that transnational corporations from developing countries have become new actors in the international economy, their role has begun to inspire a growing body of literature. Research on this issue to date has focused on a relatively small number of these corporations, analysing the effect of their activities on host countries, especially developing countries. While a multitude of difficulties arise in measuring foreign direct investment by such firms, it has been argued that transnational corporations from developing countries can make a unique contribution to other developing economies—not only as an important source of capital, but also as a provider of technologies and other productive resources appropriate to the price and factor conditions in the host country. It has been further asserted that foreign direct investment by these corporations could become the catalyst for broader regional integration among developing countries, giving them greater bargaining power vis-à-vis transnational corporations from developed countries.

This study does not pursue the same line of research. Rather, it focuses on what has been largely neglected in the literature on developing-country transnational corporations, viz., the impact of foreign direct investment on the development process of the companies' home countries. An assessment is made of the contribution by transnational corporations from developing countries to such aspects of development as the balance of payments, employment, technology transfer and industrialization. The present volume also describes the growth of developing-country transnational corporations by analysing data on foreign direct investment and comparing competitive advantages of transnational corporations from a diverse sample of countries.

The increasing importance of transnational corporations from developing countries in the international economy may suggest that their contribution to the development process of their home countries has also grown. Therefore, the study evaluates existing policies towards developing-country transnational corporations and identifies areas where policy initiatives can enhance the contribution of these firms to their home countries.

It is hoped this study will increase the understanding of transnational corporations from developing countries and encourage the adoption of policies that help them play an important role in the development of host and home countries. The study was prepared by Sanjaya Lall, Panos Kanavos, Masataka Fujita and Rajneesh Narula, and edited by Robert Taylor.

Hamdan BenAissa

Director

Transnational Corporations and Management Division
Department of Economic and Social Development

New York, March 1993

CONTENTS

PRE	FACE		iii			
INT	RODU	CTION	1			
I.		NSNATIONAL CORPORATIONS FROM DEVELOPING COUNT				
	A.	Background	3			
	В.	Theoretical framework				
		1. Investment-development path	5			
		2. Ownership advantages of transnational corporations from developing countries	8			
	C.	Motives and characteristics	11			
		1. Motives for foreign direct investment	11			
		 (a) Market-seeking foreign direct investment (b) Export-oriented foreign direct investment (c) Resource-seeking foreign direct investment (d) Technology-seeking foreign direct investment (e) Efficiency-seeking foreign direct investment 				
		2. Characteristics of transnational corporations from developing of	ountries 15			
		(a) Technology (b) Location and spread (c) Size (d) Forms of investment (e) Specialization by industry				
II.		FOREIGN DIRECT INVESTMENT AND TRANSNATIONAL CORPORATIONS FROM DEVELOPING COUNTRIES: SOME BASIC DATA				
	A.	An overview	21			
	B.	Foreign direct investment from developing countries	23			
	C.	Home-country influences on outward foreign direct investment	34			
		1. Leading investors	35			
		(a) Hong Kong(b) Singapore(c) Taiwan Province of China(d) Republic of Korea				

CONTENTS

				Page		
		2.	Other leading investors	45		
			(a) Argentina (b) Brazil (c) India (d) Mexico	46 48		
		3.	Other investors	51		
		4.	Concluding observations	52		
III.	IMP	ACT	ON HOME COUNTRIES	57		
	Α.	Intro	duction	57		
	В.	Balance-of-payment effects 5				
	C.	Emp	loyment and income effects	67		
	D.	Tech	nnology and skills effects	71		
	E.	Indu	strial structure effects	73		
	F.	Gove	ernment revenue effects	75		
	G.		o-political considerations			
	H.	Synt	hesis and conclusions	77		
IV.	POL	ICY I	SSUES FOR HOME COUNTRIES	81		
	A.	Polic	cies in home developing countries	81		
	В.	Inter	national policies	87		
REFI	EREN	CES	•••••	89		
			F PUBLICATIONS OF THE TRANSNATIONAL CORPORATIONS MENT DIVISION	95		
			RE	101		

CONTENTS

Page

List of tables

II.1.	Stock of foreign direct investment from developing countries in 58 host countries, 1980 and 1990 :
II.2.	Outflows of foreign direct investment from developing countries, 1970-199126
II.3.	Outward stock of foreign direct investment from selected developing countries27
II.4.	The concentration ratio of three largest host countries for foreign-direct-investment stock from selected developing countries
II.5.	Foreign direct investment by Asian newly industrializing economies in ASEAN
II.6.	Sectoral distribution of foreign-direct-investment stock from selected developing countries
II.7.	Hong Kong: major foreign direct investments since 1986
II.8.	Taiwan Province of China: major foreign acquisitions in the United States since 1989
III.1.	Balance-of-payment effects of Indian foreign direct investment, up to 198260

INTRODUCTION

The growth in foreign direct investment (FDI) from some developing countries in recent years has raised several issues of interest. To the analysts of transnational corporations (TNCs), the emergence of developing-country TNCs raises such questions as how well traditional theories explain the rise of these TNCs, and what their competitive advantages are.

To host developing countries, the emergence of a new source of capital, technology and skills is a welcome development, especially in view of the diminishing proportion of total world FDI that flows from developed to developing countries. The specific characteristics of a significant portion of developing-country FDI—its export orientation based on labour-intensive manufacturing and its adaptation to developing country conditions—represent a major additional benefit. To host developed countries, the rise of developing-country TNCs carries mixed implications. Increased competition and the search for new technology in developed countries may be perceived as costs; the inflow of capital and skills and the prospects for expanded cooperation in third countries may be seen as benefits.

In the broader context of increased global trade and capital flows, the rise of TNCs from developing countries is generally regarded as a hopeful sign. It signifies the success of economic development and structural transformation in some parts of the developing world, and augurs well for a further liberalization of the world economy and an improvement of the general climate for FDI flows. At the same time, the fact that TNCs in the developing world are highly concentrated in a handful of the more industrialized, relatively better-off countries highlights the severe problems that impede development elsewhere.

The home countries of TNCs also face a number of issues arising from the outflow of capital and the overseas operations of their firms. In an evolutionary context, the growth of TNCs is a natural manifestation of the economic and industrial development of countries. Capital-exporting countries, however, tend to worry about the impact of overseas flow of capital, skills and technology on their domestic economies. Much has been written on these issues in the context of home developed countries, but relatively little work has addressed such concerns for home developing countries.

As a growing number of developing countries are entering the arena of FDI, these questions are assuming increasing significance. Should countries presumably short of capital be investing part

of that scarce resource overseas? Does investment abroad deprive the home country of skills and diffuse its precious technologies to potential competitors? Does it export jobs, especially from labour-intensive activities, when there is still unemployment or under-employment at home? Does it strengthen domestic industrial structure, or rather reinforce monopolistic tendencies by favouring large firms? Does it foster industrial restructuring or retard it? Does it promote or displace exports? Such issues are intrinsic to overseas investment, and likely to become more pressing concerns to Governments as the international involvement of their TNCs increases.

This volume attempts to assess the extent to which present empirical evidence can address such issues. The evidence is drawn from existing studies (on developed as well as developing countries), rather than from new empirical research. Still, a systematic review of these studies can help Governments in formulating policies towards FDI, and in anticipating the types of benefits and costs that this activity may involve.

The layout of the study is as follows. Chapter I deals with the current state of understanding of the phenomenon of developing-country TNCs: why they exist and how they differ from each other and from developed-country TNCs. Chapter II contains information on the scope, distribution and origins of developing-country FDI, and on the strategy and policies of home-country Governments that play a role in determining the nature, growth and orientation of those TNCs in various countries. Chapter III analyses the impact of TNCs on their home countries, under several headings: balance of payments; employment; technology skills; domestic industrial structure; Government revenues; and social, political and cultural relations; the analysis draws from the extensive body of literature on TNCs from developed countries. Chapter IV deals with policy issues. It suggests how home developing countries can maximize the benefits of their outward FDI, and how other countries and international organizations can help in this process. Policy issues concern both the provision of support information and guidance to TNCs, whether existing or potential, and the promotion of rules, policies and institutions to permit the full transfer of benefits from TNC operations to their home countries.

TRANSNATIONAL CORPORATIONS FROM DEVELOPING COUNTRIES: EMERGENCE AND CHARACTERISTICS

A. Background

One of the more significant economic phenomena in the latter half of this century is the rapid internationalization of capital through the modality of the transnational corporation (TNC). This has created an interdependence of economies of sovereign states, with profound effects on the evolution of both developed and developing countries. Outward foreign direct investment (FDI) can and does modify the process of development, for both the home and the host country involved in the investment. It is estimated that FDI expanded at nearly three times the growth rate of exports during 1985-1990 (TCMD, 1992, p. 320). Less widely recognized is the increasing role of TNCs from developing countries. Outward FDI flows from developing countries increased from 2.2 per cent of total outflows worldwide during 1981-1985 to 3.7 per cent during 1986-1991 (see table II.2).

Foreign direct investment by enterprises from developing countries is not a new phenomenon. Some Argentine firms became transnational in their operations in the early part of this century, while many large enterprises from industrializing countries set up trading branches overseas before the Second World War. Nevertheless, the real spurt of developing-country TNC expansion has occurred since the 1960s, driven by those countries that were relatively advanced in their industrial development and structural transformation from traditional to modern activities. Foreign direct investment—in the form of a significant commitment of human, financial and technical resources to productive activities in other countries—attained significant levels in the 1970s and grew rapidly thereafter. In this sense, the phenomenon is indeed new, marking the emergence of a new stage in the development of international industrial, trading and financial relations (Lall, 1982).

Policy makers in most countries are aware of the benefits and costs that inward FDI creates for the host economies of developing countries. The question of nurturing developing-country TNCs as a means of promoting domestic economic development and international competitiveness, however, has not received adequate attention.

The issue likely to be of greatest interest to home countries is the extent to which overseas activity by their firms can serve to increase the international competitiveness of their economies. Foreign affiliates can serve many useful functions in this context. They can market domestic exports in foreign markets, either as finished products or assembled into a final product; they can adapt products to local tastes and promote them more effectively; they can interact better with local policy makers; they can plug into local technology and serve as an antenna for parent companies in monitoring international developments; and their exposure to new competitors can sharpen management and technical skills, which can then be exploited at home. In view of these and other possible contributions, FDI can be used as a strategic tool by home developing countries in a world of intensifying competition and accelerating technological change.

However, before one can optimize the net benefits that accrue to the home economy, it is necessary first to appreciate the nature of developing-country TNCs. Conventional theory fails to provide an adequate explanation for their existence—much less their sustained growth.

B. Theoretical framework

The phenomenon of developing-country TNCs has implications for the theory of FDI (or international production, as it is increasingly known). The theory that has evolved in the past two decades, and recently achieved maturity and broad acceptance (Dunning, 1988), is based primarily (though not exclusively) on large, diversified TNCs from the advanced industrial countries, particularly the United States. The theory conveys the impression of size, spread and competitive prowess based on the possession of intangible ownership advantages. These are derived from advanced technology, brand names, organizational skills, communication networks and linkages with highly developed supplier, distribution and science-and-technology systems.

Transnationalization thus has become associated with leading-edge technology, marketing skill and organizational networks. The advantages bestowed by these assets allow firms to reach large size, dominate exports as well as direct investments (with the appropriate mix determined on the basis of locational costs and benefits), and to choose whether to exploit their position through licensing or ownership (with the choice whether to externalize or internalize advantages dependent on the relative efficacy of external markets for intangibles). This theory was developed largely for manufacturing enterprises; still, with amendments it applies equally well to service activities, which account for a growing share of world FDI flows. ²

The conventional determinants of international production do not, at first glance, seem to apply to TNCs from developing countries. These enterprises are not ostensibly on world frontiers of technology, marketing, size or organizational sophistication. While the general theory of international production can accommodate the emergence of all forms of FDI, much of the received wisdom on factors accounting for the size of TNCs appears irrelevant to the growth of FDI from developing countries. Thus, a new theory of FDI—or at least a substantial modification to the conventional theory—is needed.

The growing body of literature on developing-country TNCs in the 1980s has contributed important theoretical modifications and insights in this respect. Two strands are woven through this literature, both related to the nature of ownership advantages possessed by foreign investors. The more general theory links the nature of advantages and the mode of their exploitation to the stage of economic development of the home country. The other deals directly with the nature and determinants of the advantages of developing-country TNCs, particularly in comparison with TNCs from the developed world. The two theories are taken in turn.

1. Investment-development path

The basic idea of the so-called investment-development path (Dunning, 1981, 1988) is that the relationship between inward and outward FDI flows of any country goes through predictable stages of evolution as the economy develops. The net FDI position is a reflection of the competitive position of domestic enterprises, determined by their areas of specialization, the country's economic endowments and the nature of Government intervention in international and national transactions.

The investment-development path is based on the eclectic paradigm (Dunning, 1977, 1988, 1989), which posits that the existence of TNCs reflects the interplay of three sets of advantages: ownership, location and internalization (OLI).

- Ownership advantages are those that enable particular firms to grow and diversify more successfully than others at home or abroad. These advantages are based on the firm's own investments in creating intangible assets such as advanced technology, brand names, marketing skills or efficient organizational structures. A significant edge in at least one of these areas is a necessary condition for a firm in one country to set up production facilities in another and compete with local firms that, by definition, enjoy lower costs of communication, broader market contacts, deeper legal knowledge and other intrinsic advantages.
- Locational advantages arise at the country rather than the firm level, and determine the
 sites at which ownership advantages will be exploited. Such site selections are determined
 by the possession of particular resources, infrastructure, favourable policies and political
 stability.
- Internalization advantages determine whether specific advantages are sold to unrelated parties (say, to local firms on license), or exploited by the original holder (through FDI). The internalization decision depends on the existence and efficiency of markets in intangible assets and the significance of those assets to the creator's core business and profitability in world markets.

The nature of OLI advantages accruing to a country's enterprises reflects its level of development, market size, Government policies (on trade, industrial structure, domestic competition, intellectual property rights etc.) and diverse political, cultural and ethnic factors. Simplifying these numerous influences, the investment-development path identifies five stages in the evolution of a country's net FDI position which, in turn, is a function of its stage of development.

- Stage one. Countries at the first stage of the path are characterized as having very low levels of income and low inward and outward investments. Such poor economies offer few attractions to established TNCs, and domestic firms lack competitive advantages.
- Stage two. As incomes rise, infrastructure improves, markets grow and human capital is enhanced through education and training, inward investment starts to rise. Locational advantages now prove sufficiently attractive to TNCs. At this stage, outward investment is still low or negligible since few ownership advantages have been accumulated. However, some countries may start investing overseas to exploit natural resources or to "buy entry" into foreign markets.
- Stage three. In the third stage, countries have reached an intermediate level of industrialization. Both inward and outward investment will, ceteris paribus, play a significant role in the economy, although the orientation of economic policy—whether inward or outward 3—will affect the subsequent course of development and the role of direct investment. Inward-looking regimes will draw relatively less FDI inflows as domestic enterprises are promoted and become increasingly capable of handling complex technologies. The lower priority accorded to trade in such economies also restricts outward FDI, though the constraints of the domestic market may induce some enterprises to invest abroad.

Outward-oriented economies at this stage tend to have higher levels of investment flows in both directions. Their locational advantages are likely to be well developed, attracting foreign investors seeking an efficient, low-cost base. Their ownership advantages are likely to have been sharpened in a specialized set of activities by exposure to world markets, investments in education and technology and production of a relatively narrow range of products guided by comparative advantage.

The third stage encompasses most developing countries with significant outward FDI flows and with sizeable industrial sectors. These include the two highly successful East Asian newly industrializing economies (Hong Kong and Singapore), plus several new newly industrializing economies (Indonesia, Malaysia and Thailand); the largest Latin American countries (Argentina, Brazil and Mexico), plus the more advanced smaller economies in that region (Chile, Colombia and Venezuela); and a handful of other large Asian and Mideast economies (China, Egypt, India and Pakistan). Note that the categorization is not strictly by income: some low-income countries with large industrial bases are included, while several richer countries with low levels of industrialization are excluded.

Stage four. The fourth stage is reached when outward investment exceeds inward investment. Strong ownership advantages of domestic firms permit them to compete effectively with TNCs not only in the home market, but in overseas markets as well. Such outward investment often receives further impetus from the diminishing locational advantages in overseas production. A number of advanced industrial countries (including Japan, Germany and Sweden) can be defined as being at stage four, but a few developing

- countries (the Republic of Korea and Taiwan Province of China) may have reached that stage as well at the beginning of the 1990s (TCMD, 1992).
- Stage five. The fifth stage represents an "equivalency" stage (Dunning and Narula, 1992) in which there is a reconvergence of outward and inward investment. Ownership advantages become more firm-specific as countries at this stage possess roughly similar advantages; location of production is based on achieving rationalized investment through intra-industry production. The United States and the United Kingdom can be considered to have entered this stage.

The investment-development path was tested for 1979-1983. ⁴ Some of the explanatory variables—GNP per capita, education levels, urbanization—proved strongly intercorrelated. Others, like the degree of industrialization (proportion employed in industry and services) and trade intensity (exports plus imports as percentage of GNP), were less clearly correlated. The statistical exercises suggest that GNP per capita (and associated variables), the degree of industrialization and trade intensity are the most important variables affecting the growth of outward investment.

With respect to outward FDI, developing countries are grouped into three categories:

- the two smaller East Asian newly industrializing economies, Hong Kong and Singapore, which are the richest developing countries, have the highest stocks of per capita outward investment and are advanced on the path;
- countries that became export-oriented later and have more diversified industrial structures, with Government intervention in industrialization and investment flows (the Republic of Korea, Malaysia, the Philippines, Taiwan Province of China and Thailand); and
- countries persisting with import-substituting industrialization strategies and high levels of Government intervention (Argentina, Brazil, India and, until recently, Mexico).

The first group is nearing a stage of mature economic development which both embraces and emanates a strategy of international corporate integration (Dunning, 1988, p. 163). In the second group, the Republic of Korea and Taiwan Province of China are proceeding on a similar path. Of all developing countries, therefore, the East Asian newly industrializing economies are singled out for their progress towards economically rational specialization and integration in international production.

The investment-development path is useful and intuitively appealing. It places the emergence of developing-country TNCs in an evolutionary context, and identifies the broader determinants of the advantages that new entrants develop as industrialization proceeds. It allows for important strategic differences between countries, and correctly places the four East Asian newly industrializing economies in a class by themselves. Nevertheless, the framework remains very general, and fails to bring out certain important features of FDI by the newly industrializing economies. The framework itself is broad enough to admit qualification and refinement, which will be introduced later in this chapter.

2. Ownership advantages of transnational corporations from developing countries

The question that has intrigued most analysts of the developing-country TNC phenomenon has been the source of their competitive edge in world markets for investment. Theory has established that some advantage in intangible assets must exist if an enterprise is to become transnational. Yet, on the surface, developing-country firms appear to lack such assets—they possess neither advanced proprietary technology, nor established brand names, nor special marketing or organizational skills. Moreover, their competitors include not just local enterprises in the host countries, but established TNCs from developed countries with global production and communication networks (and affiliates in a number of developing countries). Nor does all investment by developing-country enterprises go to other developing countries: a significant and growing proportion flows to advanced industrial countries. Any explanation of ownership advantages must be general enough to account for these facts.

There have been two approaches to this question. One has its origins in the product-life-cycle literature; ⁵ the other is based on micro-level analyses of technological capability in developing countries (Lall, 1983). There is considerable overlap between the two approaches, and both have valid aspects—but the focus of attention is different, as are the predictions that emerge.

The product-life-cycle approach views developing-country enterprises as relatively passive recipients of technology and skills at the mature stage of their life cycle. This view is consistent with the comparative advantage of low-income developing countries, viz., the low cost of labour relative to capital.

The competitive edge of developing-country TNCs thus can be derived from one of three possible sources: first, the possession of technologies so mature that they have been phased out ("forgotten") by developed-country firms, but which have not yet been mastered by countries lower on the industrialization scale; second, an advantage gained by downscaling the technology (to smaller markets), making production more labour-intensive (to match lower wage rates) or adapting it to local raw materials; and third, a cost advantage arising from lower wages or overheads.

This theory of technological "trickle-down" with minor adaptation to developing countries suggests several conclusions. Developing-country TNCs will specialize in relatively labour-intensive, low-skill and low-technology activities; their operations will tend to be relatively modest in scale; their products will tend to be undifferentiated and sold mainly on the basis of price rather than distinct design or performance characteristics. Since these advantages are based on the absorption of mature technologies rather than independent innovation, they would be eroded over time as other developing countries build up their own capabilities. Moreover, these advantages could not be exploited in rich countries, where the largest markets lie. This scenario offers little hope for the independent survival and growth of developing-country TNCs over the long term.

An implicit assumption is that the absorption and minor adaptation of mature technologies is a relatively automatic or passive process that does not provide developing-country enterprises an independent technological base. It subscribes to the textbook view of technology, which differen-

tiates technological mastery (reaching a point on the production function) and adaptation (shifting to another point on the same function) from innovation (a shift of the function itself). This view of technology has been discarded by most current micro-level works on developing countries. These works adopt an evolutionary view in which firms are not on a given, well-known production function, and where shifts along the function curve—that is, adaptation—require technological effort and so constitute technological progress. The achievement of mastery in itself implies the building of new skills and capabilities, and thus considerable technological effort.

Apart from its simplified view of the process of technological diffusion and mastery, the product-life-cycle approach does not explain why developed-country TNCs, with widespread operations in developing countries, would not have access to similar adaptations or low-cost manpower as developing-country TNCs. Nor does it explain why a large proportion of FDI in developing countries by some capital exporters (Brazil, India and the Republic of Korea) is in highly capital- and skill-intensive activities. Finally, it sheds no light on why a significant and rising share of developing-country investment is flowing to advanced countries—including areas with highly differentiated products and advanced scale and technological requirements (such as automobiles, televisions, video recorders and microwave ovens).

Clearly, the competitive base of developing-country firms is founded on more complex processes than envisaged by the product-life-cycle theory. This is not to deny that the largest portion of developing-country FDI is concentrated in activities with low skill, scale, technology and marketing requirements. But the process by which technologies are mastered is not so passive as simple theory suggests, and its micro as well as macro (national level) determinants need to be better understood to explain both the simple and the complex activities undertaken by developing-country TNCs. ⁶

The second approach to the problem focuses on how technological mastery is acquired, and covers both simple and complex activities. Technological capabilities in both are built up by a gradual accumulation of skills, information and technological effort. The nature of the effort is very sensitive to the policy regime and to the local availability of the necessary technical skills, infrastructure, science and technology support and other relevant institutions (Lall, 1990). Thus, different settings and regimes produce very different sets of competitive capabilities.

To some extent, the process of capability-acquisition by each firm has individual (or idiosyncratic) characteristics. These idiosyncrasies are less marked in simple activities where the skills are easier to learn (and so to copy), and where technologies are embodied primarily in equipment (and so easier to diffuse) rather than in more complex, high-skill and high-technology activities. However, the development of a competitive edge even in the simplest activities requires considerable technical, managerial and marketing skills, and it is only countries endowed with the necessary education, training, trading and other facilities that can build up a significant TNC presence. The formation of TNCs in more advanced industries requires correspondingly greater endowments of more specialized skills and more focused domestic technological effort, with greater support from institutions in finance, technology and marketing.

The ownership advantages of developing-country TNCs are thus expected to vary by activity and by home country. By activity, advantages are expected to be found in the idiosyncratic features of accumulated skills, both managerial and technological; the uniqueness of the skills is relatively low for simple activities, increasing with the complexity (and learning period) involved. By country, ownership advantages are expected to rise with levels of education, degree of export orientation and sophistication in science-and-technology infrastructure; the extent to which the Governments intervene to develop indigenous technology and deepen the industrial structure also is a factor.

This capability-building approach has evident overlaps with the theories of the product-life cycle and the investment-development path. If a comparison were made of the capability-building and product-life-cycle approaches with respect to low and mature technologies, the sources of competitive advantage are similar: mastery of the relevant technology and the subsequent ability to adapt it. The capability-building approach emphasizes the accumulation of special marketing and engineering skills; the product-life cycle emphasizes cost advantages from cheaper technical manpower. What primarily distinguishes the two approaches is their application to more advanced activities. These do not fit comfortably in the product-life-cycle approach, which focuses on low and mature technology; by contrast, the capability-building approach provides several insights into how these activities are acquired and why they may yield unique firm-specific assets.

The differences between the capability-building approach and the investment-development-path approach are more a matter of detail and emphasis than of kind. Although both approaches emphasize the role of skill accumulation, trade and policies in building up ownership advantages, the investment-development path does not clearly specify the nature of interventions that affect competitiveness and their specific impact on different levels of competitiveness. Thus, Singapore and Hong Kong are considered similar, as are the Republic of Korea and Taiwan Province of China—yet each pair of countries differs between and among themselves. The differences are due partly to size and partly to the mode of intervention adopted (Lall, 1990); they also influence the nature and characteristics of the outward investment undertaken by TNCs of these countries.

The ownership advantages that emerge from the analysis based on the capability-building approach for developing-country TNCs are not very clear (Lall, 1983). They can arise from any or all of the industrial learning processes that occur in developing countries, so long as these processes are efficient. Such learning need not be confined to labour-intensive technologies, since many developing countries have acquired the skills and undertaken the technological and institutional development effort needed to master a range of capital- and/or skill-intensive technologies.

Relatively little emphasis is placed on cost advantages emanating from low-cost managerial labour, on the grounds that the cost savings accrued from a few expatriate personnel are likely to contribute only marginally to an investment's long-term success. The hypothesis of the product-life-cycle theory that downscaling and labour-intensive adaptations are generic sources of advantage is challenged by the technological capability-building analysis. If they were, traditional TNCs would have greater access to such advantages because of their greater exposure to developing-country environments and their advanced capacity to transfer skills and knowledge within the firm.