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<b>BOOK REVIEWS</b>	<b>115</b>
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**Raymon Vernon**  
**1913-1999**

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This issue of *Transnational Corporations* on "Forty years of international business scholarship: from Dunning and Vernon to globalization" was already closed when the sad news arrived: Raymond Vernon had passed away on 26 August 1999. He was an active member of the Board of Advisers of our journal. He was also a constant contributor of articles: his recollection of the Harvard Multinational Enterprise Project in this issue is his fourth article in *Transnational Corporations*. We wish to dedicate to his memory this issue addressing the impact of his work on the past forty years of international business research.

The editors

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**SPECIAL FEATURE:**  
**FORTY YEARS OF INTERNATIONAL BUSINESS SCHOLARSHIP:**  
**FROM DUNNING AND VERNON TO GLOBALIZATION**

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## **Preface**

The five original papers brought together for publication in this issue of *Transnational Corporations* were all presented in October 1998 at a special panel session of the annual meetings of the Academy of International Business in Vienna. The title of the panel, invited by programme chair Bruce Kogut of the Wharton School, University of Pennsylvania, was “From *American Investment in Britain* and the Product Cycle to the Global Economy”.

The objectives of the panel (and of the five papers presented in Vienna and published here after a normal refereeing process) were to conduct a retrospective analysis of United States foreign direct investment (FDI) from the 1950s to the 1990s, using two anchors. First was John Dunning’s 1958 book on *American Investment in British Manufacturing Industry* (Dunning, 1958). This was reissued by Routledge in June 1998 (Dunning, 1998), on its fortieth anniversary. Second was Raymond Vernon’s 1966 article on United States outward FDI, the product cycle model (Vernon, 1966). These two seminal contributions were related to the literature in international business and relevant work on globalization over the last 40 years.

As one of the first empirical studies of FDI in a host economy there are implications to be drawn from the Dunning book for host country policies towards FDI, both in the 1950s and now in the 1990s. As one of the key theoretical articles in the literature, there are implications to be drawn for home and host country policies towards FDI, and for corporate strategy, from the Vernon article. With today’s interest in globalization both of these studies are key building blocks in our understanding of the global economy.

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In the first paper, Dunning uses the modern analysis of transnational corporations (TNCs) (i.e. the “eclectic paradigm”) to revisit the main issues and empirical findings of his 1958 book. He also compares and contrasts the nature and determinants of United States FDI in United Kingdom manufacturing industry today with what it was in the 1950s.

Vernon’s short essay reports some personal observations about the important and influential Harvard research project on TNCs which he directed, beginning in the mid-1960s. He reports on the key studies carried out by his students and colleagues associated with the Harvard project. Again, these are reinterpreted using insights from modern globalization thinking. His warning about the unreliability of FDI data is, perhaps, his most important message.

Alan M. Rugman undertakes a careful assessment of the theoretical contributions of the 1958 Dunning book and the 1966 Vernon article on the product cycle. He analyses these two seminal contributions to the literature of international business across five dimensions and then relates these two works to the modern theory of globalization.

John Cantwell takes as his focus the critical role of technology generation and transfer to subsidiaries, based on Vernon’s article. He also assesses the transfer of technology in the mould of Dunning. Both early approaches assumed that technology took place in the parent firm’s home base. Cantwell finds that today’s literature is far advanced on this; for example, it often models technology as part of an interorganizational network, and empirical evidence shows that technology today is much more dispersed than was thought by Dunning and Vernon. Cantwell finds that United States subsidiaries in the United Kingdom now source technology locally according to host country, rather than home country, factors.

Edward Safarian interprets both the 1958 Dunning book and the early work by Vernon as evidence for public policies to liberalize FDI. Again, he sees technology as the core issue and finds that open policies towards it will help stimulate economic development. In a masterly overview of public policy towards FDI in the last 50 years, Safarian analyses the close links between firm-specific advantages



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and country-specific factors which need to be properly aligned to attract the highly mobile intangible knowledge assets of TNCs.

Together, these five papers present students and scholars in the field of international business with unique insights into the broad historical development of the field over the last 40 years. Yet in each of the five papers breadth of view is also accompanied by depth of analysis, in particular in the theoretical and empirical discussions of the role of technology in the home and host countries served by the TNC.

The help of Karl P. Sauvant and Kalman Kalotay in the preparation of this special issue is acknowledged. Also the comments of several anonymous referees proved to be extremely helpful.

**Alan M. Rugman**

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# The Harvard Multinational Enterprise Project in historical perspective

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**Raymond Vernon\***

The Harvard Multinational Enterprise Project was organized at Harvard Business School in the 1960s and 1970s. One of its primary strengths was to compile a reliable and broad database on the growth and spread of transnational corporations over time. The project produced key contributions to the literature of international business. These included the concept of the product life cycle, based on actual data about the performance and activities of United States-based enterprises of the time. This was not meant to be a grand theory, but a series of hypotheses to be tested within the context of the period. Today's theories of globalization need to be like the product cycle approach -- dynamic and relevant to their time and place.

## **Introduction**

With the interests of national economies becoming increasingly intertwined, the transnational corporation (TNC) seems positioned for another period as the target in a continuous tug-of war among political and economic interests.<sup>1</sup> There have, of course, been other such periods in the century just closing, marked by bitter disputes among Governments and by expropriations of foreign properties. Though the struggles in prospect are likely to raise many novel issues, they could prove even deeper and more significant than the outbursts of the century past.

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<sup>1</sup> I do not attempt to make that case here. But the reader who wishes to pursue the subject will find it developed in Vernon (1998).

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In periods such as these, political philosophers, economists, historians and poets have stepped up their observations about the nature, causes and consequences of TNCs. The literature they have created, reflecting their many different approaches, variously paints the TNC as an instrument for great good or great evil. If my expectations prove right, that literature will be greatly enriched in the decades just ahead.

For a 12-year period beginning in the mid-1960s, I directed a research project that came to be known as the Harvard Multinational Enterprise Project. With ample resources and a splendid team of students and faculty members, participants in the Project managed to add substantially to the existing understanding of the TNC, presenting their findings in several dozen doctoral dissertations, over 200 articles and several major data banks. When I was invited to try to identify some of the lessons of that exciting experience, therefore, I rose to the bait without any hesitation.

### **A subject for the eclectic?**

Anyone who has followed the growth in the literature of the TNC will be struck by its eclectic character. Researchers from numerous disciplines have had a hand in its making. For the most part, moreover, focusing on the TNC, these researchers have raised issues that were not occupying the mainstreams of their respective disciplines. They have tended to raise issues in various directions beyond their disciplines for an explanation of what they observed. As a rule, graduate business schools have been more tolerant of such tendencies than have institutions with a more discipline-oriented bent; so it is not surprising that much of the serious research on the TNC has been generated in business schools.

Looking back at the work of the Harvard Multinational Enterprise Project after several decades, I realize today that my own atypical training as a scholar must have had much to do with the approach pursued by many members of the Project. Every researcher comes to his or her task carrying the baggage of prior training and experience. My own background was especially complex. I joined the Harvard faculty in 1959, after having already logged 24 years of

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experience in various professional jobs in the public and the private sectors. During the early years of this string of assignments, without ever getting fully separated from the job market, I managed to fulfil the requirements of a Columbia Ph. D. in economics.

For 19 of those 24 years, I was a civil servant. In that capacity, I had been deeply engaged in a variety of tasks in the public sector, including the regulation of United States securities exchanges, the restructuring of Japanese industry under Allied occupation, the post-war reconstruction of Europe's economies, and the creation of a United States post-war trade policy. After that, I had had an exciting foray into big business as the Planning and Control Director of a United States firm. That was followed by a four-year assignment by Harvard as director of an ambitious research project, whose purpose was to analyse the economic, demographic and social forces that were shaping the New York Metropolitan Region.

I recount all this simply to make one critical point. My exposure to formal economics, though extensive and continuous through much of the 24-year period before I took up my research on the TNC, was achieved in a setting in which I was constantly exposed to the complexities, uncertainties and restraints that decision-makers encountered in the public and private sectors.

I came away from these experiences with great respect for the potential value of the static maximization exercises that form so critical a part of microeconomics. That respect was tempered, however, by the conviction that the direct value of such analyses as a rule is negatively -- not positively -- related to the size and importance of the problem involved. It is far easier to do a tight economic analysis of the costs and benefits of replacing a worker with a machine on the shop floor than an analysis of the costs and benefits of creating a new affiliate in Angola. To be sure, voluminous studies frequently accompany the decision whether to set up such an affiliate, many of which purport to provide serious projections of prospective gains and losses. But inside any complex bureaucracy such as a TNC, the relations of such studies to the investment decision itself are usually pretty tenuous.

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Why is the relationship so weak? Partly because big strategic decisions typically involve an evaluation of consequences, including costs and benefits, over an extended period of time. Inescapably, such evaluations usually entail projections that are subject to large margins of error; indeed, when such estimates are later compared with reality, the size of the error is often startling. We must resign ourselves to the fact that 10-year projections of Chinese exchange rates, growth rates, inflation rates and income tax rates, however meticulously done, cannot really provide a solid basis for deciding whether to set up an affiliate in China.

One major source of error in the projections required for major business decisions by TNCs comes from the fundamental need to factor in the responses of competitors. TNCs are not usually price-takers, facing an impersonal market composed of a large number of faceless adversaries. The games TNCs play are not games against nature, such as climbers of Mount Everest face as they brave the weather on their way to the summit. Instead, TNCs usually confront well-identified adversaries, each tailoring its moves to the moves of the others in the game. Each hopes to pursue a campaign that weakens its adversaries and drives them out of the game or that persuades the adversaries to turn from conflict to cooperation.

Where the consequences of a decision have wide ramifications over time and space, one-shot maximization decisions have only a minor role. Instead, the analyst must accept the vagaries of a Herbert Simon world (Simon, 1947), one in which critical information is unknown or unknowable, in which decisions that “satisfice” prevail over those that pretend to maximize, and in which game-theoretic concepts appear more useful than maximization exercises.

## **The research challenge**

What has this to do with the work of my colleagues and myself during the 1960s and 1970s? Consider the kind of issues toward which we gravitated and the way in which we addressed those issues.

Very early on, as we ruminated over the interactions between firms in the market, we realized the need to observe individual TNCs, firm by firm, over extended periods of time. Eventually, we developed

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several large data banks, tracing over many decades the growth of over 400 TNCs based in the United States, the Western European countries and Japan.

These enterprises covered the largest of the TNCs that were headquartered in these countries in the late 1960s. The production of goods in their respective home economies typically accounted for a considerable share of the home country's aggregate industrial production -- about two thirds of such production in the case of the United States. The exports of these enterprises characteristically represented an even larger share of the national total of the exports of their home countries. At the same time, their production affiliates located in foreign countries commonly generated a substantial share of the industrial output of the host countries; figures in the range of 10 to 30 percent were typical.

Drawing on the records of these firms and others, a number of us studied behaviour patterns associated with the product cycle. None of us had pretensions at the time that we were creating a grand theory. We were aware that we were drawing our generalizations principally from large enterprises in advanced industrialized countries performing in a period of rapid growth, changing technologies and imperfect information, and operating in a global environment with pervasive restrictions on trade and investment. We took note of the fact that such firms, especially those headquartered in the United States, were responding to the needs of a market with the world's highest per capita income, highest labour costs, and most abundant capital resources. We saw the United States-based TNCs as engaged in a series of strategies that were rational enough in the circumstances, epitomizing a version of Simon's satisficing behaviour.

When I published my first paper on the product cycle in 1966, I labeled its central propositions as hypotheses rather than as "theories" or as "laws", hoping to buttress the point that these were ideas appropriate only to a particular set of circumstances in a particular period (Vernon, 1966). But my cautions went unheeded in many quarters. When translated into Korean and Chinese, the product cycle concept was treated as if it had been transcribed directly from Mount Sinai's tablets.

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Even some of my own students, who should have known better, were reluctant to recognize the transitory quality of such ideas as the product cycle. As many of you are aware, I published an article in the late 1970s stressing the fact that the international environment had changed considerably during that decade, reducing the differences between the United States and other high-income countries (Vernon, 1979). I conjectured that these changes had reduced the operational value of the product cycle concept, at least as a model that explained the relation between the United States and other high-income countries. Before it was published, I tried a draft version of the paper on some of my students, tentatively labeling the draft “Twilight of the product cycle hypothesis”. My students’ reactions to that title were so vociferously negative that I finally softened it to “The product cycle hypothesis in a new international environment”.

During the 1960s and 1970s, the group at the Harvard Business School hardly had a monopoly on research on TNCs. Among others, John H. Dunning and his colleagues at Reading University were producing a stream of useful studies, Charles P. Kindleberger was publishing from Massachusetts Institute of Technology, and Richard E. Caves in Harvard’s economics department was producing a number of analyses in the industrial organization tradition.

The hallmark of the Harvard Multinational Enterprise Project, I think, was its emphasis on the TNC in motion, engaged in strategies that took cognizance of change. Illustrative of our emphasis on changes over time was James W. Vaupel’s demonstration that United States-based TNCs were following predictable geographic sequences in establishing their affiliates in foreign countries (Vaupel and Curhan, 1969). Vaupel demonstrated, for instance, that United States-based TNCs tended to establish their earliest affiliates in countries most proximate to the United States in physical and cultural distance, and that they moved further and further from home base in the course of time.<sup>2</sup> In a follow-up work that William Davidson and I produced a decade later, we were able to demonstrate that the geographic pull was already weakening a little (Vernon and Davidson, 1979). According to the Davidson-Vernon study, the propensity of United

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<sup>2</sup> Although a number of colleagues drew on Vaupel’s brilliant analyses, they were unfortunately never published.



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States-based TNCs to establish new high-technology activities in affiliates in a given country was closely related to the scale and scope of their prior experience in that country; and, in the course of time, that prior experience was progressively covering a larger portion of the earth's surface.

Further indications of our emphasis on change appeared in Laurence G. Franko's pioneer work on the instability of joint ventures as they aged (Franko, 1971). The analysis of John Stopford and Louis T. Wells on the evolution of the internal structures of TNCs bore the same emphasis on change in such structures over time (Stopford and Wells, 1972). The concept of the "obsolescing bargain" which emerged out of my work (Vernon, 1980) and was strengthened by Wells' subsequent research bore the same hallmarks.

In the course of our work, members of the Harvard Group returned repeatedly to several related themes: As a rule, the decisions to create and operate an affiliate in a foreign country could only be understood in the context of a global strategy; such a strategy usually involved the moves and countermoves of rivals rather than a game against nature; and many of these moves were best explained as moves intended to reduce the risks created by such rivalry.

Ideas such as these were particularly prominent in our efforts to explain the seeming tendency of TNCs to engage in a follow-the-leader strategy, setting up their new affiliates in any given country in what appeared to be a copy-cat pattern of behaviour. Careful analysis by Frederick Knickerbocker established the fact that such copy-cat behaviour indeed existed, and that its detailed characteristics were not inconsistent with our speculations as to its causes (Knickerbocker, 1973). Oligopolies with a fairly limited number of players, for instance, exhibited stronger copy-cat propensities than those with a larger number of participants.

Another context in which these central ideas proved important was in Edward M. Graham's analysis of his exchange of threat hypothesis, that is, the hypothesis that TNCs sometimes created affiliates in the markets of their rivals in order to warn them not to compete too vigorously in other parts of the world (Graham, 1974 and 1998).

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## The larger research context

These ideas were published mainly in the 1960s and 1970s. And, in retrospect, it is apparent that the timing of their appearance could not have been less favourable to their survival. These were decades in which most of the systematic research in economics departments and business schools was increasingly concentrated on the properties of efficient markets. Studies connected with the general equilibrium model and rational expectations became dominant in economics departments and business schools. The work of specialists in industrial organization, who had typically studied the behaviour of “imperfect” markets, was drawing much less attention than it had in prior decades.

Of course, serious students of the behaviour of market economies could not turn their backs altogether on the existence of imperfect markets; the evidence that such markets existed was far too strong to be altogether disregarded. Accordingly, scholars who could place such markets in a context consistent with the general equilibrium model found a welcome reception. The concepts of Oliver Williamson (Williamson, 1975) and Ronald Coase (Coase, 1988) were particularly influential. According to their analyses, firms threatened by inefficient markets in a product or service had a clear option, namely, to internalize their transactions in the product or service by incorporation within the firm. With transactions in inefficient markets presumptively internalized, it was even more plausible to assume that the markets prevalent in the real world were on the whole reasonably efficient (Williamson, 1975; Coase, 1988, pp. 33-55).

Ruminations in support of such a line of thinking had of course appeared much earlier in the history of economic thought. The work of Augustin Cournot (Cournot, 1963) in the nineteenth century, followed up by John Nash’s mathematical verification over 100 years later (Nash, 1951), offered similar support. It had been hard for economists to disregard altogether the fact that the markets in many products and services, from steel rods to railroad freight haulage, were dominated by a few well-identified oligopolists whose existence seemed to belie the idea of efficient impersonal markets. In his nineteenth-century treatise, Cournot had sought to model the behaviour of these oligopolists by making one heroic assumption,

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namely, that each oligopolist took its decision on how much to produce while having full information concerning the output of the other oligopolists. Making that assumption, Cournot could foresee the emergence of efficient market prices, with the profit levels of the participants depending on the number of firms operating in the market (Cournot, 1963).

Never mind that Cournot's assumptions about the decision-making process in oligopolies bore no relationship to what one observed on the ground.<sup>3</sup> Cournot, it appeared, had his reasoning right whether or not one accepted his starting dictum about the behaviour of markets. That fact seemed to strengthen even further the utility of trade models built on the efficient market assumption.

In such an academic environment, the kind of research done by the Harvard Group in the 1960s and 1970s faced a shrinking market. The work of the Group concentrated on an institution, the TNC, that fitted awkwardly in a world of efficient markets. The Group's tendency was to take for granted the existence of inefficient markets, dominated not only by government restrictions but also by uncertainty, scale, and interactions among oligopolists. The efforts of the group were concentrated on detecting the dynamics of a campaign, rather than on learning to maximize in a given environment. For the time being, the pursuit of such ideas was distinctly out of fashion.

### **New challenges, old baggage**

During the 1960s and 1970s, economists concerned with the development of microeconomic theory had typically ignored the existence of the TNC, unable to find a comfortable place for it in the body of their theory. The 1980s, however, produced signs of a change in the interest of leading international economists in the role of the TNCs. For one thing, the enterprises had grown so important in the global economy by that time that they could hardly be swept under the academic rug. In the United States, the parents and affiliates of such enterprises were accounting for two thirds of the country's

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<sup>3</sup> For a summary of the weaknesses of the Cournot-Nash model, see Scherer (1980), pp. 152-155.

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industrial output and over four fifths of its exports.<sup>4</sup> And back-of-the-envelope estimates indicated that in the world at large such entities were accounting for nearly one half of global output and even more of global trade in goods.

The need to incorporate the TNC more firmly in microeconomic theory was growing also because of some major changes in the composition of international trade. By the 1970s, technology-intensive goods were among the fastest-growing components of world trade. And it had become evident to savants respected such as Harry Johnson, Wassily Leontief and Richard Caves that the tried-and-true propositions of neoclassical trade theory, such as the doctrine of comparative advantage, the Heckscher-Ohlin principle, and the Samuelson-Stolper theorem, could not adequately explain such trends. These bedrock concepts were modeled on a world composed of separate nation-States, each presenting its national firms with its own national supply of the factors of production. But the TNC epitomized an entirely different world, one in which the firm drew from the resources of any country irrespective of its location. With TNCs occupying a dominant position in international trade, an obvious question for trade theorists was whether a stronger understanding of the TNC was necessary for the development of a more comprehensive body of trade theory.

It has been no simple matter, however, for trade theorists, to turn their attention to the TNC. For starters, there is a question of defining the entity to be studied. Practically everyone will agree that Coca Cola and Royal Dutch Shell are TNCs; but such agreement does not prove that there is an underlying accord on a working definition. (If official statistics are to be believed, for instance, only about 7 per cent of the world's TNCs are headquartered in the United States, an absurdly unrealistic figure.)

Besides, even if a definition is agreed, there has been no ready way to secure data that might measure their role and track their behaviour. Few countries provide such data; and those that do so present the data in aggregations that conceal or distort underlying

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<sup>4</sup> These estimates are built up from various United States government sources. See for instance Raymond Vernon (1998), pp. 11-12.

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trends. In sharpest contrast to international trade, therefore, economists have the greatest difficulty in obtaining data on which to generalize about the behaviour of the TNC. So before the 1980s only a relatively few elected to explore the darker corners of the street.<sup>5</sup>

The lack of data alone, however, does not begin to explain the economist's relative neglect of the TNC. Another source of such neglect has been the power of a kind of intellectual hysteresis, to be found in any strong and successful discipline.<sup>6</sup> When economists dealt directly with the activities of TNCs, they naturally interpreted such activities in a form consistent with the prevailing paradigm. "Foreign direct investment", which is reported in the published balance-of-payment accounts of most countries, was freely used as a surrogate for the activities of such enterprises. Indeed, until the 1980s, these were the only official data available in many countries that reflected the existence of TNCs.

It has taken a decade or two for scholars to begin recognizing the gross ambiguities of the official data labeled as "foreign direct investment" and their glaring inadequacies as measures of the cross-border economic flows generated by TNCs. Few realize, for instance, that the retained earnings of foreign-owned affiliates are counted as foreign direct investment irrespective of their use, and that in some years in some countries, retained earnings have represented the principal source of such investment. Nor is it widely recognized that, among developing countries, many Governments have only one source of information regarding the cross-border flows of the TNCs, namely, the original authorizations that the Governments have issued to foreign applicants. These, experience tells us, are notoriously inaccurate guides to the subsequent behaviour of the applicants.

Nor does any country attempt systematically to evaluate the intangibles of various sorts that are a part of the TNC package, resources that some scholars think to be far more consequential than

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<sup>5</sup> The work of such scholars, however, is not to be overlooked. Even before the 1980s, Edith T. Penrose, Stephen Hymer, Charles P. Kindleberger, Gary C. Hufbauer, Irving B. Kravis, Robert E. Lipsey, and Richard E. Caves, not to mention John H. Dunning's group at Reading University, among others, were already closing in on the subject.

<sup>6</sup> See for instance Kuhn (1962).

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the money and machines that accompany their entry into a host country.

In spite of such handicaps, trade theorists in the 1980s began to turn their attention to the TNC. Their interest was whetted by the appearance of Paul R. Krugman's "new trade theory", which gave a central role to the power of scale in explaining the composition of international trade. Almost a century earlier, business managers in numbers had begun to recognize the importance of scale in international trade, and had begun to adapt their strategies to that fact. Trade theorists, however, were unable to recognize the importance of scale until they had mastered the mathematics required for the task, a goal finally achieved in the early 1980s (Helpman and Krugman, 1985).

Once that challenge was met, theorists began to explore the implications for trade behaviour, occasionally introducing the TNC in their models. Having begun with some primitive models of the TNC whose counterparts could not have been found in the real world, James Markusen (Markusen, 1995) and others over the course of time have developed models that test well against some of the observed behaviour of TNCs and the observed patterns of their trade. So the near-silence among trade and investment theorists on the role of TNCs has finally been breached.

### **The challenges ahead**

Are important contributions to an understanding of the TNC to be expected from mainstream economic theorists? The challenges remain formidable. International trade and investment theorists are being asked to adapt to a world in which marginal costs often run close to zero, in which products and services are increasingly tailored to the individual customer, in which competition is conducted among known adversaries rather than in an impersonal market structure, and in which the productive resources lying within the command of any given country cannot easily be specified. What is more, they are being asked to frame their models and hypotheses in a setting in which the relevant data are scarce and not easy to come by.

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These developments have stimulated some economists to think in new directions, trying to relate the changing structure of the firm to changes in trade and capital movements.<sup>7</sup> As a rule, their work continues to reveal a strong tendency to look on the activities of TNCs primarily as just one more form of international capital movement -- a “direct” investment rather than an “indirect” one, with interesting consequences for international trade and international capital flows.

Despite the obstacles, economists are displaying a heightened interest in firm structures and their implications for firm behaviour. The computer’s power has greatly reduced the costs of modeling and testing complex sequences of action and counteraction among firms, based on game theory or other principles. Moreover, despite the abiding centrality of the general equilibrium model in economic thinking, scholars do seem to be exhibiting an increasing interest in exploring the implications of inefficient markets, incomplete information, uncertainty, risk, inertia and emotion.<sup>8</sup> Indeed, my superficial impression is that the content of scholarly journals on the theory of the firm is increasingly devoted to topics that acknowledge the relative importance of “imperfections” in explaining market behaviour.

As these new emphases work their way into research papers and books, they could encourage theorists to recognize some of the attributes of the TNC that usually distinguish it from the textbook “firm”, such as its capacity for commanding resources in distant places, its use of intangibles as a source of competitive strength, its propensity to engage in battle against known adversaries, and its tendency to operate in an environment of unrelenting change.

Of course, if such a shift actually takes place, it is bound to generate a demand for better data on the behaviour of the TNCs themselves. And if such data are to have much value in the development of a useful theory, they will have to provide the materials

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<sup>7</sup> For important examples of such ruminations, see the symposia in the *Journal of Economic Perspectives*, vol. 12, no. 4, Fall 1998, “Globalization in Perspective,” pp. 3-72, and “The Firm and Its Boundaries”, pp. 73-150.

<sup>8</sup> The *Journal of Economic Literature*, vol. xxxvi, no. 1, March 1998, contains a half-dozen articles of this genre.

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for more longitudinal studies at the firm level. Unfortunately, data of that sort are of a kind that Governments cannot easily provide, given the rules of confidentiality to which they are held. But once again, the effect of the computer has been to reduce dramatically the costs of compiling such data through non-government channels. So one challenge is to find a way of extending, improving and enlarging the data banks that can provide such information, perhaps taking off from the body of data that the Harvard Group generated up to 1975. Apart from providing a fitting coda to the Group's work, such a project could stimulate the academic community to turn its energies more energetically to an understanding of one of the key institutions of the twenty-first century. ■

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# Forty years on: American Investment in British Manufacturing Industry revisited

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John H. Dunning\*

This article traces the main changes which have taken place in United States direct investment in United Kingdom manufacturing industry over the past 40 years, and explains the reasons for these by drawing upon the eclectic paradigm of international production. *Inter alia*, the article reveals that, while United States affiliates in the United Kingdom have continued to increase their share of United Kingdom manufacturing output, relative to other foreign investors -- and especially Japanese and continental European investors -- their role has become less significant.

## Introduction

*American Investment in British Manufacturing Industry* -- my first book -- was published by Allen and Unwin in June 1958 (Dunning, 1958a). Its contents were the outcome of a three-year research project financed by a grant from the (United Kingdom) Board of Trade under the Conditional Aid Scheme for the use of counterpart funds derived from United States economic aid.<sup>1</sup> Its purpose was to evaluate the ways in which, and the extent to which, United States direct investment in United Kingdom manufacturing industry in the mid-1950s was helping to increase the productivity of indigenous resources and capabilities, and the competitiveness of United Kingdom firms.

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<sup>1</sup> More specifically, the Marshall Plan.

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The stimulus for the study came from two sources. The first was the findings of a series of research reports on the comparative productivity of United Kingdom and United States industries, conducted by the Anglo-American Council on Productivity (AACP) between 1949 and 1952.<sup>2</sup> *Inter alia*, these studies, like those of E. Rothbarth (Rothbarth, 1946) and Laslo Rostas (Rostas, 1948) in the 1940s, revealed that the productivity of the average United States industrial worker was universally between two and four times higher than his United Kingdom counterpart.<sup>3</sup> The second was an observation, by myself, on a visit to Scotland in 1952, of a clustering of United States manufacturing affiliates within a 15-mile radius of Dundee and Glasgow, and the apparent impact such a presence was having on the employment, productivity and exports of the region.<sup>4</sup>

The key question which particularly intrigued me was this: “Given that, across the board, United States-owned firms in the United States were more productive than United Kingdom- owned firms in the United Kingdom, would this generalization still hold true if United States- owned firms were located in the United Kingdom or United Kingdom owned firms were located in the United States?” In other words, was the higher productivity of United States firms in the United States due to the better quality of United States technology and/or management, marketing and organizational capabilities which might be readily transferred to the United Kingdom, or was it a reflection of superior, but immobile, characteristics of the United States economy?

In seeking an answer to this question, I distinguished between country- and firm-specific differences in productivity, or between (what I later came to call) *location*-specific and *ownership*- specific advantages, facing potential foreign investors, viz., those specific to a spatial area independently of the ownership of firms, and those

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<sup>2</sup> As summarized, for example, by Hutton (1953).

<sup>3</sup> Later, these figures were to be confirmed and elaborated on by a United States study (Frankel, 1957).

<sup>4</sup> In chapter III of the 1958 edition of *American Investment* I state that “between 1940 and 1953, United States subsidiaries in this area accounted for two-thirds of the increase in the total labor force directed to the (so called) Development Areas of the time.” At the time, I recorded some observations about these phenomena in an article I wrote for the (then) *Annual Survey of the Manchester Guardian*. See Dunning, 1958b.

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specific to the ownership of firms independently of where they were sited. If, for example, most differences in United Kingdom-United States productivity were location-specific, then, insofar as most of these were non-transferable across space, United Kingdom-United States productivity differences could be regarded as largely unavoidable. If, on the other hand, they were primarily due to the higher efficiency of United States intellectual capital -- including managerial capabilities -- and such assets were readily transmutable to the United Kingdom, then United States affiliates would show superior performance relative to their indigenous, i.e. United Kingdom, counterparts.

It, then, seemed to me that a study of United States business investment in the United Kingdom afforded a unique opportunity to put this proposition to the test; and, in chapter IV of *American Investment*, I did my best to make productivity comparisons both between United States parent firms and their United Kingdom affiliates, and between the United States affiliates and their United Kingdom-owned competitors. Having demonstrated that, parts, at least, of the competitive advantage of United States firms *were* transferable across the Atlantic, I then sought to examine *which* of these were exported, and *how* they were assimilated into the United Kingdom economy; and in particular, how they helped upgrade the productivity of United Kingdom resources and location-bound capabilities, and the competitiveness of United Kingdom firms.

In this present article, I shall seek to do three main things. First, I shall compare and contrast the level, structure and significance of United States foreign direct investment (FDI) in United Kingdom manufacturing industry in the early 1990s with that in 1953. In the following section, I revisit some of the ideas and data presented in my original study, but view them through the analytical lens of contemporary scholars; in other words, had I been writing the 1958 monograph today, what changes might I wish to make? The third objective, drawing upon the data set out in the previous section, is to establish how different might be my explanation of the economic determinants of United States FDI in the United Kingdom in the 1990s, as compared with those put forward in the 1950s. The article concludes by taking an exploratory glimpse into the likely future of United States participation in the United Kingdom industry.

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## **“Then” and “now”: the level, pattern and significance of United States participation in United Kingdom industry**

In the mid-1950s the United Kingdom was second only to Canada as the most popular destination for United States manufacturing FDI. In 1955, it accounted for 57.7 per cent of the stock of United States FDI in Europe and 14.9 per cent of that in all countries. Although, in 1953, it was estimated that the sales of United States manufacturing affiliates in the United Kingdom accounted for only 4.8 per cent of all manufacturing sales, this percentage was at least double in the case of technology-intensive and branded consumer goods.

While, in the mid-1950s, most United States FDI in the United Kingdom replaced imports from the United States, between 35 and 40 per cent of the sales of United States manufacturing affiliates were exported. In spite of quite high intra-European tariff and non-tariff barriers, the United Kingdom was regarded by United States investors as a bridgehead to both Continental European and to Commonwealth markets -- especially in the case of exports of new industrial products.<sup>5</sup> The productivity (output per employee) of United States manufacturing affiliates was estimated to be about one third higher than that of their indigenous competitors. While, as I showed, this was partly due to the concentration of United States FDI in the more productive United Kingdom sectors, in each of the manufacturing industries about which data were available, United States affiliates outperformed their United Kingdom competitors.<sup>6</sup>

Table 1 sets out further details; it also compares and contrasts the situation in the 1950s with that of 40 years later. We might highlight five main points:

- First, the contribution of United States affiliates to United Kingdom manufacturing employment and sales has significantly risen over the last 40 years; and in 1992 stood at 8.6 and 14.7 per cent, compared with 2.8 and 4.8 per cent 40 years earlier.

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<sup>5</sup> As detailed in chapter X (Dunning, 1958a).

<sup>6</sup> See table VI and table VI.6 of Dunning, 1958a.

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At the same time, the share of the total inbound FDI stock into the United Kingdom accounted for by United States direct investors has fallen from around four fifths in the early 1950s to 41.4 per cent in 1994. This is mainly the result of a sharp growth of intra-European Community (EC) FDI (under 10 per cent in 1953; 30.9 per cent in 1994), and of Japanese FDI (0 per cent in 1953; 4.5 per cent in 1994).

- Second, the industrial distribution of the activities of United States affiliates suggests that, over the past four decades, the growth in employment has been most marked in chemicals and allied trades (especially drugs), food and drink products, instruments, electrical products, and paper products sectors,<sup>7</sup> and least in the mechanical engineering and rubber goods and transportation sectors. However, relating these data to those of total United Kingdom employment we see that, compared with 1953, the United States concentration quotient has risen in nine of the twelve manufacturing industries identified in table 1, and has fallen in the remaining three. The representation of United States affiliates is currently most marked in the chemicals, precision instruments and electrical goods industries; and, in the 1990s, as in the 1950s and 1960s, their share of total United Kingdom production is concentrated in the high to medium knowledge-intensive sectors, and in those producing high-quality branded consumer goods.
- Third, there is some reason to suppose that, whereas in the 1950s, United States investors were locating their value-adding facilities in the United Kingdom to overcome trade barriers,<sup>8</sup> in the 1990s, not only are United States FDI in, and United States exports to, the United Kingdom complementary, rather substitutes for each other,<sup>9</sup> but a significant (and growing) proportion of the United Kingdom-based activity by United States firms is geared towards protecting or augmenting their

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<sup>7</sup> Comparable data are not available on sales.

<sup>8</sup> See especially chapter II of Dunning (1958a). This investment today is usually referred to as *defensive* market-seeking investment.

<sup>9</sup> Such FDI is more *aggressive* market-seeking or is designed to increase the efficiency of existing investment through the rationalization and restructuring of two or more European manufacturing plants.

**Table 1. United States direct investment in United Kingdom manufacturing industry, 1953 and 1994**

	1953	1994		
<b>1. United States direct investment stock in United Kingdom manufacturing (\$ million)</b>	<b>941.0<sup>a</sup></b>	<b>26,742.0</b>		
As per cent of United Kingdom GNP	2.3	3.0		
As per cent of all United States FDI stock in United Kingdom	66.3	24.0		
As per cent of all FDI manufacturing stock in United Kingdom	80.0	41.4		
As per cent of United States FDI stock in European manufacturing	57.7	24.9		
<b>2. Number of United States manufacturing affiliates in the United Kingdom</b>	<b>246</b>	<b>624<sup>b</sup></b>		
<b>3. Manufacturing sales of United States affiliates (\$ million)</b>	<b>1,709.0</b>	<b>96,081.0</b>		
As per cent of all manufacturing sales in United Kingdom	4.8	14.7 <sup>b</sup>		
<b>4. Manufacturing employment of United States affiliates</b>	<b>262,200</b>	<b>374,800<sup>b</sup></b>		
As per cent of all manufacturing employment in United Kingdom	2.8	8.6 <sup>b</sup>		
As per cent of manufacturing employment of United States affiliates in Europe	..	26.4		
<b>5. Manufacturing exports (\$ million)</b>	<b>660.0</b>	<b>33,000.0</b>		
As per cent of all United Kingdom manufacturing exports	12.0	17.0		
As per cent of all manufacturing sales of United States affiliates in United Kingdom	38.6	33.8		
<b>6. Industrial distribution of employment in United States affiliates</b>				
	%	C.Q. <sup>c</sup>	%	C.Q. <sup>c</sup>
Chemicals and allied trades	12.7	2.23	17.8	2.48
Food, drink and tobacco	6.7	0.69	14.5	1.27
Metal manufacturing	3.4	0.52	3.4	0.32
Non-electrical and engineering	31.3	1.70	16.5	1.69
Electrical goods and machinery	5.5	1.45	8.4	1.07
Vehicles	22.7	1.77	18.9	2.18
Metal goods not otherwise specified	1.0	0.18	1.6	0.50
Precision instruments	6.6	4.13	6.5	1.82
Textiles and clothing	1.6	0.06	1.4	0.16
Wood, cork, paper, etc.	1.8	0.53	7.4	0.53
Other manufacturing industries	6.7	0.48	3.7	0.25
<b>Total manufacturing industries</b>	<b>100.0</b>		<b>100.0</b>	

Source: Dunning (1998); United States Department of Commerce (1996), *United States Direct Investments Abroad; Benchmark Survey 1994* (Washington: United States Government Printing Office) 1996; Central Statistical Office (CSO) (1997). *Abstract of Statistics* (London: CSO); Central Statistical Office (CSO) (1996). *Report of the Census of Production 1992: Business Monitor P1002* (London: CSO); Central Statistical Office (1997), *Overseas Direct Investment: Business Monitor MA4* (London: CSO).

<sup>a</sup> 1955.

<sup>b</sup> 1992.

<sup>c</sup> C.Q. = United States concentration quotient = The share of the total manufacturing employment accounted for by United States affiliates in a particular industry divided by the share of total manufacturing employment accounted for by all United Kingdom firms.



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core competitive advantages rather than exploiting these same advantages. In *American Investment*, I gave several examples of new knowledge passed back from the United States affiliates to their parent companies in the 1950s.<sup>10</sup> Over the past 40 years, not only has the research and development (R&D) intensity of United States affiliates in the United Kingdom substantially increased,<sup>11</sup> but so, too, has the propensity of these affiliates to undertake R&D on behalf of their parent companies,<sup>12</sup> and to act as vehicles for tapping into innovatory activities undertaken in the United Kingdom. In a recent survey on the geographical origin of the competitive advantages of 144 of the world's largest industrial enterprises (Dunning, 1996), the United Kingdom was named as the second most important source country for augmenting managerial and technological assets. It is also worth noting that the greater part of United States direct investment in the United Kingdom since the early 1980s has taken the form of mergers and acquisition (M&As),<sup>13</sup> and that the major motive for many of these has been to gain access to new sources of knowledge and/or markets, as much as to exploit the existing stock of knowledge and markets.

- Fourth, as in the 1950s, a substantial proportion of the output of the United Kingdom manufacturing affiliates of United States firms is currently exported. In 1953, this proportion was estimated to be 38.6 per cent; and at that time, United States affiliates accounted for 12.0 per cent of all United Kingdom manufacturing exports.<sup>14</sup> The great majority of these exports went either to the rest of Europe or to Commonwealth countries. In 1994, United Kingdom manufacturing affiliates exported 27.6 per cent of their output, and accounted for 33.8 per cent

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<sup>10</sup> See especially chapters VI and X of Dunning (1958a).

<sup>11</sup> For example, in the 1950s, United States manufacturing affiliates in the United Kingdom probably employed less than 10 per cent of their total labour force in R&D-related activities; by 1989 this percentage had increased to 31 per cent. United States Department of Commerce (1992), *United States Direct Investments Abroad, Benchmark Survey for 1989* (Washington: United States Government Printing Office).

<sup>12</sup> As described, for example, in Pearce and Singh (1992).

<sup>13</sup> For further details see G. DeLong, R. C. Smith and I. Walter (1996).

<sup>14</sup> See chapter X of Dunning (1958a).

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of all United Kingdom manufacturing exports. No data on the imports of affiliates are available except those from the United States. In 1994, these accounted for about 6 per cent of total sales, a very considerable increase on the 3 per cent - 4 per cent estimated for 1954.<sup>15</sup>

- Fifth, there has been some geographical decentralization of intra-United Kingdom inward FDI since the mid-1950s. In 1953, 57.9 per cent of all the total manufacturing employment of United States firms was in London and the South-East and in the eastern counties of England. For *all* foreign-owned firms, the corresponding figure for 1992 was 30.9 per cent.<sup>16</sup> Among the regions that have attracted the largest inbound share of FDI are North and North-West England (up from 7.1 per cent to 18.8 per cent), the Midlands (up from 10.1 per cent to 18.4 per cent) and Wales (up from 2.8 per cent to 6.5 per cent). Among the regions which have lost ground are Scotland (down from 12.1 per cent to 10.1 per cent) and South and South West England (down from 6.5 per cent to 5.4 per cent).

However, whereas the share of employment of all foreign firms in assisted (previously development) areas was only slightly less than that for all United Kingdom firms (40.9 per cent compared with 43.1 per cent in 1953), that of United States affiliates (22.0 per cent) was considerably lower than that of all United Kingdom firms (34.6 per cent). There is, indeed, some evidence that foreign firms -- and particularly, in the last decade, Japanese firms -- have encouraged the development of new clusters of industrial activity, especially in those regions whose development agencies have been particularly active in their marketing campaigns to attract new investment.<sup>17</sup>

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<sup>15</sup> See chapter X of Dunning (1958a). For estimates in the 1960s see Dunning (1969).

<sup>16</sup> United Kingdom Census of Production data cited in table XI.1 of Dunning (1998).

<sup>17</sup> Notable examples include a cluster of consumer electronics affiliates, South Wales, and a cluster of auto-assemblers and component suppliers in North-East England and Derbyshire. See, for example Dunning (1986) and Strange (1993).

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## The determinants and effects of United States FDI in United Kingdom manufacturing (circa 1953)

So much for some general facts and figures, the main conclusions of which are twofold: (1) The contribution of United States affiliates and United Kingdom-United States firms to United Kingdom manufacturing output -- and particularly in the high- to medium-technology industries -- has continued to increase over the past 40 years, although this contribution, relative to that of other foreign direct investors, is less dominant than it used to be, and (2) although there has been some diversification in both the industrial structure and the locational pattern of United States-owned manufacturing affiliates, relative to that of indigenous United Kingdom firms, the activities of these affiliates continue to be concentrated in knowledge- and scale-intensive industries and in those supplying branded consumer goods with a relatively high income elasticity of demand. United States affiliates also tend to concentrate in or around large urban areas, notably London, Cardiff and Glasgow; and, more recently, Sunderland and Derby.

We now turn to consider (what we perceive to be) the main analytical thrust of our earlier research and of how, if we were writing *American Investment* today (but viewed from the perspective of the 1950s), this would be different, and of how, if we were applying our analysis to the contemporary economic and political milieu, we would wish to modify our earlier findings. In this article, we shall confine ourselves to the *determinants* of United States FDI in the United Kingdom. Our most recent views on the *effects* of United States FDI on the competitiveness of the United Kingdom manufacturing sector are set out elsewhere.<sup>18</sup>

In our original study, we were not, in fact, primarily concerned with the determinants of United States FDI in the United Kingdom. But in our analysis of its historical development, and of its industrial composition in 1953 (chapters I and II), we did consider some of the major attractions of the United Kingdom (and/or major disadvantages of the United States) as a manufacturing base for supplying the United

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<sup>18</sup> See especially chapter XI of Dunning (1998).

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Kingdom and other European and Commonwealth markets with United States goods and services. Moreover, in these same chapters, and more specifically in chapter VI in a section entitled “The competitive advantages of American technical expertise and management philosophy”, we detailed the main competitive (later<sup>19</sup> to be called ownership-specific (O)) advantages of United States-owned firms; and the reasons -- which largely reflected on the different economic environments of the United States and the United Kingdom -- why this was so.<sup>20</sup>

The kind of country (viz., United States) specific competitive ownership advantages we identified in the mid-1950s were documented in several places in our original treatise. I would like to reiterate here just four of the more important of these advantages:

- 1) United States representation (in the United Kingdom) is highly concentrated in the “newer” -- though not “brand-new” -- United Kingdom industries. Yet, though new to this country, most of the industries concerned had been previously well established in the United States. They embrace technologies, trades and skills which, if not discovered by, were first exploited on any scale in the United States, and/or those for which the comparative advantage of production in the past -- if not at present -- has favoured that country (Dunning, 1958a, p. 78).
- 2) With one or two minor exceptions, all affiliates and United Kingdom-United States concerns are able to draw upon the research and development output and facilities of their United States associates, and this gives them an important advantage over most of their native competitors. To the extent that a United States affiliate can freely draw upon such knowledge and in most cases adapt it to the specialized needs of the markets it services with little difficulty, it is afforded a vital competitive advantage - an advantage which is further underlined by the fact that it is also able to send back to the parent company any ideas for experimentation, development or commercialization (Dunning, 1958a, p. 167).

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<sup>19</sup> The first time we used these expressions was in J. H. Dunning (1973).

<sup>20</sup> As later detailed by Raymond Vernon in his product cycle theory of FDI. See Vernon (1966).

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- 3) The manufacturing expertise of the parent plant available to United States affiliated concerns is, in most cases, the result of many years' accumulated learning and experience. Coupled with the fact that the economic environment in the United States is frequently more favourable to the development of those industries in which there is strong United States representation in the United Kingdom, the gains which inward direct investment might bring are substantial. The more marked the differences between current United Kingdom and United States production methods, the greater the potential benefits likely to result from such associations of this kind (Dunning, 1958a, p. 174).
  - 4) Because of these factors -- educational, cultural and economic -- it is not surprising that the United States should lead the world in the development of management techniques, and for it to have a larger measure of ability both to take decisions and to administer them more effectively. But there is also the question of the attitude towards entrepreneurship and management, the dynamism and inventiveness of which, in the United States, so much impressed the Productivity Teams, who strongly argued that it should be emulated by the United Kingdom management. Even here, however, it is difficult to argue that this should always be the case, for to benefit from a particular managerial technique it may be that a whole set of conditions have to be brought about which are not, themselves, economically justifiable (Dunning, 1958a, p. 250).

In several places in *American Investment*, I also acknowledged that FDI was just one means by which the competitive advantages of United States firms might be channelled to the United Kingdom. However, at the time, I made no attempt explicitly to identify the conditions under which FDI might be preferred to licensing and other non-equity modes. This point was taken up later in another of my contributions (Dunning, 1973); but, even then ( in 1973), it was acknowledged that, although the literature was full of examples of when licensing was likely to be preferred to FDI or exports as a means of exploiting foreign markets, there was little systematic attempt to formalize these into a theory of marketing (Dunning, 1973, p. 315).

If I were writing *American Investment* today, the main change

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I would make would be to give its contents a more formal analytical framework. As might be expected, I would use that of the eclectic, or ownership-location-internalization, paradigm of international production, as set out in various of my writings,<sup>21</sup> and also in a study of Japanese FDI in United Kingdom manufacturing industry conducted in the early 1980s (Dunning, 1986).

In brief, the eclectic paradigm asserts that the participation of firms from one country in the value adding activity of another country is determined by:

- (i) the extent and characteristics of the competitive or *ownership* (O) of specific advantages of the investing (or potentially investing) firms, relative to those headquartered in the recipient or host country;
- (ii) the *locational* (L) attractions of the recipient country, relative to those of other countries -- including the investing country - - especially in respect of the activities necessary to optimize the economic rent on the O-specific advantages of the investing firms;
- (iii) the extent to which it is in the best interests of the foreign firm to *internalize* (I) the market for its O-specific tangible and intangible assets, rather than choose another organizational mode, e.g. licensing, management contract, franchising, etc., by which these assets, or the rights to their use, are transferred; or, indeed, by which their value may be protected or augmented.

The paradigm further asserts that the structure of the OLI advantages facing a particular firm will vary according to a number of contextual variables, such as the nature of the value added activities of the firm, its country of origin, and a range of firm-specific characteristics, such as age, size, strategic focus, and its relation to its competitors or potential competitors.<sup>22</sup> Finally, the determinants of FDI will depend on its *raison d'être*. Is it, for example, primarily

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<sup>21</sup> Most recently in J. H. Dunning (1993, 1995 and 1999).

<sup>22</sup> This last variable is given particular emphasis by such scholars as Frederick Knickerbocker and Raymond Vernon, who argue that much FDI is related to advancing or protecting an oligopolistic market position of the investing firms. See, for example, R. Vernon (1994).

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intended to supply products for sale in local or adjacent markets; or is it seeking a secure supply of natural resources or to take advantage of lower real labour costs? Or is its purpose to rationalize or restructure its portfolio of existing foreign assets, or to augment the firm's global competitive advantages -- so-called created assets -- seeking FDI?

Table 2 uses this framework to identify the main determinants of United States FDI in United Kingdom manufacturing industry in the 1950s. Before commenting on this table, we would observe that, at that time, the great majority of inbound United States investment was of a market-seeking kind. However, in choosing the United Kingdom rather than some other European country as a location for production, particularly when it was intended to supply the European market -- supply-side considerations, notably input costs and culture/psychic distance variables, e.g. language, host government policies, business customs, etc. -- played an important role. But generally, because of trade barriers, there was less efficiency-seeking, i.e. rationalized, United States investment in Europe; nor, except perhaps in the pharmaceutical industry,<sup>23</sup> was there any explicit attempt by United States firms to augment their existing O-specific advantages by tapping into European intellectual or physical capital.

In table 2, column 1, I have asterisked the kind of country- and firm-specific O and L advantages originally identified in *American Investment*.<sup>24</sup> Those not asterisked are those which scholars, over the last four decades, have put forward as being significant determinants of FDI by market-seeking TNCs -- and particularly United States TNCs. It is to be noted that the OLI variables thought to influence other kinds of contemporary FDI, e.g. asset-augmenting FDI, are included. The components of column 2 of table 2 are explained in a later section of this article.

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<sup>23</sup> In the 1960s, there was some concern about United States firms investing in the pharmaceutical industry, particularly by way of M&A, and that they were doing so to gain access to top European R&D scientists and technicians. See chapter VI of Dunning, 1958, and chapter IX of Dunning, 1970.

<sup>24</sup> See especially chapters I, II and VI of Dunning, 1958a.

The obvious lacunae of my original study in identifying the determinants of FDI were that it did not explain -- indeed, it did not seek to explain -- why, given the O advantages of the United States investors or potential United States investors, and the L advantages of the United Kingdom as a production outlet, United States firms should choose to internalize the transatlantic market for these assets, rather than engage in licensing, technical service franchising, subcontracting or other non-equity arrangements, with United Kingdom firms. Contemporary theory would suggest that this was because the transaction and coordinating costs of using the cross-border intermediate product market for the transfer of technology and other intangible assets were greater than those associated with their transfer and usage within the firm possessing these advantages.<sup>25</sup>

**Table 2. Some determinants of United States direct investment in the United Kingdom manufacturing industry**

	In early 1950s	In mid-1990s
1) O-specific advantages (of the investing firms)	a)* Manufacturing techniques and marketing experience of United States parent companies	As a) to d) in early 1950s
(i) Property right and/or intangible asset advantage (Oa)	b)* Access to United States product and production technology; and innovatory capacity	e) Knowledge gained about the United Kingdom and other European commercial and legal infrastructure, supply and marketing conditions; human resource management, consumer culture, and government policies and regulations
	c)* Access to United States managerial philosophy, attitudes and techniques; and "bank" of human learning, expertise and experience	f) Ability to access and harness resources from throughout the world; and ability to reconcile global market needs with those of particular regional and national markets
	d)* Privileged possession of patents, trademarks and/or brand names	
(ii) Advantages of common governance, learning experiences, and organizational competence (Ot)	a)* Those branch plants of established enterprises enjoy, where <i>de novo</i> firms, e.g. those associated with size, economies of scope, spreading of overhead	As a) in early 1950s
		b) Those which specifically result from the transnationality of a company.

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<sup>25</sup> As has been well summarized by Richard Caves (1996) and by a series of review articles in the *Journal of International Business Studies*, summer edition (1998).



(Table 2, continued)

In early 1950s	In mid-1990s
<p>costs and product diversification of parent companies; those which allow affiliates access to resources and experience of parent companies at marginal cost; and synergistic economies (not only in production, but in R&amp;D purchasing, marketing finance arrangements)</p>	<p>Transnationality enhances the operational flexibility of the investing firms by offering (a) wider opportunities for arbitrating, production shifting and global sourcing of inputs; (b) more favoured access to and/or better knowledge about international markets, e.g. for information, finance, labour, etc.; (c) an ability (i) to take advantage of geographic differences in factor endowments, government intervention, markets, etc., and (ii) to diversify or reduce risks, e.g. in different currency areas, and create of options and/or political and cultural scenarios, (d) an ability to learn from societal differences in organizational and managerial processes and systems, and (e) opportunities to balance the economies of integration and a speedy response to changes in country-specific needs and advantages.</p> <p>c) Those which arise from coordinating the firm's Oa advantages with those of other firms, and achieving an optimum profile of L-specific assets. Such coordination embraces cross-border vertical and horizontal strategic alliances (e.g. with suppliers and competitors) and networks of similar firms; it also includes the ability of firms to recognize as and when they need to augment or use their own O-specific advantages with those of the immobile assets located in foreign countries.</p>

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(Table 2, continued)

	In early 1950s	In mid-1990s
2) Location-specific advantages (of the United Kingdom, relative to other locations, for value added activities of United States-owned firms)	<p>a)* Tariff and non-tariff barriers (both to United States exports to Europe and intra-European trade)</p> <p>b)* Exchange controls</p> <p>c)* Limitations on dividend, remission and capital repatriation</p> <p>d)* Transatlantic transport and communication costs</p> <p>e)* Real production costs (including labour, material costs, etc.)</p> <p>f)* Domestic market size and growth potential</p> <p>g)* Government economic policies (i) general (ii) specific to inbound FDI</p> <p>h)* Costs of setting up, organizing and monitoring a foreign value adding operation</p> <p>i)* Presence of related firms, including other foreign affiliates</p>	<p>As d), e) and h) in early 1950s</p> <p>j) Quality of human and physical infrastructure</p> <p>k) Exchange rates</p> <p>l) Availability of complementary assets (e.g. supplier capability, local technological base agglomeration, etc.)</p> <p>m) Investment incentives (offered by both national and subnational Governments in Europe)</p> <p>n) Need to acquire or tap into the O advantages of European firms, especially in knowledge-intensive sectors</p>
3) Internalization incentive advantage (of the investing firms or potential investors)	<p>a) Avoidance of search and negotiating costs</p> <p>b) To avoid costs of moral hazard, information asymmetries and adverse selection; and to protect reputation of internalizing firm</p> <p>c)* To avoid costs of broken contracts and ensuing litigation</p> <p>d) Buyer uncertainty (about nature and value of inputs (e.g. technology being sold)</p> <p>e) When market does not permit price discrimination</p> <p>f)* Need of seller to protect quality of intermediate or final products</p>	<p>As in early 1950s, but f), j), k) and l) are relatively more significant today than they were in the 1950s.</p> <p>m) While, in some cases, time limited inter-firm cooperative relationships may be a substitute for FDI; in others, they may add to the incentive advantages of the participating firms, R&amp;D alliances may help strengthen the overall competitiveness of the participating firms. In addition, the growing structural integration of the world economy is requiring firms to go outside their</p>

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(Table 2, concluded)

	In early 1950s	In mid-1990s
	g) To capture economies of interdependent activities (see b above)	immediate boundaries to capture the complex realities of know-how trading and knowledge exchange in innovation, particularly where intangible assets re tacit, and there is a need to speedily adapt competitive enhancing strategies to structural change.
	h) To compensate for absences of future markets	
	i) To avoid or exploit government intervention (e.g. quotas, tariffs, price controls, tax differences, etc.)	
	j)* To control supplies and conditions of sale of inputs (including technology)	Alliances or network related advantages are those which prompt a "voice" rather than an "exit" response to market failure; they also allow many of the advantages of internalization without the inflexibility, bureaucratic or risk-related costs associated with it. Such quasi-internalization is likely to be most successful in cultures in which trust, forbearances, reciprocity and consensus politics are at a premium.
	k) To control market outlets (including those which might be used by competitors)	
	l) To be able to engage in practices, e.g. cross-subsidization, predatory pricing, leads and lags, transfer pricing, etc. as a competitive (or anti-competitive) strategy	
		o) Increasingly attention is being given to the i advantages associated with asset creating and/or asset acquiring activities c.f. those of asset exploiting activities. As yet, the application of transaction costs theory to explaining the organizational modality appropriate for optimizing the dynamic efficiency of firms is relatively unexplored.

Source: Dunning (1958a, 1998).

\* Indicated those advantages identified in Dunning (1958a).

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A contemporary reading of the findings of our 1958 study suggests that the costs associated with the transfer of intangible assets between independent United States and United Kingdom firms in the early 1950s were fivefold. These were:

- (1) Search and negotiating costs prior to the transatlantic transfer of intangible assets or rights to assets;
- (2) The need to protect the quality of intermediate or final products arising from these assets;
- (3) The costs of moral hazard and adverse selection;
- (4) The absence, or inadequacies, of futures markets; and
- (5) Some degree of buyer uncertainty, e.g. about the value of the technology being sold.

It will be noted that these transaction costs largely reflected those associated with static markets. Virtually no attention in the 1950s was paid to the transaction costs of creating new assets rather than the deployment of existing assets. In the absence of these and other market-related transaction costs identified in table 2, it is probable that United States FDI in the United Kingdom would have been less, and licensing and other non-equity agreements between United States and United Kingdom firms more, in the 1950s.

In summary, in the 1950s, the main determinants of United States FDI in United Kingdom manufacturing industry were, first, the privileged possession of country-, viz., United States-specific intangible assets -- and particularly technology, managerial expertise and marketing skills; second, the (perceived) lower production and/or transfer costs of adding value to these assets in the United Kingdom rather than in the United States or elsewhere; and third, the belief by United States producers that, due to the (perceived) high transaction and coordinating costs of using the transatlantic market for direct sale of these assets or the right to their use to United Kingdom firms, they could more profitably exploit these by establishing their own production facilities.

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## **The determinants of United States FDI in United Kingdom manufacturing (circa mid-1990s)**

We now consider the contemporary situation of United States FDI in United Kingdom manufacturing, and ask how its determinants differ from those described in the previous section. Or, put another way, if I were writing a study of United States FDI in the United Kingdom in the mid-1990s, what changes would I make to the 1958 volume?

A clue to the answer to this question is given in my approach to explaining the reasons for, and consequences of, Japanese FDI in United Kingdom manufacturing industry in the 1970s and 1980s (Dunning, 1986). Here, I explicitly used the eclectic paradigm, first put forward at a Nobel Symposium in 1976, as my conceptual framework, and I believe that this paradigm, suitably modified to take account of the changing world economic scenario -- and particularly the emergence of alliance capitalism -- of the last decade or so,<sup>26</sup> may serve as a useful starting point.<sup>27</sup>

Rather than elaborate further on the current tenets of the eclectic paradigm, let us indicate some of the most significant changes which have occurred in the motivation and/or characteristics of inbound (and particularly United States) FDI into the United Kingdom over the past four decades, and which might be expected to affect the determinants and effects of such changes.

We would highlight three such changes:

- 1) The degree of transnationality of most of the leading United States investors in the United Kingdom -- and especially their participation in other European countries -- has greatly increased since the mid-1950s, as, indeed, have the range and

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<sup>26</sup> As set out, for example, in my *Journal of International Business Studies* article (Dunning, 1995).

<sup>27</sup> While I am not advocating that the eclectic paradigm is the only approach to explaining all aspects of the growth of United States participation in United Kingdom industry, as a framework for evaluating the economic determinants of such participation, I believe it has much to commend it.

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depth of their value added activities. This, together with the trend towards deeper European economic integration, has caused United States TNCs increasingly to adopt an efficiency seeking or rationalized strategy towards their European manufacturing operations in place of the “stand-alone” or multi-domestic strategies they operated in the 1950s. These factors, in turn, have led to the emergence of a new set of O-specific advantages, which reflect the ability of investing firms to coordinate multiple activities in multiple locations -- or what, in our various writings, have been termed transaction cost minimizing O advantages ( $O_t$ ).<sup>28</sup> While many of these advantages can *only* be fully realized through FDI, others, e.g. some economies of scale and scope of knowledge sharing and of learning and of spatial clustering are also being achieved through a variety of cooperative agreements, including strategic alliances and inter-firm networks.

- 2) Since the early 1980s, M&As have become an important modality of TNC activity. Between 1985 and 1994 they are believed to have accounted for between 50 per cent and 60 per cent of all new foreign direct investment.<sup>29</sup> In analyzing the reasons for these M&As, it is clear that many were primarily motivated not in order to exploit existing O-specific advantages, but rather to protect or augment such advantages. There is, indeed, a good deal of other evidence to support this view. For example, according to a survey of the world’s largest manufacturing companies in 1994-1995, referred to earlier as a substantial proportion (upwards of one third, and over one half in the case of the most transnational of firms) of their technology-based competitive advantages were perceived to be derived directly from their foreign-based activities. Scholars also generally agree that the pace of technological development and the globalization of markets has compelled large and medium-size firms -- particularly in knowledge-intensive

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<sup>28</sup> Perhaps more correctly, these advantages should be called O-specific transaction and coordinating net benefits. But internalization theory tends to focus on the gains from avoiding the transaction costs of market failure rather than the benefits which arise from coordinating activities in hierarchies.

<sup>29</sup> The estimation is based on the value of new cross-border M&As foreign direct investment flows to developed countries. We have discounted these percentages to take account of minority M&As.

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industries -- to conclude cross-border M&As and strategic alliances, both to capture economies of synergy and to truncate the research and development time for innovations. The implication of these and other features of alliance capitalism is that not only do TNCs need O-specific advantages to penetrate foreign markets, but to utilize them profitably, they also require gaining access to a variety of complementary assets, both those owned by indigenous firms and those more generally available but location-bound (e.g. human and physical infrastructure), in foreign countries.

- 3) Third, there is increasing evidence that the foreign activities of TNCs are becoming more embedded in the host countries, and are contributing more to the dynamic efficiency of United Kingdom industry. In *American Investment*, we revealed that in 1953, 77 of the 205 United States affiliates in the United Kingdom had been established in the United Kingdom for 24 years or more and 64 per cent undertook some form of R&D.<sup>30</sup> In general, however, the bulk of innovatory activities of United States TNCs were confined to their home countries. For example, only 6.5 per cent of the R&D expenditures by United States TNCs were undertaken outside the United States, while over the period 1969-1972, the patents registered by United States firms in the United States attributable to research carried out in foreign locations was 5.0 per cent. Throughout the 1970s, these figures increased only marginally, but the latest statistics (1994 for R&D expenditures and 1991-1995 for patents) give respective proportions of 13.2 per cent and 8.6 per cent (Cantwell and Harding, 1997). Data on the location of innovatory activities of TNCs from France, Germany, the Netherlands and the United Kingdom show broadly comparable trends.<sup>31</sup> I conclude that while the globalization and/or rationalization of R&D activities remains well below that of other value added activities of TNCs,<sup>32</sup> it is rising quite speedily.

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<sup>30</sup> And 19 per cent engaged in some basic research.

<sup>31</sup> See, for example, Cantwell and Kotecha (1997) and Cantwell and Janne (1997).

<sup>32</sup> In 1994, the sales of the foreign affiliates of United States TNCs were 30.7 per cent of their worldwide sales; the corresponding figure for employment was 26.8 per cent (Mataloni and Nader, 1996).

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These (and other) changes in the world economic scenario have caused scholars (including myself) to reappraise their theorizing on the reasons for international business activities and their consequences for host countries. However, to the best of our knowledge, there has not been any systematic attempt to evaluate the ways in which United States FDI in the United Kingdom has been affected by these changes.<sup>33</sup> While such a task is well beyond the scope of this article, it is possible to identify some of the ways in which the configuration of OLI advantages facing United States and other foreign investors in the 1990s is different from that in the 1950s and of how these differences have affected both the structure and impact of United States FDI in the United Kingdom manufacturing sector.

The second column of table 2 sets out the main OLI advantages in respect of the three main types of United States FDI in United Kingdom manufacturing, viz., market-seeking, efficiency-seeking and strategic-asset seeking, in the 1990s. Compared with those linked in the first column, I would emphasize four main differences:

- 1) Knowledge-based  $O_a$  advantages and most kinds of  $O_t$  advantages have become a more important component of the core competencies of United States foreign investors (or potential investors), relative to  $O_a$  advantages most prevalent in the 1950s. In general, the former advantages are less *country*- (United States) specific and more *firm*-specific than are the latter. They also tend to reflect the degree of multinationality of the investing firms rather than their country of ownership.
- 2) The value of the core competencies of particular investing firms is increasingly influenced by their ease of access to complementary assets of foreign firms or public authorities by and their ability to coordinate these efficiently with their own O-specific advantages.
- 3) The locational (L) attractions of countries are increasingly viewed by mobile investors in terms of the ability of the institutions in those countries to provide the kind of human

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<sup>33</sup> The latest comprehensive appraisal of the role of FDI in the British economy dates back to 1988. See Young, Hood and Hamill (1988).



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and physical infrastructure and other kind of support facilities necessary for their O-specific advantages to be productively employed.

- 4) There have been a number of changes in the factors influencing the foreign entry mode by firms, and particularly the choice between cross-border licensing (and other non-equity) agreements and FDI. On the one hand, transport and communication advances have reduced some transaction and coordination costs of cross-border markets.<sup>34</sup> On the other, the intra-firm benefits derived from effectively coordinating the use of multiple assets -- both external and internal to the firm -- in different locations have also risen as the world economy has become technologically and organizationally more complex. One thing seems certain. The kind of I advantages identified by economists to explain the exploitation of the O-specific advantages of United States firms in the United Kingdom are not necessarily those which explain why United States firms choose to internalize asset-creating or asset-augmenting activities. For in the one case one is concerned with the static efficiency of the investing firm, and in the other with its dynamic efficiency.

These differences in the OLI characteristics of firms would suggest a rather different structure of inbound FDI in the United Kingdom in the 1990s, compared to that in the 1950s. They also suggest that home countries which are more successful in generating the conditions for their TNCs to be successful organizers of multiple economic activities and coordinators of disparate assets (including those which are culture-specific) are those likely to be the most successful foreign investors in the late twentieth century.

Japan is often cited as a country which offers its corporations a supportive infrastructure and competitive ethos well suited to the needs of global investors. To what extent this is the case is not for this article to evaluate, but there can be little doubt that in some sectors -- notably automobiles and consumer electronics -- Japanese foreign

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<sup>34</sup> Especially those associated with the transfer of relatively standardized and codifiable intangible assets.

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direct investors have taken some United Kingdom and European markets away from United States affiliates over the past two decades. This, together with the growth of intra-European Union (EU) FDI consequent upon the completion of the European Internal Market, is the main reason why the United States share of the foreign direct investment stock in the United Kingdom fell from 74.1 per cent in 1962 to 41.4 per cent in 1993.

An analysis of the published statistics of United States FDI in United Kingdom manufacturing industry gives little hint of the changing rationale behind such investment. Such evidence that we have comes mainly from a variety of academic and business surveys conducted on both sides of the Atlantic, and from the records of the *Invest in Britain Bureau*<sup>35</sup> and various regional development agencies. Most of this, though fragmentary, does point to a reconfiguration in the perception of United States investors about their locational priorities, which, itself, partly reflects the changing character of their O-specific advantages, and, partly, the benefits to be derived from internalizing the transatlantic market for (some) intangible assets. One fairly clear conclusion from these studies, and from the actions of individual United States and other investors, is that in the emerging knowledge- based globalizing economy, firms are increasingly viewing their core competencies as their ability to create, harness and effectively utilize technological and human assets drawn from multiple geographical sources. Moreover, in seeking both for the most appropriate ways to achieve this goal, and for the right location to undertake value added activities pursuant to it, they seek the external assets which will help them to augment and deploy their core competencies in the most cost-effective manner.

It would seem, too, that over the last 40 years, there has been some convergence in the structure of the value adding activities of United States manufacturing affiliates and that of their United Kingdom competitors. Partly, this reflects the response of United Kingdom firms to the example and stimulus of past inbound United States investment,<sup>36</sup> and partly the fact that, in the 1990s, the main

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<sup>35</sup> A unit within the Department of Trade and Industry.

<sup>36</sup> For example, even by the 1970s, the profitability gaps between United States manufacturing affiliates and their United Kingdom competitors had been halved since the 1950s (see Dunning, 1976).

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United Kingdom competitors to United States affiliates are themselves among the leading global players, and have to meet similar demands of the international marketplace. Indeed, I would suggest that it is their *degree* of transnationality, rather than *nationality* of ownership which is becoming the main distinguishing feature between large firms in internationally oriented sectors. If this is the case, then *industry*- and *country*-specific factors in determining differences in the pattern of O and L advantage between foreign-owned and domestic firms are becoming less important, and firm-specific factors increasingly more important.

### **A glimpse into the future**

Although, over the past 40 years, the share of United Kingdom manufacturing output accounted for by United States affiliates has continued to rise -- albeit at a much slower rate since the mid-1970s -- several of the unique characteristics of United States direct investment described in *American Investment* have evaporated. This is mainly because of the kind of O-specific advantages ascribed to United States affiliates have been assimilated by United Kingdom and other foreign firms producing in the United Kingdom; and because contemporary “best practice” manufacturing and managerial capabilities are fairly standardized practices among the most efficient firms, whatever their nationality. Indeed, names of United States affiliates in the United Kingdom, which in the 1950s were recognized as being distinctly American, are now commonly thought to be British -- or at least an integral part of the United Kingdom industrial scene. Moreover, as more firms compete in the global marketplace, almost inevitably there is a convergence in cross-border competitive advantages, which reduces the significance of nationality of ownership as a variable affecting competitiveness. Indeed, as I have argued elsewhere (Dunning, 1997), in the 1990s, the extent and character of a firm’s transnationality might be a more significant determinant of its competitiveness than its country of ownership.

I would, however, not want to press this point too far. Among “best practice” firms, there continue to be at least some attributes which reflect their country of ownership. National innovatory systems, for example, are not irrelevant in explaining why firms from

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some countries and in some sectors are more successful innovators. The business culture in Japan and other Asian countries continues to offer the TNCs from these countries considerable transaction-related advantages in the emerging age of alliance capitalism, vis-à-vis their Western counterparts. That these country-specific advantages will continue to be of some relevance, especially in cutting-edge technologies and in human resource management, we have no doubt; but we do not believe these will be the critical O- specific advantages of foreign (including United States) firms in the future.

All this should not be taken to mean that the United Kingdom will not continue to welcome United States direct investment as it has done in the past; but this will primarily be because of the added source of firm-specific created assets and markets it brings with it, rather than those which reflect the national resource endowments of the United States economy. Nor should it be inferred that investors will not find the United Kingdom an attractive location in which to engage in value added activities. But, like other mobile investors, including some United Kingdom firms, they will invest in the United Kingdom, relative to other countries, only if they perceive it is in their commercial interests to do so; and, all the signs suggest that the economic demands of potential investors in the global economy of the 1990s are much more stringent than they were in the 1950s.

Relative to that of other foreign-owned firms, I foresee a further fall in the participation of United States investment in United Kingdom industry in the years ahead. By contrast, I envisage a major increase in the share of Japanese investment and that from other Asian developing countries, and a modest rise in intra-European FDI. It is perhaps worth observing that, in sharp contrast to their Japanese counterparts, the share of the global sales of United States TNCs accounted for by their foreign affiliates has remained fairly constant over the past decade.<sup>37</sup> This may well increase marginally in the next decade in the faster-growing developing countries, and perhaps also in Japan, but only if the rate of European economic growth were

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<sup>37</sup> Around the 30 per cent level. By contrast, the share of global sales of Japanese TNCs has risen from under 5 per cent in 1985 to 15 per cent in 1990. Bearing in mind that the Japanese home market is half the size of its United States counterpart, this would suggest that Japanese firms have a long way to go in their internationalization process.

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to exceed that of the United States (which at the moment seems improbable) would the European share of the global sales of United States foreign affiliates seem likely to rise.

Are United States TNCs likely to give (relatively) more attention to the European market in the next decade or more? Over the past 40 years, United States participation in United Kingdom industry has grown from adolescence to maturity. This is not to say there are no opportunities for the United Kingdom to divert new United States investment away from the European mainland to supply the European market. (Of course, the reverse could also happen!) But, in general, and except in the short run, it is unlikely there will be further substantial gains from intra-EU investment diversion. It is true that the United Kingdom's future stance on European Monetary Union (EMU) could be a critical factor here. Most (but not all) United States TNCs favor the United Kingdom's entry into the EMU. Partly this is because it would lower the transaction costs of doing intra-EU business, but mostly because they perceive (rightly or wrongly) that by remaining outside the EMU, the United Kingdom would lose many of its competitive advantages relative to those of its Continental European rivals. Whether or not this is a correct assessment depends on the extent to which, by joining the EMU, the United Kingdom would have to commit itself to other economic and social policies of the EU, e.g. the social chapter, which might raise the production and/or transaction costs of its firms.

What does all this imply about United Kingdom policy towards inward direct investment? In the 1950s, I was advocating a constructive and liberal approach, and have continued to do so in my various writings over the last 40 years. However, I have also come to appreciate the critical role of national Governments in setting the right economic and political climate for inbound TNC activity. This they may do by reducing information asymmetries and uncertainties; by encouraging the right ethos for entrepreneurship and competitiveness among their national constituents; by ensuring, through appropriate macroeconomic and micromanagement policies, that the market system works as efficiently and fairly as it can; and by fostering (or doing nothing to impede) the spatial concentration of those activities which gain from being in close proximity to each other. It is surely no coincidence that since the early 1980s, when

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market-oriented policies were vigorously pursued by the Conservative Government -- and, in the 1990s, are essentially being largely replicated by the Labour Government -- the United Kingdom has become such a favoured European location for inbound (including United States) investment.

At the same time, recent surveys (see, for example, Hatem, 1997) have shown that mobile investors are increasingly preferring to locate their activities in countries or regions which not only provide the right fiscal and other incentives, but offer the kind of location-bound real resources which firms need if they are efficiently to exploit, and/or complement, their own O-specific advantages. Countries and regions which are successful in promoting their *distinctive* locational advantages are likely to be those most attractive to inward direct investment. It is then no longer sufficient for the United Kingdom just to provide a first-rate physical infrastructure and educational facilities: it also needs to evolve a portfolio of United Kingdom-specific assets which are not possessed by its competitors and not easily imitated by them.<sup>38</sup>

Such advantages may embrace a whole set of enabling actions, which are designed to reduce the transaction costs of markets and promote the innovatory capabilities and dynamic capabilities of firms. Once again, it is not accidental that those countries (or regions within countries) which have been the most successful in attracting mobile investment are those which foster and publicize these kinds of immobile assets the most aggressively, and which offer inward innovators informative, “hassle-free” and speedy administrative procedures.<sup>39</sup> In this respect, the setting up of the *Invest in Britain Bureau* in 1977 was an important step forward in the United Kingdom’s efforts to upgrade its profile to foreign investors; although, as location decisions are increasingly being taken at a subnational, i.e. microregional, level, the incentives offered by regional authorities

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<sup>38</sup> In this respect, to be competitive, countries or regions, like firms, need to develop their core competitive assets which are not easily copied by other countries. At one time, these advantages were based on natural endowments. Today, they might be based on created assets of one kind or another. Since these assets are more mobile across national boundaries, this is a more difficult thing to do.

<sup>39</sup> Notably, the Singaporean Government and several regional authorities - - e.g. Scotland; Alabama, in the United States; Bangalore in India; and Shanghai in China.

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are becoming increasingly important.<sup>40</sup> Here, of course, national Governments have to draw a fine line between encouraging interregional competition and avoiding wasteful locational tournaments between the regions and districts within their jurisdiction.

I would make one final point. In *American Investment*, I made reference to United States firms investing in the United Kingdom to gain access to United Kingdom technology and certain types of professional and skilled labour. Such asset-seeking investment, particularly among advanced industrialized countries, has become much more prevalent in recent years. It certainly explains a good deal of the acquisitions of United States firms by European investors over the last decade. As and when the United Kingdom upgrades the productivity of its location-based resources, rather more of this type of United States direct investment might be expected. As argued in my 1970 volume (Dunning, 1970, chapter 8), I do not believe one should be unduly concerned about this kind of inbound investment - partly because, in the United Kingdom's case, it is a two-way phenomenon, and partly because the evidence suggests that, far from exporting technology from this country, United States FDI is helping to build up the United Kingdom's innovatory and organizational capabilities - particularly vis-à-vis its Continental European competitors.<sup>41</sup> Finally, in judging the economic merits of any acquisition, its price should reflect its true social value, and this should include any future costs and benefits directly resulting from the acquisition.<sup>42</sup>

## Conclusions

As might be expected, there are many similarities between the structure of United States FDI in the United Kingdom manufacturing sector, its determinants and its consequences for United Kingdom industrial productivity in the 1950s and 1990s. But, there are some

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<sup>40</sup> As described from a United States perspective in Donahue, 1997.

<sup>41</sup> Thus, the R&D content of United States manufacturing affiliates has continued to increase over the past 30 or more years. For a recent examination of the growth of Japanese-owned innovatory facilities in the United Kingdom, see Pearce and Papanastassiou (1996), and Turner and Hayward (1997).

<sup>42</sup> This assertion seems to us to be as valid in the 1990s as when we first put it forward in the late 1960s. See Dunning (1970).

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noticeable differences. These are the result, first, of changing economic circumstances -- notably that of new technological advances and the liberalization of cross-border markets -- and second, of the emergence of new analytical tools to international business scholars, business historians and geographers. In conclusion, let me summarize four of the more important of these:

- 1) Though United States affiliates now account for a larger share of total United Kingdom manufacturing output than they did in the 1950s, their share of the contribution of all foreign firms has fallen quite significantly.
- 2) Any contemporary explanation of United States FDI in the 1950s would benefit from a more rigorous analytical base than was available to scholars (or at least than the one I adopted!) at that time.
- 3) In the United Kingdom in the 1990s, compared with in the 1950s, the extent and configuration of OLI advantages facing foreign firms (*vis-à-vis* their indigenous competitors) has undergone several changes as a result of the emergence of alliance capitalism and the knowledge-based economy, and of the growing transnationalization of the leading foreign direct investors. *Inter alia*, these events have led to more strategic asset-seeking FDI and cross-border cooperative ventures by United States firms and to a different set of locational needs by them. More particularly, O advantages which relate to the economies of common governance and the efficient coordination of a diverse portfolio of international activities have become more important. Increasingly, too, the rationale for internalizing intermediate product markets needs to be broadened to embrace the transaction and coordination costs (and benefits) of asset-creating as well as asset-exploiting FDI. At the same time, non-equity cooperative ventures between United States firms and their United Kingdom competitors, suppliers and customers, have helped complement FDI as a critical avenue for both gaining and exploiting firm-specific advantages.
- 4) From a policy perspective, there is less reason for United States foreign direct investors in the United Kingdom to be favoured or discriminated against, *vis-à-vis* their indigenous competitors in the 1990s, than there was in the 1950s. In today's more



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liberalized market economy, United Kingdom economic policy<sup>43</sup> should be principally directed to providing an appropriate macro-organizational environment and location bound assets so that (a) inbound FDI most conducive to advancing the dynamic comparative advantage of the United Kingdom can be attracted to, and retained in, the United Kingdom and (b) it should have the greatest *net* benefit<sup>44</sup> in upgrading domestic resources and capabilities and the competitiveness of United Kingdom firms. In particular, I would suggest that more emphasis should be given to identifying and promoting the unique and non-imitable competitive advantages of the United Kingdom; and, by the fostering of clusters of related activities, to ensure that the desired inbound FDI become firmly embedded in the local environment. Finally, in the case of the larger United States capital inflows, it may be entirely appropriate for national or local authorities to “tailor make” at least some of their location-specific assets to meet the requirements of the investing entities. ■

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<sup>43</sup> Both at a national and subnational level.

<sup>44</sup> I.e. gross benefit less gross cost.

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# Forty years of the theory of the transnational corporation

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Alan M. Rugman\*

John Dunning's 1958 book was the first significant study of the economic performance of United States foreign direct investment in a host country economy. It was an empirical assessment of the benefits and costs of United States FDI in the United Kingdom, using survey data for 1953. Raymond Vernon's 1966 article was a classic complement to Dunning, since it provided a rationale for United States outward FDI, based on the timing of innovation cycles in oligopolistic industry structures. Both contributions are highly relevant for the globalization issues of today – but with several differences. While the transnational corporation is still the unit of analysis today, there is a Triad of transnational corporations instead of just United States ones. Today, two-way foreign direct investment and related managerial and public investment policy (liberalization) issues have replaced the one-way outward foreign direct investment and foreign control of host economies regulatory issues. Finally, the modern theory of the transnational corporation (internalization/eclectic) has some of its antecedents in both Dunning and Vernon, although the managerial implications were neglected due to the focus on public policy.

## Introduction

The panel for which this article is written is designed to conduct a retrospective analysis of United States foreign direct investment (FDI) from the 1950s to the 1990s, using two anchors. First is John

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Dunning's 1958 book on inward United States FDI in the United Kingdom (Dunning, 1958). Second is Raymond Vernon's 1966 article on United States outward FDI, the product cycle model (Vernon, 1966). These seminal contributions are to be related to the literature in international business and relevant work on globalization over the last 40 years.

As one of the first empirical studies of FDI in a host economy, there are implications to be drawn from the Dunning book for host country policies towards FDI, both in the 1950s and now in the 1990s. As one of the key theoretical articles in the literature, there are implications to be drawn for home and host country policies towards FDI, and for corporate strategy, from the Vernon article. With today's interest in globalization both of these studies are key building blocks in our understanding of the global economy. My specific focus is on the theoretical frameworks of the Dunning 1958 book and the Vernon 1966 article and subsequent developments.

### **Dunning's empirical country study of 1958**

The basic objective of the research reported in Dunning (1958) was to construct an objective factual record of United States FDI in British manufacturing industry and to assess its impact on the British economy. It is driven by macro public policy considerations rather than micro managerial ones. This was the first study to attempt to evaluate the contribution of FDI to a host economy. In an unusually detailed piece of fieldwork over a two-year period (1954-1955), funded by the Marshall Aid Plan, Dunning actually visited 115 United States affiliates and an additional 45 United States-United Kingdom companies with 25 per cent or more United States equity control. Another 45 firms provided information by mail. Out of a potential set of 245 United States manufacturing companies in the United Kingdom, employing 100 or more workers, only 40 did not cooperate with Dunning. His final set of 205 firms accounted for between 90 and 95 per cent of all the workers in United States-owned firms in the United Kingdom. Dunning usually conducted two visits to each firm. He obtained objective data and also made a subjective assessment of the firm's contribution to the United Kingdom economy.

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After a review of the historical growth of United States FDI in the United Kingdom (which started with Colt in 1852 and Singer in 1867) and an assessment of its significance in the 1950s, Dunning reported on its key characteristics: geographical location; size; ownership pattern; financial, administrative and managerial structure. He then, in chapter 5, undertook one of the first attempts to measure transfer of technology, from United States parent to British subsidiary. This was a nice complement to work by Vernon (1966) on parent firm innovation and the timing of production of knowledge assets in foreign affiliates. Of course, Dunning was concerned with analysis of the aggregate effects of FDI and its public policy implications, whereas Vernon was much more micro- and firm-oriented. Dunning looked at the impact of United States FDI on the United Kingdom manufacturing productivity, while Vernon hypothesized about the oligopolistic clustering and timing of product entry by industry and country.

In the second half of his book Dunning used his data and “balanced judgement” to evaluate the contribution of United States FDI to United Kingdom economic development. He assessed the way in which United States FDI affected United Kingdom competition, research and development (R&D), manufacturing and managerial expertise, consumers, and the overall efficiency of the economy. One chapter looked at the economic relationships between United States manufacturing affiliates and United Kingdom component and raw material suppliers, with a discussion of the impact on United Kingdom procurement and production policy. He also considered how United States FDI has affected the “domestic” part of the United Kingdom economy, which was only indirectly affected by foreign investments.

Although in his 1998 ex-post-updated chapter Dunning claimed that he distinguished between country (location factors) and firm (ownership) differences in productivity (Dunning, 1998, p.248), the 1958 book did not use the Dunning eclectic paradigm mainly because the focus was on economic policy-making and transfer of technology rather than on the theory of the transnational corporation (TNC). It was macro and normative in scope. Indeed, as Dunning (1998) commented, in 1958 TNC was not yet recognized as a term, yet alone as a formal unit of analysis.

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## Vernon's product cycle model of 1966

Vernon (1966) embedded his product life cycle theory within the historical characteristics of United States FDI of the period. His focus on knowledge as an independent variable, location factors, and the timing of an innovation all led to the argument that a United States TNC had a strong home base in which to develop and produce new products. In time, these were produced abroad in wholly owned affiliates, in Canada and Western Europe. At the end of the product life cycle, when the firm-specific technological advantages were dissipated and proprietary production was no longer required, the product was produced anywhere in the world at least-factor costs.

In his article, Vernon assumed that United States average income was twice that of Western Europe, with a comparably high-wage rate, such that the United States market was the country source of innovation, especially to conserve on relatively high cost labour. The firms in the rich United States market had an incentive to develop new labour-saving products. But why produce them in the United States, rather than foreign markets? Vernon said that the answer lay in external economies of industry location. The new product was "unstandardized" and producers needed to be close to the market to save on communications costs, as it was commercialized. The good was produced in the United States and any foreign demand was met by exports. As the product matured, it became more standardized. Foreign production in wholly owned affiliates could now take place, depending upon relative home vs. host country production and transport costs. Once one United States producer was established in a major foreign market, there tended to be oligopolistic reaction, as other United States producers tried to maintain or defend their global market shares. The most striking historically bound empiricism in Vernon (1966) was his assumption of Japan and Taiwan Province of China as "less-developed countries" which were at the last stage of the product cycle, capable only of producing a fully standardized product.



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## **Transnational corporation theory as an economic theory**

Both Dunning (1958) and Vernon (1966) took an economic approach to the analysis of international business. This was consistent with the dominant approach starting in the late 1970s, in which the appropriate unit of analysis was the TNC. That the theory of international business is the theory of the TNC was the central argument of Alan M. Rugman (1981) and Richard E. Caves (1996), following upon the key conceptual breakthrough by Peter J. Buckley and Mark Casson (1976), in which the theory of internalization was first developed. The argument that the field of international business needed a theory of the TNC has been reconfirmed by Casson (1987), Buckley (1988) and Dunning (1993), amongst others.

Recently, Mira Wilkins (1997) published an influential article in which she also argues that the field of international business has as its core the theory of the firm that extends over borders. She also agrees with Rugman (1981) that the core theory of the international firm is the transaction cost/internalization approach. This gives insight into the internal management of the firm and its behaviour as it operates across national borders. In addition, of course, she argues that the historical context of both firm behaviour and the global system is an important component of analysis, but her focus on the firm as the unit of analysis is consistent with the basic economic approach to the field of international business. In a recent review of TNC theory, Wilkins reconfirms this perspective on the central role of the TNC as the unit of analysis in the field of international business (Wilkins, 1998).

Wilkins disagrees with Bryan Toyne (1997) and others who argue that the economic approach of the theory of the TNC is too narrow for the domain of international business. Toyne argues for a holistic approach in which the firm's actions are embedded in social relationships. Yet an economic theory of the TNC is not narrow. A focus on the TNC as the unit of analysis, with an economics-based theory of the firm, also involves study of the global environment within which the TNC operates. The manager of the TNC is an interactive agent dealing with issues internal to the firm at the same time as with external environmental issues. The theory of the TNC uses economics as a base, but its application by managers requires use of analysis from disciplines other than economics, namely,

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political science, sociology, psychology and so on. These disciplines help explain the social and political context of TNC activity. There is no need for a *separate* holistic theory of international business when the management of the global firm can be fully analyzed by internalization theory within its social context. This “multiple perspectives” approach of using the lenses of different disciplines to focus on the TNC is now the standard for international business theory.

At the time of Dunning’s research in the 1950s, the largest amount of FDI was by the United States. Therefore the TNC of interest was the United States TNC. In the last 40 years, the relative importance of the United States TNC has been balanced by the growth of European and Japanese TNCs. While these have distinctive cultural styles, it is apparent that the basic nature of the TNC – as an economic agent of international production and distribution – has not really changed all that much in the last 40 years. Both European and Japanese TNCs can be analyzed using an internalization theory approach, just as can the United States TNC (Rugman, 1981, 1996a). Thus the key contributions of Dunning (1958) and Vernon (1966) remain valid as a general case of TNC behaviour, although their theorizing and empirical work is confined to United States TNCs. In other words, there is not a separate theory of either the Japanese TNC or the European TNC that can survive alone without building on the internalization theory approach, which is basically consistent with the early Dunning and Vernon work.

The basic premise of this article is that, today, there is an accepted theory of the transnational corporation. This is internalization theory as a theory of the firm, as broadened by John Dunning to include country factors as well as firm factors. (For a review of the last 20 years of internalization theory, see Rugman, 1996a.) Dunning’s “eclectic” paradigm of international business brings together three elements: a) ownership-specific advantages of property rights and intangible assets; b) internalization incentive advantages, to overcome market failures such as buyer uncertainty and the lack of futures markets; and c) location-specific advantages, which include differences in country natural resource endowments, transport costs, cultural factors and government regulations (Dunning, 1980).

It is pretty obvious that (a) and (b) both deal with transaction cost issues and that they can be combined into a “firm”-level category, leaving (c) as a country/location category. This points to a useful distinction between firm-specific advantages and country-specific advantages. In turn, this can yield the following firm-specific advantage/country-specific advantage matrix of figure 1, developed by Rugman (1985) and used by Rugman and Verbeke (1990).

**Figure 1. The matrix of firm-specific and country-specific advantages**

		Firm-specific advantages	
		Low	High
Country-specific advantages	High	1	3
	Low	2	4

*Source:* adapted from Rugman, 1985 and Rugman and Verbeke, 1990.

This matrix has been used to capture many of the key issues in the field of international business, such as the performance of TNCs under conditions of Canadian-United States free trade; the investment provisions of the North American Free Trade Agreement; and the impact of a multilateral agreement in investment (Rugman, 1996b) and as a basic explanation to synthesize studies of the public policy/TNC interaction, (Rugman and Verbeke, 1998).

### **Assessment of Dunning’s contribution to TNC theory**

One objective of this article is to see to what extent the largely empirical 1958 Dunning book provides any basis for the current dominant internalization/eclectic paradigm as the theoretical explanation of globalization. Are there empirical antecedents to the

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theory of the TNC (including Dunning's own eclectic paradigm) in the 1958 book? Indeed, can a focus upon the extent and performance of United States FDI in the United Kingdom yield any long-term theoretical insights?

A key finding of this article is that, indeed, there is a strong linkage between Dunning (1958) and today's globalization issues. The linkage is more empirical than theoretical, although the 1958 book is driven by the central insight that large United States TNCs engage in international production with affiliates in the United Kingdom. However, these are analyzed not within the context of a theory of the multinational firm but from the viewpoint of the benefits and costs of public policy. The major unit of analysis is the country, not the firm.

Despite this focus, in 1958, Dunning was already able to anticipate the key insight of Stephen Hymer (1960, 1976) and break away from an economist's country-level analysis of FDI as a capital flow and instead have FDI as a firm-driven managerial decision. Hymer in 1960 made the critical conceptual breakthrough, which put the TNC on the centre stage of international business. Hymer's 1960 dissertation is credited as the start of the modern analysis of the TNC as an industrial organization/micro theory rather than a theory of international financial capital flows (Dunning and Rugman, 1985). The empirical work in Dunning (1958) on the extent of United States TNC activity in United Kingdom was actually used by Hymer as evidence of his distinctive theory of the TNC (Dunning and Rugman, 1985). I shall consider the Dunning contribution to TNC theory in two ways: first, the linkage to Hymer's work and second, the linkage to the modern theory of the TNC.

### ***Dunning and Hymer***

Perhaps it is not well known that Canadian radical economist Stephen Hymer relied extensively on Dunning (1958) for a substantial chunk of his 1960 doctoral dissertation. When this was published as Hymer (1976), pages 134-148 simply reproduced Dunning's data on foreign ownership, with three key tables being lifted straight from Dunning (1958), namely, those on Dunning's pages 58, 60-78 and

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156-157. These tables all reported data on United States FDI by industrial sector, using the United States firms' share of total employment in that sector as a measure of foreign ownership. While Dunning only found 2.8 per cent overall United States share for 11 manufacturing sectors using 1953 data, Hymer seized on the point that much of the United States FDI was bunched in a few key subsectors, in which there is often a high degree of concentration. Hymer concluded (Hymer, 1976, pp. 144-145):

“The connection between concentrated industries and international operations is nowhere more clearly seen than in the data presented by Dunning . . . . the predominance of oligopolistic industries is striking . . . .”

From this it can be seen that Dunning's early 1950s empirical work on United States FDI in the United Kingdom was extremely influential in the thinking of Hymer. Hymer's key empirical theme was that United States “international operations occur in some industries throughout the world rather than in all industries in some countries”. (Hymer, 1976, p. 157). He thus liked Dunning's United Kingdom data, which showed a “tendency for these industries to be concentrated industries” (Hymer, 1976, p. 167).

Hymer also made the point that, in the late 1950s, it was virtually impossible to gather firm-based data. He stated that his examination of the annual reports of the 750 largest United States manufacturing firms failed to yield basic information on the amount and location of their FDI, except for automobile and petroleum firms. He stated that practically no United States firms in Canada even distinguished between their United States and Canadian operations in their accounting data, and that consolidation of foreign with domestic activities was common across United States firms at that time (Hymer, 1976, pp. 164-165). Today, annual reports are much better and it is possible to calculate returns on foreign assets directly from the primary sources of annual reports (for example, Gestrin, Knight and Rugman, 1998). Vernon's Harvard Multinational Enterprise Project began to collect firm-based data in the late 1960s, and Vernon (1971, 1977) used this data bank, although today it is out of date. Today, Vernon is still, rightly, concerned about both poor data on FDI and the potential for its misuse.

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The methodological solution to the lack of reliable published firm-led data in the 1950s (and ever since) has been to do a survey. This was the basic source of information for Dunning (1958) and also for A. Edward Safarian (1966) on foreign ownership of Canadian industry. As noted earlier, Dunning's survey was remarkably comprehensive. He surveyed 205 of the set of 245 United States firms in the United Kingdom in which United States equity ownership was 25 per cent or greater and which employed 100 or more workers in 1953. These 205 firms employed 90-95 per cent of workers in all United States manufacturing firms in the United Kingdom at the time.

Safarian (1966) used a questionnaire to 227 United States-owned firms in Canada in 1959, many of which are small to medium-sized firms. He also identified and included 53 other (non-United States) foreign-owned companies in Canada in his work. The work of Hymer and other Canadians like Safarian (1966) and Rugman (1980) has always been driven by a desire for good data to help influence public policy. Dunning (1958) reported that United States FDI in Canada in the 1950s was four times greater than its FDI in all of Western Europe (Dunning, 1958, p. 315). The reason given by United States managers was that "Canadian investment is as fully attractive as domestic United States investment". But the United Kingdom was the next largest recipient of United States FDI in the 1950s, accounting for 58 per cent of the United States stock of FDI in Europe in 1955 and 15 per cent of all United States FDI.

Canada had the largest percentage of foreign ownership of any country at that time, and foreign control of Canadian manufacturing was still 56 per cent in 1975 (Safarian, 1993). As a result, the Canadian Government started an annual survey of all foreign firms in Canada, yielding a rich source of data known as CALRUA, the Corporate and Labour Unions Returns Act. In addition, the Canadian Department of Industry, Trade and Commerce collected separate data on the economic performance of all foreign-owned firms in Canada for the period 1964-1981. These data sources were used by Rugman (1990) to assess the trade performance of foreign-owned firms in Canada and of Canadian TNCs in the United States, a task which Dunning (1958) had already accomplished in a British context. By the 1980s it emerged that foreign ownership was not the only issue for Canadian

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policy makers, since there was observed to be a relatively greater percentage of Canadian outward investment, i.e. six times its size (Rugman, 1985). The Canadian experience therefore anticipated the more global trend towards two-way FDI by the 1990s, in contrast to the one-way FDI of the 1950s. It also reflects very well the key public policy shift from the 1950s concern over regulation of inward FDI towards a balanced concern with both outward and inward FDI in the 1990s.

### ***Dunning and the theory of the TNC***

While it is of great historical importance that Dunning (1958) can be so closely linked to Hymer (1976), there is nothing in Dunning, or Vernon (1966) for that matter, which reveals any insight into the transaction cost/internalization theory of the TNC. Neither is there in Hymer, as argued by Dunning and Rugman (1985). Although Ronald Coase's article was published back in 1937 (Coase, 1937), there was little interest in transaction costs analysis until Williamson (1975) and, in an international context, Buckley and Casson (1976).

The fallout of this is that Dunning (1958) sets the tone for much of the work in the field, which in the 1960s and 1970s was concerned about public policy and the regulation of TNCs, and only partly with the efficiency aspects of TNCs. Indeed, the fact that Hymer (1976) can hook his structural market imperfections model onto the Dunning (1958) empirical evidence is partial proof that the efficiency-based market imperfections/transaction cost camp was somewhat delayed in making an impact on the field. As Dunning and Rugman (1985) argue, there is no evidence in the 1960 Hymer dissertation that Hymer recognizes the transaction cost approach, and it is not until Buckley and Casson (1976) that this efficiency-based approach to the TNC gains any acceptance as against the Hymer power-based viewpoint.

But Dunning cannot be blamed in any way for retarding development of the theory of the TNC. Hymer (1976) is a seminal breakthrough that is half right, namely, the focus on power-based asset advantages of TNCs and half wrong, in his unwarranted concern over the power of the TNCs in oligopolistic industry structures. Buckley and Casson (1976) is a balancing seminal breakthrough

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because the pioneering development of internalization theory sets the stage for empirical work which evaluates the performance of TNCs at firm level, e.g. Rugman (1981). It is to be noted that Vernon (1966) is more efficiently driven (but not by optimization principles) and that his work anticipates today's game theory models of the TNCs with oligopolistic market power.

The resource-based view of the firm is also not anticipated by Dunning (1958) or Vernon (1966). Although Edith Penrose (1959) was writing at about the same time, her work was largely ignored until it was rediscovered by strategic management scholars in the late 1980s. This is odd for us in the international business field, since the resource-based view is fully consistent with an internalization theory approach to the TNC (Rugman, 1996a).

If there is any link with Dunning and Vernon, it is more to the work of Michael Porter, as summarized in Porter (1990). Porter has a Vernon-type strong home base for United States FDI framework in mind as a basis for his "diamond" analysis of competitiveness. He also assumes an ethnocentric and hierarchical mindset for home country managers (Perlmutter, 1969). However, unlike Dunning (1958), Porter actually says that inward FDI does not contribute to an improvement of domestic competitiveness. Porter (1990) is thus a prisoner of the old Hymer-type thinking of the 1960s, and his work fails to reflect the efficiency-based aspects of the modern theory of the TNC, as developed by Buckley and Casson (1976), Rugman (1981) and Dunning (1980, 1993). It is apparent that Porter has been too much influenced by the one-way United States outward FDI analyzed by Vernon (1966) and not enough by the more recent work on the transaction cost and resource-based view theory of the TNC. Porter does pick up on Vernon's game theory approach to oligopolistic industry structures but does not match Dunning's movement from a public policy focus in 1958 to an efficiency-based focus in 1980 and beyond.

Today, the basic empirical insights of Dunning are still valid. While United States FDI is no longer predominant, with the rise of European and Japanese TNCs, it is apparent that the 500 largest TNCs in the Triad still dominate world investment and trade. It has been



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estimated that these 500 large Triad-based TNCs account for 80 per cent of the world's stock of FDI and of over half of world trade (UNCTAD, 1997). The only empirical modification required to Dunning (1958) is to replace United States FDI with triad FDI. While there are differences between United States, European and Japanese TNCs, this literature does not contradict the basic points: a) that the empirical evidence supports concentration of global FDI into a small set of 500 TNCs, and b) that there is a satisfactory general theory of the TNC which explains the basic activities of this set of TNCs. In other words, firm factors are more important than country factors for a theory of international business.

### **Public policy implications of Dunning and Vernon**

The work of Dunning (1958) on the host country issues of inward FDI has stood up well to the passage of time. The complementary work of Vernon (1966) on the home base for innovation and outward United States FDI is also valid. At a simple level Dunning is empirical with a few theoretical generalizations and Vernon is theoretical, with a few empirical and historical anecdotes thrown in. Yet at a deeper level both contributors make theoretical and public policy implications for the globalization issues of the 1990s.

As discussed above, the focus on United States FDI does not restrict these works to a special case. In the 1950s United States FDI was the major force for globalization. In 1960 the United States held 48.3 per cent of the accumulated world stock of FDI (Dunning, 1993). In 1960 Japan held less than 1 per cent of the world stock of FDI, with all of Europe accounting for the remaining 42 per cent (Dunning, 1993). As Vernon states, at that time Western Europe had half the per capita income of the United States and Japan was a less developed country. Today all three areas are roughly equal in purchasing power and they make up the Triad (Ohmae, 1985). Yet the role of the largest 500 Triad-based TNCs in 1998 is not substantively different from that of the United States *Fortune 500* of 1960. At that time half of these United States firms were TNCs, and half were purely domestic firms. In fact, in research done for his 1974 doctoral dissertation, Rugman used the *Fortune 500* data from 1960-1969 to compare the

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rates of return and risk of earnings of United States TNCs compared to non-TNCs from this set, which divided rather neatly into two such sub-groups (Rugman, 1979). Today a *Fortune Global 500* exists, i.e. as an entire set of TNCs, and of these 500, in 1997, 442 came from the Triad. In short, a theory relevant for United States TNCs in 1958 and 1966 is highly likely to be as relevant for Triad TNCs today. The players in globalization may have broadened but the large TNC as the unit of analysis has remained.

The second theoretical insight from Dunning and Vernon is, however, profoundly different. Both of these grandfathers of the field were looking at one-way United States FDI to the United Kingdom. There was a clear home base and host country. In 1960 Canada was the recipient of 24 per cent of the accumulated stock of FDI, Europe for 23 per cent and in the United States 14 per cent (Dunning, 1993). The other third of the total was in developing countries. Today this is no longer the case. Now there are large two-way flows of FDI, and the United States has simultaneously the world's largest outward and inward stocks of FDI. The implications of two-way FDI are not apparent in Dunning (1958) or Vernon (1966). However, the basic theory of the TNC, in terms of the firm-specific advantage/country-specific advantage framework developed above, can readily handle two-way FDI. In a recent article Rugman and Verbeke (1998) classified the literature of the last 15-20 years within this framework. Since I have argued earlier that the modern theory of the TNC can be traced back to Dunning, and that the firm-specific advantage/country-specific advantage matrix captures its key elements, then we can conclude that the Dunning work is reconcilable with modern work on two-way FDI. These complex issues of home and host country policy being of concern to the United States Government, and its firms, are now being reflected in the European and Japanese experience.

Although Dunning subsequently recognized that the United Kingdom outward FDI could match inward United States FDI into the United Kingdom, in the 1958 book he does not make much of this point. Ironically, Dunning's next study in the 1960s was of United Kingdom outward investment, according to Dunning (1998) in an update of his 1958 book's contribution. In this sense, Dunning was

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well ahead of Vernon in beginning to focus on two-way FDI for the United Kingdom and then the United States. Perhaps in anticipation of this, in Dunning (1958), it is argued the United Kingdom and United States economies are complementary to each other, with the United Kingdom generating new ideas and the United States better at commercializing manufacturing. Dunning finds that the economies are at different stages of the manufacturing process and that trade and FDI are therefore mutually advantageous. Despite this, as a prisoner of the times, Dunning advocated selective screening of United States FDI and its direction towards development targets of the host economy. In Canada, in 1968, the Watkins report advocated a screening agency (Rugman, 1980), and it was only in 1985 that this was abolished and investment liberalization achieved.

A final, related issue is the extent to which the early use of United States FDI led to a United States-centric view of the field of international business, as alleged by Toyne (1997). In the same volume, Jack Behrman refutes this view. He states that a 1960 policy study of United States FDI abroad was objective and not subject to parochial concerns (Behrman, 1997). My own viewpoint is that the issue has been obscured by the assumption of political scientists, and related policy analysts, who are obsessed with the power of the TNC and see it as a major actor on the stage of international relations. It is often simply assumed that the large size of the TNC reduces the relative power of the nation-State. In Canada, a large literature was developed by economic nationalists who felt that the United States TNC was the agent of United States imperialism. Proposals to reduce foreign ownership of the Canadian economy were thinly veiled anti-United States propaganda (Safarian, 1993). In reality the interactions of States and firms are much more complex.

The work in international political economy (Strange, 1988) has only recently moved on from an obsession with the great power of the TNC to a more sensible view of the relative balance between the TNC and nation-State (Stopford and Strange, 1991; Boddewyn and Brewer, 1994). This balance, of course, was recognized by Vernon (1971) in a book whose title is misleading, since the analysis of the book shows that sovereignty is not at bay, but rather that there are complex and offsetting interactions between TNCs and Governments.

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In this book, Vernon, again is mainly concerned with the role of United States FDI abroad, and the nature of inward FDI into the United States is not discussed.

## **Conclusion**

A summary of the points developed in this article appears in table 1, which attempts to assess the contributions of Dunning (1958) and Vernon (1966) to the globalization process of today. In table 1, five key issues are outlined on the vertical axis, while the horizontal axis shows, briefly, how Dunning and Vernon handle them. The horizontal axis also shows how these five key issues are handled in the international business literature today. For further details, see Rugman and Verbeke (1998) and the discussion of Caves (1996) using the firm-specific advantage/country-specific advantage framework of the modern theory of the TNC.

The overall conclusion is that both Dunning (1958) and Vernon (1966) are seminal contributors to the theoretical and public policy development of the field of international business. In particular, Dunning's work can be tied closely to the theoretical breakthrough of Hymer (1960) in making the firm the unit of analysis (rather than the country) in the modern theory of the TNC. But both original publications should be read or reread by all scholars in the field. The genesis of the major globalization issues of the 1990s can be traced back to the work of these two giants of the field.

**Table 1. The contributions of Dunning and Vernon to international business theory and policy**

Key issue	1950s		1990s
	Dunning (1958)	Vernon (1966)	Globalization theory today
Unit of analysis	United States TNC in a host nation (country level)	United States TNC from a home base (industry + country level)	Triad-based TNCs (United States, E.U., Japan) (firm Level)
Type of FDI	one-way inward	one-way outward	two-way FDI
Basic theory	benefits and costs of FDI	home base firm innovation and timing of FDI	internalisation/eclectic theories resource based view holistic approach
Public policy	assess foreign ownership and performance of TNCs; regulate FDI	understand reasons for home-host country production switches	liberalize both inward and outward FDI
Managerial Implications	hierarchical parent; branch plant	hierarchical home parent controls location and timing of subsidiary production	choice of home base or strategies plus the development of associated core competencies and dynamic organizational capabilities

*Source:* the author's compilation.

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# **From the early internationalization of corporate technology to global technology sourcing**

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**John Cantwell\***

The early work of both Dunning and Vernon laid the crucial foundations for the large body of subsequent research on technological change and transnational corporations. While corporate technology creation in transnational corporations is often more widely internationally dispersed than Vernon had originally supposed, the notion of the locational agglomeration of innovation in key centres remains highly relevant. The transnational corporation now provides a means of linking alternative streams of innovation in geographically separate centres through the organization of the exchange of knowledge across national boundaries, as emphasized by Dunning in his latest work. This shift in the role of transnational corporations, from exploiting home-base technology in international markets to the international sourcing of technology, is illustrated here by revisiting the evidence on technologically active United States-owned transnational corporations in the United Kingdom and Europe, the case with which Dunning and Vernon had begun. It is shown that United States transnational corporations developing technology locally in the United Kingdom have moved away from their historical focus on the industries in which they were strongest at home (notably in electrical equipment) towards industries in which indigenous United Kingdom companies have the greatest technological expertise (notably in chemicals and pharmaceuticals).

## **Introduction: the early expansion of United States transnational corporations in Europe**

In the earliest version of the product cycle model, Vernon (1966) postulated that transnational corporations (TNCs) concentrate their

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technological development in their home country. The three theoretical justifications for this view were that there are scale economies in the research and development (R&D) function, locational economies of agglomeration in new product development, and a stimulus to innovation from the demand of high-income consumers and skill-intensive downstream production facilities, in the 1960s especially for United States-owned TNCs in the advanced United States economy (see Cantwell, 1995). However, Vernon based this aspect of the product cycle model on the evidence mainly of the early post-war experience of United States TNCs, as represented by the findings of the Harvard Multinational Enterprise Project (Vaupel and Curhan, 1973).

With the benefit now of a much wider range of evidence on the extent of the internationalization of R&D in large TNCs, it has become clear that technological development is not always highly centralized in the parent company in the home country (Lall, 1979; Mansfield, Teece and Romeo, 1979; Casson, 1991; Granstrand, Håkanson and Sjölander, 1992; Pearce, 1997), even if in general the home country is the most important single location for R&D (Patel and Pavitt, 1991; Patel, 1995). United States TNCs had carried out significant levels of technological development in their affiliates located in the United Kingdom and Europe in the interwar period just as they are doing today, while United Kingdom-, Swiss- and Dutch-owned TNCs had already highly internationalized their R&D by the 1960s (Cantwell, 1995). Thus, the extreme case of a very high degree of concentration of R&D in the home country of the TNC is a special case. It is a special case that tends to be representative of countries whose outward investment in other industrialized countries grows out of technological hegemony or an outstanding record in domestic innovation -- such as the United States in the early post-war years, and Japan since the 1970s.

Most notably in the electrical equipment industry, United States TNCs had a history in the interwar years of developing some new technologies in the United Kingdom and Europe. Although after the war they did so only to a lesser extent, Dunning (1958, 1970) observed how their local development efforts spilled over to help improve productivity and export performance in some industries in the United Kingdom, and subsequently more widely in Europe. He postulated

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that, while occasionally the local presence of United States-owned R&D might drive out weaker indigenous players, in general it would tend to enhance the technological capability of the host country. Following up on this line of argument, Cantwell (1989) found that United States inward direct investment in Europe had the most favourable dynamic effect upon the technological efforts of indigenous firms in industries in which local companies had a strong technological tradition of their own, which was revived by the competitive stimulus provided by innovative United States TNC new entry.

However, in the early stages of the internationalization of technological development in TNCs, historically the primary motive of the firms was to adapt products to local tastes and living and working conditions, local production and regulatory requirements, and local resource availabilities or scarcities (Cantwell, 1995). Hence, in terms of broadly defined industrial groups, United States-owned R&D activity in the United Kingdom initially reflected mainly the existing technological strengths or competitive advantages of the relevant parent companies, the focus on electrical equipment being a result of the interwar technological preeminence of companies such as General Electric, AT&T and ITT. Even today, much R&D in foreign-owned affiliates is still largely aimed at adapting technologies to local markets and environments (Pearce and Singh, 1992; Fors, 1998). As observed by Dunning (1958, 1998), United States-owned affiliates in the United Kingdom first engaged in local research mainly to adapt technology to United Kingdom production conditions, reflecting principally the structure of technological activity in the United States economy. Yet even as early as the 1950s, he notes how some United States-owned affiliates in the United Kingdom tapped in to local sources of expertise and created technologies that proved useful to their United States parent companies, so the typical direction of transfer was reversed. More recently, TNCs have increasingly developed a more globalized approach to innovation that embodies more decentralized but better integrated R&D activities to gain access to the main centres of R&D excellence for their industry (Dunning, 1994; Cantwell, 1995; Pearce, 1997; Florida, 1997; Cantwell and Janne, 1999). Over time, TNCs increasingly and gradually take advantage of host locations as centres for innovation and thus favour sectors in which the host country has a relative competitive advantage.

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Therefore, we would expect that the technological development of many United States-owned affiliates has become more sophisticated and specialized to exploit United Kingdom-specific technological expertise and skills (as might have been forecast from some suggestions of Dunning, 1958) as a source of complementary technology for the company of which they are part as a whole.

This article revisits the early perspectives on technological change in TNCs that derive from the work of Vernon and Dunning, with particular reference to the case of the activities of United States TNCs in the United Kingdom and Europe, on which their earlier studies had concentrated. More particularly it compares the extent, evolution and industrial patterns of research undertaken by United States TNCs in the United Kingdom and Europe in each of three phases -- in the interwar period, on which Vernon and Dunning had only limited evidence, in the early post-war period which they documented extensively, and in the more recent period of take-off in internationally integrated TNC strategies. The characteristics of these three phases in the technological accumulation of the largest TNCs have been discussed further in Cantwell and Piscitello (2000). Our evidence relies on a database of corporate patents granted in the United States to the world's largest industrial firms, which allows us to distinguish the location of the research facility originally responsible for each patented invention, as well as its ownership. This enables us to monitor the technological development efforts of United States-owned affiliates located in Europe, to examine their industrial structure and how it has changed over time.

## **Data**

The technological activity of United States TNCs in Europe is examined using data on patents granted in the United States to the largest United States-owned and European-owned firms in the historical periods 1920-1939 and 1940-1968, and then in the more recent period 1969-1995. A large literature has pointed out the advantages as well as the limitations of patent statistics as an internationally comparable indicator of technological activity (e.g. Pavitt, 1988; Acs and Audretsch, 1989; Griliches, 1990). As mentioned already, our patent database distinguishes both the country

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of origin of the invention (or the location of the corporate research facilities responsible) and the country of location of the parent firm. All patents granted under the names of affiliates have been consolidated into the relevant corporate group, but the historical dataset for the first two periods relies on a smaller set of companies. There are 284 corporate groups in the historical case (of which 92 are United States-owned and 192 are European-owned, including 65 United Kingdom-owned firms), and 603 corporate groups for the period since 1969 (of which 336 are United States-owned and 267 are European-owned, of which 84 are United Kingdom-owned companies). The patenting of large firms from 1920-1968 was recorded manually from the *United States Index of Patents* and the *United States Patent Gazette*, while from 1969 onwards equivalent information has been computerized by the United States Patent Office. The firms selected for the historical patent search were identified in one of three ways. The first group consisted of those firms which have accounted for the highest levels of United States patenting after 1969; the second group comprised other United States, German or United Kingdom firms which were historically among the largest 200 industrial corporations in each of these countries (derived from lists in Chandler, 1990); and the third group was made up of other companies which featured prominently in the United States patent records of earlier years (a method that proved most significant for a number of French firms that had not been identified from other sources). For a further discussion of the historical data see Cantwell (1995).

For 1969-1995, the corporate groups are drawn from the world's largest 792 industrial companies (as derived from *Fortune*, and listed in Dunning and Pearce 1985, of which 730 had recorded patenting activity for the 1969-1995 period), with the addition of 54 technologically large companies apparently missed from the *Fortune* listings, to make 784 corporate groups in all. Of these, 181 of the largest firms are of neither United States nor European origin, and so they are not considered for our current purposes. The consolidated firms are also allocated to their primary industry of output according to the product distribution of their sales, so that corporate patenting was divided into 10 broad industrial groups. European countries are defined as Germany, United Kingdom, Italy, France, Netherlands, Belgium and Luxembourg, Switzerland, Sweden, Denmark, Ireland,

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Spain, Portugal, Greece, Austria, Norway and Finland. The problem of the variation in the propensity to patent the results of innovation over time, amongst industries, technological sectors and nations is avoided by constructing measures from the United States patent statistics in the form of shares and ratios rather than absolute numbers.<sup>1</sup> Some figures should however be interpreted with care when the number of patents registered is low. Consequently slight changes may be reflected in large percentage increases or decreases in the numbers presented.

Countries' industrial patterns of technological specialization can be observed by means of a revealed technological advantages index as developed by Soete (1987), Cantwell (1989), and Patel and Pavitt (1991). The revealed technological advantages index of the United States and the United Kingdom as hosts to the research of the largest firms can be calculated across industrial groups of companies, and is defined as that country's share of all United States patenting in a given industry relative to its share of all United States patenting in all industries -- all large firms patenting in the United States, irrespective of their country of ownership or of where technological development is located. Denoting by  $P_{ij}$  the number of United States patents of the host country  $j$  in a particular industry  $i$ , the revealed technological advantages index for each country in that industry is defined as  $(P_{ij} / \sum_j P_{ij}) / (\sum_i P_{ij} / \sum_{ij} P_{ij})$ . The index varies around unity, so a value greater than one suggests that the host country is comparatively advantaged or specialized in the considered industry in relation to other countries, and a value less than one shows comparative disadvantage. Similarly, the revealed technological advantages index is defined across industries for groups of United States and United Kingdom firms at home, respectively; United States firms located in the United Kingdom; and United Kingdom firms located in the United States.

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<sup>1</sup> To illustrate, as a measure of the degree of internationalization of technological activity we calculate the share of total patenting of some given group of firms that is attributable to research or other technological activity outside the home country of the parent company. Firms in different industries, or originating from different home countries, can then be compared with one another. The higher propensity to patent of, for example, pharmaceutical firms relative to shipbuilding companies does not affect matters, provided that pharmaceutical firms are equally more likely to patent from both their foreign and their home-located activity, which is a plausible assumption.

## The early view from the United Kingdom host country and United States home country perspectives

The historical dominance of the electrical equipment industry in the European-located technological development of United States TNCs is illustrated in table 1, a dominant position that reflected the preeminence of United States companies in this field, as remarked upon above. As measured by corporate patenting, roughly two thirds of the R&D conducted by United States-owned affiliates in the United Kingdom and in Europe in the interwar and early post-war years was organized and managed by firms in the electrical equipment industry. In the interwar period United States TNCs in non-electrical machinery had also carried out a substantial local technological effort, especially in the United Kingdom, a sign of strength that also reflected excellence at home. Yet after the war, United States-owned affiliates were rather more active than they had been previously in chemicals and pharmaceuticals, motor vehicles and scientific instruments, but less so in non-electrical machinery.

**Table 1. Industry shares of United States patents of the largest United States firms attributable to research located in the United Kingdom and Europe, 1920-1968**

*(Percentage)*

Item	United States affiliates located in the United Kingdom		United States affiliates located in Europe	
	1920-1939	1940-1968	1920-1939	1940-1968
1 Food, drink and tobacco	0.0	0.6	0.0	0.7
2 Chemicals and pharmaceuticals	1.3	7.9	3.4	13.4
3 Non-electrical machinery	30.4	13.6	15.1	8.5
4 Electrical equipment and computing	65.1	63.9	75.3	64.0
5 Motor vehicles	2.4	5.7	2.9	4.9
6 Rubber and plastic products	0.1	0.4	0.1	0.3
7 Non-metallic mineral products	0.2	0.4	0.3	0.6
8 Coal and petroleum products	0.0	2.9	2.4	3.2
9 Professional and scientific instruments	0.6	4.5	0.6	3.6
10 Other manufacturing	0.0	0.2	0.0	0.8
Total all industries	100.0	100.0	100.0	100.0

*Source:* United States patent database compiled by John Cantwell at the University of Reading, with the assistance of the United States Patent and Trademark Office.

The fall in the technological contribution of United States-owned affiliates in the United Kingdom and Europe after the war can be viewed either from the host country or the home country perspective. On the United Kingdom host country side, the participation of United States TNCs in the research of large firms located in Britain dropped from 32.8 per cent to 19.5 per cent, and it fell back especially in the electrical equipment, non-electrical machinery and motor vehicle industries, as shown in table 2. However, although United States TNCs in their areas of greatest technological strength refocused their innovative efforts at home in the United States (which was then reflected, as we have seen already, in Vernon's earliest version of the product cycle model), occasionally in other industries there was a more moderate expansion of United States-owned research abroad, even in this early post-war period. In particular in the United Kingdom, there was an increase from a low base in the United States-owned share of development in chemicals and pharmaceuticals, in which United States companies had improved their competitiveness vis-à-vis European firms by comparison with the interwar years, and a dramatic extension in United States control over United Kingdom-located R&D in scientific instruments (most notably in photographic equipment). This latter involvement can be traced back to the establishment of Eastman-Kodak's R&D

**Table 2. Share of patenting activity from United Kingdom-located large firm research attributable to United States-owned companies, by industry of the parent firm, 1920-1968**  
(Percentage)

Item	1920-1939	1940-1968
1 Food, drink and tobacco	0.0	4.4
2 Chemicals and pharmaceuticals	2.4	7.1
3 Non-electrical machinery	54.3	31.6
4 Electrical equipment and computing	64.4	33.4
5 Motor vehicles	40.9	13.7
6 Rubber and plastic products	0.4	2.5
7 Non-metallic mineral products	4.4	6.5
8 Coal and petroleum products	0.0	13.0
9 Professional and scientific instruments	18.5	75.4
10 Other manufacturing	0.0	0.3
Total all industries	32.8	19.5

*Source:* United States patent database compiled by John Cantwell at the University of Reading, with the assistance of the United States Patent and Trademark Office.



facility in Harrow, near London, in 1928 (Wilkins, 1974). Despite the relative weakness of indigenous United Kingdom company efforts in this sector, Kodak built a European research base from this investment which later drew in the R&D of other foreign-owned firms, an essentially foreign-owned TNC technology clustering of the kind observed in the Singaporean experience today.

From the United States home country angle, in the interwar period the equivalent of over one tenth of the very substantial level of research in electrical equipment carried out at home by large United States firms was conducted in their European-located affiliates. About one third of this was done in the United Kingdom (see table 3). An even higher relative share was recorded by United Kingdom-located affiliates in non-electrical machinery, perhaps owing to the United Kingdom's continuing attractiveness for the development and exploitation of the basic mechanical technologies in which its traditional strength lay, rather than for research in the newer science-based industries, in which Germany had forged ahead. After the war, the decline in internationalization of R&D in United States-owned

**Table 3. Patenting of United States-owned companies from their European-located facilities as a proportion of patenting from parent company facilities in the United States, in the United Kingdom and in Europe as a whole, 1920-1968**  
(Percentage)

Item	Host locations			
	Europe		United Kingdom	
	1920-1939	1940-1968	1920-1939	1940-1968
1 Food, drink and tobacco	0.0	1.6	0.0	0.7
2 Chemicals and pharmaceuticals	2.0	1.9	0.3	0.5
3 Non-electrical machinery	6.2	2.8	4.9	2.1
4 Electrical equipment and computing	10.7	5.9	3.6	2.8
5 Motor vehicles	1.8	1.3	0.6	0.8
6 Rubber and plastic products	0.1	0.4	0.0	0.2
7 Non-metallic mineral products	0.8	1.1	0.2	0.3
8 Coal and petroleum products	2.9	0.8	0.0	0.3
9 Professional and scientific instruments	1.3	4.0	0.6	2.4
10 Other manufacturing	0.0	0.5	0.0	0.1
Average of all industries	6.6	3.1	2.6	1.5

*Source:* United States patent database compiled by John Cantwell at the University of Reading, with the assistance of the United States Patent and Trademark Office.

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TNCs is clear. In comparison with the domestic research of the same large United States companies, their foreign-located technological development fell from 6.6 per cent to 3.1 per cent in Europe, and from 2.6 per cent to 1.5 per cent in the United Kingdom. Even in scientific instruments in which there was some positive dispersion of R&D, the early post-war share reached no higher than 4.0% in Europe as a whole, and 2.4 per cent in the United Kingdom.

### **Patterns of international technological specialization**

Viewed from the historical perspective, Vernon's (1966) model remains useful in its association of the pattern of technological leadership through innovation in the home country and the industrial structure of outward direct investment. Using the revealed technological advantages index derived from the data on corporate patenting as defined above, an index value greater than unity represents a position of relative innovative strength, or revealed technological advantage. The cross-industry-revealed technological advantage distributions show that the profile of technological specialization of United States-owned affiliates in the United Kingdom roughly matched that of United States companies at home, in electrical equipment and non-electrical machinery in the interwar years, and in scientific instruments after the war. Only in motor vehicles did the strength of United States TNCs at home not lead to much local technological effort in their United Kingdom-located affiliates, as can be seen from table 4.

In other words, in these early years United States TNCs used their foreign affiliates mainly to exploit and extend a technological advantage developed at home, and so as to better serve the relevant foreign markets (Cantwell, 1995; Cantwell and Piscitello, 2000). Or in Kümmerle's (1996) terminology, their European-located research was primarily of a home-base exploiting kind, and not home-base augmenting. Far from attracting "local technology sourcing" or what Dunning (1995) has more recently described as "asset-seeking investment" by United States-owned TNCs in the fields of local United Kingdom technological strength, the interwar United Kingdom specialization in chemicals and pharmaceuticals was essentially attributable to indigenous firms (notably ICI and the synthetic fibre

**Table 4. Revealed technological advantages across industries of United States and United Kingdom firms, 1920-1968**

Item	United States affiliates located in the United Kingdom			United Kingdom as a host country		United States firms in the United States	
	1920-1939	1940-1968		1920-1939	1940-1968	1920-1939	1940-1968
1 Food, drink and tobacco	0.00	0.52	0.58		2.32	1.30	1.08
2 Chemicals and pharmaceuticals	0.07	0.34	1.00		0.92	0.67	0.90
3 Non-electrical machinery	1.93	1.41	1.17		0.87	1.02	0.96
4 Electrical equipment and computing	1.53	1.98	0.78		1.16	1.08	1.03
5 Motor vehicles	0.28	0.57	0.22		0.82	1.20	1.11
6 Rubber and plastic products	0.02	0.14	1.43		1.12	1.15	1.13
7 Non-metallic mineral products	0.11	0.22	0.83		0.67	1.21	1.14
8 Coal and petroleum products	0.00	0.24	0.11		0.36	1.11	1.02
9 Professional and scientific instruments	0.23	1.82	0.41		0.47	1.02	1.12
10 Other manufacturing	0.00	0.04	6.85		2.60	0.51	0.91

*Source:* United States patent database compiled by John Cantwell at the University of Reading, with the assistance of the United States Patent and Trademark Office.

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companies, British Celanese and Courtaulds -- see Cantwell and Barrera, 1998). At that time Du Pont had an alliance with ICI for joint technology development, under which cross-licensing agreement they ensured a geographical separation of their markets. Conversely, in the sectors of greater United States TNC strength, the United Kingdom's technological specialization in non-electrical machinery before the war, and in electrical equipment in the years after the war, owed much to the United States presence and local extension of technologies that United States TNCs had pioneered at home. As shown in table 2, United States-owned firms accounted for over 50 per cent of domestic development efforts in the former case, and for over 30 per cent in the latter case. Indeed, the early post-war revival of United Kingdom research in electrical equipment might be traced to the dominant role of the United States corporate giants in establishing a local United Kingdom technology base in the interwar period, when they were responsible for nearly 65 per cent of locally generated patents in this industry.

### **The transformation towards international technology sourcing in the modern era of globalization**

In recent years the historical position has been reversed, in that United States-owned affiliates in the United Kingdom have switched out of technological development in the electrical equipment industry in favour of chemicals and pharmaceuticals, as shown in table 5. The United States foreign participation in United Kingdom-located research has concentrated increasingly in the industries of chemicals and pharmaceuticals (from 26.7 per cent in 1969-1977 to 39.6 per cent in 1987-1995) and professional and scientific instruments (from 3.9 per cent to 6.9 per cent over the same period), resulting in higher shares for the United Kingdom than for other European locations. United States shares have also increased in the food, drink and tobacco and non-metallic and mineral products sectors. In contrast, between 1969 and 1995, the proportion of United States affiliate research in the electrical equipment and computing industry fell the most in the United Kingdom from 34.9 per cent to 23.1 per cent, while the research share of United States-owned affiliates in that industry was relatively less important overall in the United Kingdom than in other European countries.

**Table 5. Industry shares of United States patents of the largest United States firms attributable to research located in the United Kingdom and Europe, 1969-1995**

(Percentage)

Items	United States affiliates located in the United Kingdom			United States affiliates located in Europe		
	1969-1977	1978-1986	1987-1995	1969-1977	1978-1986	1987-1995
1 Food, drink and tobacco	1.9	2.3	2.2	1.5	1.8	2.2
2 Chemicals and pharmaceuticals	26.7	33.7	39.6	24.8	25.3	29.1
3 Non-electrical machinery	11.6	13.4	11.6	10.7	11.6	10.1
4 Electrical equipment and computing	34.9	31.0	23.1	39.1	37.5	31.5
5 Motor vehicles	5.7	5.3	7.1	4.2	4.5	6.7
6 Rubber and plastic products	2.1	0.9	0.1	2.6	1.8	1.2
7 Non-metallic mineral products	2.2	2.3	2.8	1.9	3.1	4.7
8 Coal and petroleum products	3.1	3.2	3.4	4.4	4.3	3.3
9 Professional and scientific instruments	3.9	3.1	6.9	4.6	2.9	5.4
10 Other manufacturing	8.0	4.8	3.4	6.1	7.3	5.8
Total all industries	100.0	100.0	100.0	100.0	100.0	100.0

Source: Cantwell, Dunning and Janne (1999).

From the United Kingdom host country perspective, the participation of United States-owned affiliates has not recovered its interwar share of 32.8 per cent (table 2), but it has risen gradually from the early post-war figure of 19.5 per cent to 20.5 per cent in 1969-1977, and back to 25.7 per cent in 1987-1995, as indicated in table 6. Once again, the steady increase in the influence of United States TNCs within the United Kingdom's corporate R&D owes especially to an increased presence in chemicals and pharmaceuticals, in which the United States-owned share climbed from 2.4 per cent in the interwar period and 7.1 per cent in the early post-war years (table 2) through 18.0 per cent in 1969-1977 to as much as 28.9 per cent in 1987-1995. Over the same period the equivalent share of United States TNCs in the United Kingdom electrical equipment industry fell from the height of 64.4 per cent in the interwar period to 33.4 per

cent in 1940-1968 (table 2), holding at 32.9 per cent in 1969-1977 before slipping back further to 23.4 per cent in 1987-1995. In other sectors the contribution of United States TNCs to United Kingdom corporate R&D recovered somewhat between 1969 and 1995 in non-electrical machinery and motor vehicles (table 6), but not back to the levels they had attained in 1920-1939 (table 2); while the tremendous post-war expansion of United States-owned R&D in the United Kingdom in professional and scientific instruments led already to a peak share in this industry of over 90 per cent by 1969-1977, and it has not fallen than 90 per cent since, as the local technological agglomeration of United States TNCs operating in the United Kingdom has been preserved in this field.

**Table 6. Share of patenting activity from United Kingdom-located large firm research attributable to United States-owned companies, by industry of the parent firm, 1969-1995**  
(Percentage)

Items	1969-1977	1978-1986	1987-1995
1 Food, drink and tobacco	11.4	10.8	13.5
2 Chemicals and pharmaceuticals	18.0	23.2	28.9
3 Non-electrical machinery	21.7	26.9	38.0
4 Electrical equipment and computing	32.9	33.4	23.4
5 Motor vehicles	8.6	11.5	22.5
6 Rubber and plastic products	13.5	11.3	2.8
7 Non-metallic mineral products	19.3	25.4	48.3
8 Coal and petroleum products	11.8	14.6	14.8
9 Professional and scientific instruments	91.8	90.8	90.9
10 Other manufacturing	20.2	12.8	9.3
Average of all industries	20.5	23.0	25.7

Source: Cantwell, Dunning and Janne (1999).

Likewise from the United States home country viewpoint, the foreign share of United States TNC R&D has remained below its interwar peak. Despite increasing from 4.3 per cent in 1969-1977 to 5.6 per cent in 1987-1995 in Europe as a whole, the share is still below the 6.6 per cent of 1920-1939, while the rise in the United Kingdom-located share of United States TNC technological development from 1.5 per cent in 1969-1977 to 1.7 per cent in 1987-1995 leaves it well below its interwar 2.6 per cent (see table 7, in comparison with table 3). However, once again the increases in United States-owned local R&D are particularly noticeable in chemicals and

pharmaceuticals, from 4.5 per cent in 1969-1977 to 7.3 per cent in Europe as a whole, and from 1.8 per cent to 3.1 per cent in the United Kingdom (table 7), both of which are well above the comparable interwar shares of activity by United States TNCs outside the United States (given in table 3). With respect to technological activity located in the United Kingdom, as emphasized already from table 5, the most notable feature is that the switch towards an increasing reliance on a United Kingdom location in chemicals and pharmaceuticals contrasts sharply with the move away from the historical internationalization of United States-owned electrical equipment companies conducting research in the United Kingdom (Cantwell, 1995). From 3.6 per cent in 1920-1939 (table 3), the share of United Kingdom location in United States TNC R&D in the electrical equipment industry had fallen to 1.9 per cent in 1969-1977, and from there to as little as 1.2 per cent in 1987-1995 (table 7).

**Table 7. Patenting of United States-owned companies from their European-located facilities as a proportion of patenting from parent company facilities in the United States, in the United Kingdom and in Europe as a whole, 1969-1995**  
(Percentage)

Item	Host locations					
	Europe			United Kingdom		
	1969-1977	1978-1986	1987-1995	1969-1977	1978-1986	1987-1995
1 Food, drink and tobacco	2.8	4.9	6.7	1.3	2.0	2.0
2 Chemicals and pharmaceuticals	4.5	5.9	7.3	1.8	2.5	3.1
3 Non-electrical machinery	3.9	6.0	9.0	1.5	2.3	3.2
4 Electrical equipment and computing	5.8	7.0	5.1	1.9	1.9	1.2
5 Motor vehicles	3.0	5.2	7.0	1.4	1.9	2.3
6 Rubber and plastic products	6.5	6.7	6.5	1.8	1.1	0.1
7 Non-metallic mineral products	2.7	6.6	12.9	1.1	1.6	2.2
8 Coal and petroleum products	2.0	2.1	2.3	0.5	0.5	0.8
9 Professional and scientific instruments	6.1	4.7	5.3	1.8	1.6	2.1
10 Other manufacturing	2.4	3.4	2.6	1.1	0.7	0.5
Average of all industries	4.3	5.5	5.6	1.5	1.8	1.7

Source: Cantwell, Dunning and Janne (1999).

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As a result, the pattern of technological specialization of United States-owned affiliates in the United Kingdom has shifted away from electrical equipment and even to some extent from scientific instruments, and towards chemicals and pharmaceuticals, as shown in the revealed technological advantage calculations for the more recent periods in table 8. Indeed, at the very time that the United Kingdom's own technological specialization has increasingly favoured R&D in the chemicals and pharmaceuticals industry, from a revealed technological advantage value of 1.11 in 1967-1977 to one of 1.54 in 1987-1995, the equivalent revealed technological advantage of United States-owned affiliates located in the United Kingdom jumped even more sharply, from 0.98 to 1.73 (see table 8). The United Kingdom having lost its revealed technological advantage in the electrical equipment industry by 1969 (which early post-war advantage in any case, as argued above, had had much to do with the remaining benefits of the early research-based investments of United States TNCs in the United Kingdom in this industry during the interwar period), even United States-owned electrical equipment affiliates in the United Kingdom gradually did comparatively less and less local research, falling from a revealed technological advantage value of 1.26 in 1969-1977 to 0.62 in 1987-1995. Thus, United States-owned United Kingdom-located affiliates have moved away from the exploitation of the main areas of United States home country strength (although the United States electrical equipment TNCs have lost advantage even at home in recent times to the leading Japanese firms in this industry), and instead towards the industry in which indigenous United Kingdom firms are strongest -- namely, chemicals and pharmaceuticals. Beyond the latter case, one can also observe a growing United States TNC focus in the United Kingdom on local development in the food product and non-electrical machinery industries (in which areas between 1969-1977 and 1987-1995 the United States-owned-affiliate revealed technological advantage rises from 0.88 to 1.52, and from 0.96 to 1.58 respectively), the overall United Kingdom revealed technological advantage in 1987-1995 being 2.90 in food products and 1.07 in non-electrical machinery.

## **Conclusions**

United States-owned research in the United Kingdom is comparatively concentrated in the chemicals and pharmaceuticals



**Table 8. Revealed technological advantages across industries of United States and United Kingdom firms, 1969-1995**

Items	United States affiliates located in the United Kingdom				United States affiliates located in Europe				United States firms in the United States			
	1969-1977	1978-1986	1987-1995	1987-1995	1969-1977	1978-1986	1987-1995	1987-1995	1969-1977	1978-1986	1987-1995	1987-1995
	1 Food, drink and tobacco	0.88	1.26	1.52	1.52	1.59	2.68	2.90	2.90	1.06	1.09	1.29
2 Chemicals and pharmaceuticals	0.98	1.32	1.73	1.73	1.11	1.31	1.54	1.54	0.86	0.92	0.98	0.98
3 Non-electrical machinery	0.96	1.21	1.58	1.58	0.90	1.03	1.07	1.07	0.98	0.95	0.86	0.86
4 Electrical equipment and computing	1.26	1.06	0.62	0.62	0.79	0.73	0.68	0.68	1.04	1.00	0.92	0.92
5 Motor vehicles	0.77	0.60	0.80	0.80	1.85	1.21	0.91	0.91	0.82	0.55	0.60	0.60
6 Rubber and plastic products	1.30	0.71	0.08	0.08	1.97	1.44	0.75	0.75	1.08	1.19	1.14	1.14
7 Non-metallic mineral products	0.89	1.12	1.78	1.78	0.95	1.01	0.95	0.95	1.21	1.27	1.37	1.37
8 Coal and petroleum products	0.40	0.42	0.64	0.64	0.70	0.66	1.11	1.11	1.19	1.46	1.47	1.47
9 Professional and scientific instruments	1.22	0.72	1.02	1.02	0.27	0.18	0.29	0.29	1.02	0.77	0.85	0.85
10 Other manufacturing	0.93	0.58	0.45	0.45	0.95	1.04	1.24	1.24	1.25	1.38	1.71	1.71

Source: Cantwell, Dunning and Janne (1999).

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industry, and has reinforced the position of the United Kingdom as a centre of excellence for R&D in that industry by contributing to the upgrading of the already existing innovatory, research and technological capabilities of indigenous United Kingdom firms (Cantwell, 1989; Cantwell and Hodson, 1991; Cantwell, 1992). In some industries an increase in United States-owned technological development has gone hand in hand with a rise of indigenous activity (in chemicals and pharmaceuticals, food products and to a lesser extent in oil), but in others (particularly in electrical equipment) there has been a process closer to a vicious cycle of mutual decline (Cantwell, 1987). The growing correspondence between the industrial composition of the technological development of United States-owned TNCs in the United Kingdom and the pattern of R&D in locally owned companies is suggestive as well of an historical shift towards a strategy of international technology sourcing within United States-owned TNCs, or what in his latest writings Dunning (1995) has stylized as asset-seeking investment. In turn, the rising significance of cross-border technology sourcing implies the establishment of a more complex and creative international corporate network for technology development within the TNC. Not surprisingly, this historical change has been a major theme in the later work of both Dunning and Vernon.

By the late 1970s Vernon (1979) recognized that the emergence of global structures within TNCs had eroded the explanatory power of the product cycle model. The model had been especially effective in depicting one particular historical phase of TNC development, namely, the form of expansion of United States TNCs in the early post-war period. It also proved useful as a means of emphasizing the role of corporate technology leadership in international trade and investment, although leaders are now marked out not so much by their greater propensity (and capacity) to engage in foreign direct investment, but rather by their greater ability to organize cross-border networks for further technology development (Cantwell and Piscitello, 1999). Yet when recast in this slightly different context of increasingly globally interconnected TNCs, another of Vernon's early themes in the product cycle model has reappeared as of great relevance today, and is now attracting a large literature. That is the theme of the locational agglomeration of innovative activity in the regional centres of TNCs, which of course Vernon had supposed to apply mainly to centres within the home country. Instead, now that the leading TNCs

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are operating across several geographically dispersed centres, technological development has become concentrated in certain key regions within countries, and TNCs source knowledge from each of them and provide an institutional means for the exchange of knowledge between the principal centres for development in each industry (Cantwell and Iammarino, 2000). Thus, much of Dunning's recent research has been concerned with the linkages between location-specific lines of technological innovation in regional centres and the global sourcing of technology and hence the creation of competitive advantage by TNCs (Dunning, 1996, 2000). Not only did Dunning and Vernon set the stage for the massive subsequent literature on technological innovation and the dynamism of the TNC, and provide many of the key insights that were to become crucial to later researchers, but they have also both proved adept at adapting their thinking to accommodate the major institutional changes that have occurred since their earlier investigations. Perhaps the most important such change has been the wider extent of technologically creative international networks within TNCs, which is well illustrated by the evolving structure of United States-owned local technology development in the United Kingdom. ■

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# Host country policies towards inward foreign direct investment in the 1950s and 1990s

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The early seminal contributions of John H. Dunning and Raymond Vernon point to largely open policies towards inward foreign direct investment as an important aspect of technical development, which is the key to economic growth. In contrast with such conclusions, policies were often interventionist in the 1960s and 1970s. The liberalization since then has been selective and managed. This article outlines policy developments over the past half century in the context of the Dunning and Vernon approaches, and explores the determinants of policy in various sub-periods. It emphasizes the need for further study of the incentives for appropriate public policy, policy design, and policy effects.

## Introduction

In a historical perspective, host-country policies towards foreign direct investment (FDI) in the 1950s and 1990s look rather similar, with the exception of some controls still in effect in the 1950s, largely for exchange control reasons. Tariff protection, of course, was greater then. These similar policies are in line with the conclusions of the seminal contributions of the Dunning book (Dunning, 1958) and the Vernon article (Vernon, 1966), both of which pointed to largely open policy towards inward FDI as an important aspect of technical development which, broadly interpreted, is the key to economic growth.

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This interpretation is straightforward in one sense but inaccurate in others. Policy in-between these periods underwent huge swings. The interventionist plants which flowered in the 1960s and 1970s, while now dormant, are far from dead. Some, indeed, have taken on mutations which will continue to cause serious difficulties in the attempts to develop liberal multilateral policies.

Dunning's book dealt with what we now call, thanks to his later work, the ownership and locational part of the ownership-location-internalization (OLI) paradigm. His central message was that FDI had more to do with an application abroad of knowledge of all sorts and less to do with capital transfers of the type emphasized in portfolio movements. What he was particularly interested in was how far United Kingdom productivity levels could move toward United States levels in given industries, and correspondingly which types of ownership advantages were transferable in this process and which were location-bound. His key conclusion for present purposes was that the United Kingdom pattern of production was moving closer to the United States and this was happening more quickly and more smoothly because of the presence of United States firms. He saw some problems, of course, arising from oligopolistic competition (or lack of it) in the industries involved, but the dynamic effects of the United States firms was such that "their role has been an important one and very largely for the good" (Dunning, 1958, p. 194).

Vernon's 1966 contribution puts this into a sequential process, tracing how knowledge applied in a home country (in this case the United States) can be transferred abroad through trade and then FDI, leading to reversals in trade balances as production begins abroad, and incorporating countries at different levels of income. It generalizes the innovation and growth issues discussed by Dunning from one recipient to several types, and uses a more formal framework with a temporal sequence in the analysis.

It would be difficult to overestimate the effects of the early work of these two scholars. Many other studies, including many of my own, built on their work. Both have continued to provide elaborations on their earlier work and quite new approaches, with further spinoffs in the work of other scholars. One reason for this is the thoroughly modern flavour of their early work, as John Cantwell



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(1992) notes with regard to Dunning. Both writers were concerned with the development and diffusion of innovations, and the effects on productivity and competitiveness - themes which are the focus of much of the recent work on economic growth within and between countries.

The following section will provide an outline of the policy context for host countries in the 1950s and 1990s, and some remarks on the swings which have occurred in between. The principal focus will be on policy determinants, and thus whether the present apparent liberalization is likely to continue. It will be argued that projecting the present trend is a risky business, and that a managed and selective approach to liberalization is what we are experiencing in any case. Trade policy will also be touched on, given that the major part of trade is now within or with TNCs.

### **A brief outline of policy towards foreign direct investment and transnational corporations**

Policy towards inward FDI today bears many similarities to that in effect in the 1950s, allowing for the lingering foreign exchange and other controls in the 1950s as an outgrowth of the Second World War. However, there were huge swings in the intermediate periods. In what follows, policy changes towards FDI will be outlined over the last half century.<sup>1</sup>

The world of the 1950s had its closed industries where foreign firms were prohibited or their role was limited. Some of these were closed to private ownership whatever the source, i.e. they were public, private or mixed monopolies such as air transport or various public utilities. Such restrictions went back many years, but were extended by the nationalizations in various manufacturing industries during or after the war. The areas subject to closure were greatly extended over the next few decades, before the process began to be reversed.

There was still a variety of regulations in force reflecting post-war recovery problems. For present purposes, the key restriction was

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<sup>1</sup> The trends overall and by country are spelled out at length for the developed countries in Safarian (1993). More generally, see UNCTC (1991a).

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the widespread prevalence of exchange controls and import restrictions in both developed and developing countries. While not directed solely or mainly towards transnational corporations (TNCs), some of the restrictions clearly affected them more heavily. These restrictions were gradually loosened on current account especially, but lingered in a number of developed countries until the 1980s and longer still in many developing countries.

What was absent from this picture for many countries was the existence of an explicit screening agency to review inward FDI with a view to setting performance conditions as well as monitoring entry to restricted industries. Some aspects of such screening would occur with exchange controls, but this was usually directed at balance-of-payments objectives rather than employment creation or maintenance, developing linkages to local suppliers, implementation of national and regional development plans, capturing natural resource rents, and so on. Many developed countries established such explicit general view mechanisms only in the 1960s or 1970s, for a variety of reasons. Moreover, various forms of discrimination against established firms were in effect. Industries reserved to domestic firms were broadened in the developed countries, and a number of high-technology firms or industries were effectively off-limits to foreign investors. A wave of expropriations and nationalizations swept through the developing countries, notably in the natural resource industries. In developing countries some form of review on establishment and for some types of expansion was common, as were requirements for majority local ownership in many industries.

The trend changed again beginning in the mid-1970s and later, depending on the country. Many industries were privatized or deregulated. Often a share was reserved for a period for the State or for domestically owned firms, but the trend was clear - - the public, private or mixed monopolies were giving way both to a more competitive market approach and to inward FDI. In the process there was huge expansion in services FDI, aided greatly by the revolutions in transportation and information technology. The trend spread to other industries which had not been subject to a degree of state monopoly but were nevertheless reserved for domestic investors.

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FDI review mechanisms were increasingly liberalized, then often converted to, or jettisoned in favour of, organizations to attract FDI with limited powers of review. Industry requirements for majority local ownership were modified or abolished. Discrimination against established foreign firms was reduced, thanks in part to parallel liberalization in trade policies. Tariffs had been substantially reduced or removed in the developed countries (although non-tariff barriers had surged), while they were dropping fast in many developing countries. Exchange controls on both current and capital account were liberalized. Programmes to attract FDI, always present for some types of firms, expanded greatly in scope and size, with some “location tournaments” involving huge payouts and delivering, it was hoped, commensurately large gains to the single winner.

There is an important caveat to all of this (Safarian 1993, chapter 12). The trend towards liberalization of policies on FDI is undeniable. But it is important to add that what appears to have happened in the 1980s and 1990s is managed internationalism rather than a full move to liberalization of trade and FDI policies. Generalized intervention directed at foreign-owned TNCs has often given way to selective intervention in an international context, aimed at all TNCs. The policies of the 1960s and 1970s were more restrictive on the inward side but offered incentives to get steering effects. On the outward side they were either exchange control-oriented or non-existent. Policy since then has opened many industries and reduced reliance on screening. But policy has also expanded reliance on the steering effects of selective incentives and, particularly in a number of industrial countries, backed these up by greater use of countervailing measures, anti-dumping duties, voluntary export restraints, and other non-tariff barriers. On the outward side, promotion of domestic TNCs and of exports is the rule. It is this attempt to accept internationalization but only if it can be managed to give desired outcomes which is driving much of the new protectionism, whether in national policy on trade, FDI, or multilateral initiatives. The literature on strategic trade and investment policy has given some support to such approaches, despite the serious problems of implementing such policy from a welfare viewpoint.

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There are many issues one could discuss in reviewing the history of policy. Three are of particular interest here. Why did policies become more restrictive in the 1960s and 1970s? Why have they become less restrictive thereafter? How would we expect them to change in the future? The next section outlines research on TNCs, particularly as related to the Dunning-Vernon set of ideas and to policy issues arising therefrom. The succeeding sections consider the questions just posed. This is done in the context of the driving forces of globalization, the structural changes in home and host relations and the industrial composition of FDI, and the responses of firms and of Governments to this changing set of circumstances.<sup>2</sup>

### **Effects of transnational corporations and appropriate policies: the approaches of Dunning and Vernon**

A major conclusion of the research of both Dunning and Vernon is that the operations of TNCs are likely to raise productivity and living standards in host countries and, for that matter, globally as well. The core of both approaches is the creation of knowledge in the firm which can serve as the basis for profitable operations. They then wed this to locational issues and to the form of exploitation of the created knowledge. Dunning's OLI paradigm was at least implicit in the 1958 book, with the first two parts clearly laid out. It was spelled out very fully in a series of articles and books over the next several decades. Basically, ownership-specific endowments reflect advantages distinctive to a firm, and the location-specific advantages are those which adhere to a country, while internalization advantages refer to the efficiency of the TNC in exploiting these advantages relative to trade and alliance forms of exploitation. As Cantwell (1992) has explained, the development of the OLI paradigm drew partly on Dunning's original insight into the link between the spread of international production and the impact on local productivity and competitiveness. He notes that it also drew on J.C. McManus' (1972) development of internalization and the TNC (which in turn drew on Coase, 1937) and on Vernon's dynamic view that the firm's choice of organizational form as it spread its activity abroad would be

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<sup>2</sup> See Rugman and Verbeke (1998) and Dunning (1994) for stimulating articles along similar lines, as well as Safarian (1993, especially part III).

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determined by the stage of the product cycle. The OLI approach was criticized on a number of fronts and modified or extended accordingly. Yet it has served as a framework for an extensive body of research on TNCs.

Vernon and his colleagues also combined internalization, locational and innovation approaches in a model of oligopolistic competition.<sup>3</sup> Innovations were tested at home, moved abroad through exports then FDI, were imitated as the product was standardized, then perhaps imported to the country which had served as innovator. What was a trade surplus in the product in earlier years eventually became a deficit. This model highlighted a number of characteristics which were likely to appear in footnotes (if at all) in the trade and investment literature of the period. Thus in analyzing locational decisions there was less emphasis on relative factor-cost and transport issues and more on the locus and timing of innovation, on ease of communication and scale economies, and on the threat of trade protection as a determinant of production. In a later version of the model, provision was made for more rapid maturing and imitation in a world of established TNCs, and one where United States firms were less dominant (Vernon, 1979).

These two related sets of ideas should be put in the context of what has happened in the literature on economic growth. Solow-type models have put the emphasis on capital accumulation adjusted for the quality of human capital, with technological change determined outside the system. Paul Romer and others have made endogenous technological change the central issue.<sup>4</sup> The policy emphasis in this approach is on the economic incentives for the creation and diffusion of innovation. Trade theorists, particularly in the decade or so from the late 1970s onwards, made a number of attempts to link technology transfer, TNCs, and the welfare of home and host countries. This lag in relation to the scholars working on TNCs can be related in part to the demands imposed by general equilibrium theory, and even then

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<sup>3</sup> It is of interest here to quote Vernon (1966, note 6) regarding Dunning (1958) as “filled with observations that lend casual support to the main hypotheses of this paper.”

<sup>4</sup> The *Journal of Economic Perspectives*, 8, 1 (1994) carries several articles reviewing different approaches to growth.

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incorporated monopolistic competition more fully than oligopolistic approaches. Meanwhile, as will be noted below, work on TNCs had moved on to network analysis.

The policy position which comes out of the work of Dunning and Vernon in the 1950s and 1960s is very consistent with the work of the endogenous macro growth theorists of the 1980s and 1990s. The Dunning and Vernon research also has the great virtue of putting more emphasis than the latter usually put on the processes underlying growth, such as the organizing role of the entrepreneur and the quality of both private and public institutions. Dunning saw improvement in the balance of payments, given the strong export role of United States affiliates in the United Kingdom, but placed his major emphasis on the transferability of United States industrial dynamism in terms of research and development (R&D) and other knowledge, a more effective management style, improved supplier performance and so on. He saw two potential disadvantages. One was the potential damage to local consumers and producers from the aggressive competitive practices of many United States firms: however, since these did not appear to be exclusive to United States firms, and were subject to United Kingdom monopolies policy, he considered this a fairly small issue, particularly relative to the potential gains from FDI. More important was the danger from over-dependence on United States R&D, which might stunt R&D by United Kingdom firms, limit the demand for local scientists and technologists, and cause other problems (Dunning, 1958, pp. 308-310). Despite his strong conclusion that the United States presence was important and largely for the good, he advocated continuation of a selective, simplified screening process which would give advice, among other matters, on which forms of TNC investment or licence would bring benefits.

Two decades later, after much study of TNCs in developing as well as developed countries, Dunning still had a positive view of what TNCs can contribute, in this case with respect to the increasing pressure for industrial restructuring in the world economy. However, pending the preferred development of multilateral policies on such matters, there was certainly no propensity on his part to favour a neutral government stance on the ways in which TNCs (their own and those of other countries) determine the international allocation of resources. First, there is a need for government policies to assure

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markets do operate efficiently in restructuring and growth, ranging all the way from converting underinvestment in education and training to countering the adverse effects of monopoly power. Second, to assure that resource allocation as decided by TNCs is consistent with the industrial aims of Governments, Dunning advocated monitoring the performance of such firms while also noting that piecemeal and discriminatory regulation of TNCs would likely fail to deal with underlying issues (Dunning, 1985, chapters 1 and 13).

A decade later, the emphasis is still on “a constructive and liberal” approach to inward FDI, but there is even more emphasis than in 1985 (and certainly than in 1958) on the important role of national Governments in creating an appropriate economic and political environment. This includes not only promoting the efficiency of the private industry and of procedures to attract FDI, but especially the promotion of distinctive location-bound resources to complement the mobile ownership-specific advantages of firms. The goal is to attract the kind of FDI which will do the most to improve local capabilities and competitiveness. He goes on to note that there is less reason to favour or discriminate against a United States direct investor in the liberalized United Kingdom economy of the 1990s than there was in the 1950s (Dunning, 1998, pp. 269-271). Developing local capabilities, government-business cooperation, countering restrictive business practices -- these are the keys to the new policy approach. But it is also important to add that Dunning emphasizes in his many studies that no one set of policies will serve the needs of countries and industries at very different stages of development, and that no one view of the appropriate role of government will survive the underlying changes in technology, the nature and degree of globalization experienced, and the changing structure and strategies of TNCs.

Vernon’s studies (1971, 1977) lead to a recognition of how the TNC can improve productivity and growth at a global level, given the mobilization and application of a wide variety of entrepreneurial, managerial and technical resources extending far beyond mere financial capital. But he goes on to note that the international distribution of the gains is uncertain, and that the domestic effects are uneven and complex with a challenge to the power of local elites and strains between ideologies and cultures as well. The key problem

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is the conflict which can arise between national goals on the one hand, and transnational decision-making on the other, a conflict exacerbated by the dominant role of the United States as home country. Each institution, national State and TNC, severely impacts the other. He sees the tensions as particularly sharp in the struggle by developing countries to secure easier access to capital, technology and markets with reduced reliance on the TNC form. He also sees some similar concerns among a number of developed countries (France and Japan, for example) and the likelihood of increasing pressures by all to improve their net gains from TNCs and from the globalization process more generally. Utopian as it may have then seemed, he believed the only way out of this dangerous confrontation was 1) to disentangle the problem of overlapping jurisdictions, i.e. the extension abroad of national law and policy through TNCs, and 2) to secure agreements between public authorities on the rights and the obligations of both firms and Governments.

The work of Vernon and his associates has cut a wide swath through research and policy analysis on TNCs. It is impossible to do justice here to this huge and influential body of work so I will simply note briefly three contributions. First, the product cycle model has continued to play a role in the theoretical literature, despite Vernon's later reservations about it with regard to United States direct investment. Thus, Paul R. Krugman (1979) gave it a central role in an influential article on North-South technology transfer. Second, Vernon's work has had a significant influence in the area of international political economy, where conflicts between firms and States (and indeed, between States and between TNCs) arise from the divergence of national and transnational objectives. Third, as Richard E. Caves (1998, p. 9) has remarked, the Harvard Project "nourished much of our foundation stock of knowledge on MNEs".

### **Why policies became more restrictive**

Standard economic theory tends to support the free movement of goods and factors of production on the grounds that such movements raise world economic welfare and are likely to raise national economic welfare. There have always been some qualifications to this position, reflecting a divergence of private and



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social costs and benefits because of, for example, lack of competition and of knowledge of available choices. Thus, optimal tax (for capital) and tariff (for goods) arguments have traditionally been made. TNCs introduce new sets of arguments, of course, since the transfers of knowledge add substantially to the potential gains, while such issues as differences in bargaining power and transfer pricing can affect the distribution of gains. At the national level, the first-best approach in harmonizing social and private gains is to eliminate the causes of discrepancies and a second-best approach is to levy taxes or subsidies which close the gaps involved. Where such policies cannot reach TNCs, or where inter-State issues are involved, then bilateral or multilateral approaches to policy need to be considered.

For much of the 1960s and 1970s, by contrast, policy on TNCs can best be described as third-best in terms of economic welfare and no more than that in terms of political welfare. Many more restricted industries were added, accompanied in some countries by nationalization with or without “adequate” compensation, divestment requirements and the like. Formal review on entry and subsequent merger became more common, although in most cases the criteria were poorly defined or unevenly implemented and the welfare results were mixed. Discrimination against existing investments was widespread. While the United States Government was not the only offender in this regard, it drew strong criticism for attempting to extend the reach of domestic law and policy through TNCs.

This is not the world one would have expected from even the qualified policy approaches just noted in the previous section, although it is clearly the confrontational approach which Vernon in particular feared. Actual policy developments can be explained in many ways. We note four here but will avoid ranking them since they are interrelated.<sup>5</sup> First, the United States was dominant as the home country, and also of course, in political and military influence. Put differently, with so many countries focused largely on the inward side, it was easier to act in ways which restricted inward FDI. Second, FDI in this period was concentrated in natural resources and manufactures. The former lend themselves to “obsolescing bargains”,

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<sup>5</sup> For a discussion of policy origins in the developed countries, see Safarian (1993, chapter 10).

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to use Vernon's phrase (Vernon, 1971, chapter 2), which, as noted, drew a remarkable number of expropriations in this period, both in petroleum and in other industries. Much manufacturing in the period was geared to serving mainly the domestic market, hence capable of being pressured by national authorities.

Third, there was another intellectual tradition which was far more critical of TNCs and was highly influential in much of the developing world. The Singer-Prebisch model (for example, Singer 1950) argued that the gains from FDI would occur largely in the developed, industrialized countries because the terms of trade moved in favour of manufactures and because local linkage effects were small in many developing countries.<sup>6</sup> In developed countries as well it was often argued that excessive reliance on TNCs inhibited the development of local entrepreneurial capabilities and of related industries. Karl Levitt (1970) makes this argument for Canada, but it has been echoed elsewhere. Thus, Edward M. Graham and Paul R. Krugman (1989) go to some lengths to demonstrate that Japanese FDI in the United States did not reduce R&D, productivity and so on.

Fourth, and finally, it is important to add that one's interpretation of policy and of welfare depends very much on what one believes to be driving the policy makers. Global economic welfare is the objective of much economic analysis, but even this quickly becomes more complex when income distribution within and between nations is taken into account. Policy may, in fact, be driven mainly by a desire to appropriate more of the gains nationally, as already noted. It may also be driven by the attempt to focus on certain objectives, such as employment of particular kinds, even when these might better be achieved by other means. Or policy can be captured by those who benefit from the regulation, quite possibly with welfare losses more broadly. The public choice or interest group model is too well known to be laboured, but we note that it can be extended to broader issues. It is quite understandable that newly independent countries are usually deeply suspicious of their former rulers,

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<sup>6</sup> One should note that Vernon (1971, chapter 2) took exception to this view insofar as it related to enclave economies.

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including the firms whose home base is in the former imperial power. Even countries long since independent vehemently resist the extension of extra territorial law and policy through TNCs. It is also not too cynical to emphasize, as Johnson (1965) did, that in the name of sovereignty, local elites will sometimes push for policies which impose economic loss on many while enriching few. There is sometimes a case for questioning the national political or economic effects of transnational decision-making. Such questioning should not be confused with rent-seeking by special interest groups or policies which are ineffective at best and potentially damaging in terms of the objectives sought.

### **Why policies became less restrictive**

Many of these arguments can be turned around to explain why policy became less restrictive in the 1980s and 1990s. One obvious point is that the country composition of FDI changed dramatically. The United States no longer dominates outward FDI. Its share of developed country outflows fell from 66 per cent in 1961-1970 to only 16 per cent in 1981-1990. Indeed, it is also now the largest host country in absolute terms, though far from that relative to GNP. Many more Governments are both home and host to TNCs. A spectacular example is Canada, which for many years was the largest host country to inward FDI in terms of absolute stock and among the two or three largest in terms of per cent ownership of industry and similar relative measures. One measure of the transformation in Canada's situation is that the ratio of outward to inward stock of FDI, for many years at about 20 percent, began to change around 1970. Inward and outward stocks today are about equal, measured at historical cost; if measured at current value, the outward stock would be less than the inward since most of the former is of more recent origin. Broadly speaking, countries which have many home-based TNCs are more likely to favour policies which give them access and non-discriminatory treatment abroad. It is particularly notable that many third-world TNCs have appeared, and that both Japanese and European TNCs have spread.

A second force driving liberalization is the changed composition and organization of FDI. The services share of the global

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stock of FDI rose from about one quarter in the early 1970s to about 50 per cent in the late 1980s (UNCTC, 1991b, p. 15). Moreover, manufacturing FDI had moved from a relatively autonomous and relatively national market focus to a much more internationally integrated focus. These changes in firm strategy had a great deal to do with developments in transport and information technologies. Among other things, technological (including organizational) changes meant that the mobility of the knowledge-intensive aspects of investment had increased. As Dunning has often emphasized, in a world where many TNCs are now well established, the motives for FDI are less directed to initial FDI and more to sequential FDI. There would be less FDI motivated by resource-seeking and market-seeking, and more of it directed to efficiency-seeking (as in rationalizing the overall structure of production) and strategic or created asset-seeking (including tying in to the networks of other firms). Along with the proliferation of alliance strategies one should note the greatly increased reliance on international mergers and acquisitions. Both of these strategies reflect the emphasis on exploiting complementarities in assets and reducing uncertainty.

Third, these technological changes have to an important degree contributed to an increased emphasis on markets, including many privatizations. On the international side, these changes were accompanied by considerable trade liberalization, particularly for tariffs, along with a swing in many developing countries from import substitution to export promotion. Many impediments to FDI were reduced or removed. Technological change was not the only force behind these policy changes. Import substitution had been shown to have serious problems after a time, notably for smaller markets, where Governments were unable to prevent rent-seeking, and where inefficient smaller operations proliferated. FDI screening turned out to be difficult even for countries with sophisticated bureaucracies, given the need to relate it to changing country and industry advantages, changing firm strategies, and competition and political pressures from other countries. There was not necessarily, as Dunning (1994, 1997) has emphasized, a need to reduce the overall role of government, but rather to adapt government to a new set of circumstances where it collaborates with firms to enable or steer wealth-creating activities, as he puts it. This involves a wide set of policies, the details of which

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will differ by country and industry, to improve location-bound assets and to attract, keep and develop the intangible firm-specific assets which are created in TNCs.

The case might be let to rest if there were not a fourth point, already noted above in discussing the reasons for earlier restrictive policies. The determinants of policy become complex as we move beyond wealth creation to wealth distribution between and within countries, and to sociopolitical determinants. A simple interest group model of policy could cover some of the situations involved here (zero sum, or worse if misallocation occurs) but surely not all. Freeing up trade and investment creates losers as well as winners, and the former are usually imperfectly compensated for their part in helping to increase “national” welfare. Governments are interested in managing declining industries, not just seizing growth opportunities. Competition between Governments to improve local capabilities and attract the mobile wealth-creating intangible assets of TNCs sounds admirable in principle. In practice it can resemble strategic trade and investment policies with dubious actual welfare results for countries and perhaps even globally, though not necessarily for the producers involved. Worse still, competition between Governments can degenerate into the enormous proliferation of non-tariff barriers which often reflect Stiglerian regulatory capture by industry. Political sovereignty, the issue which dominated so much of the antagonism to TNCs earlier, has by no means withered away in the so-called global economy, although how it will be exercised will change.

Indeed, one can see rising demands to harness the forces of globalization proceeding apace with rising trade, investment and technological integration. The harnessing will be attempted, of course, by the same processes used to anchor the world legal framework in favour of liberalization and non-discrimination. It is evidently going to be very difficult to reach more comprehensive multilateral agreements on investment. There are two major viewpoints on a need for agreement on international aspects of competition policy, for example. One is to ease the barriers and costs for international mergers, and the other is to reduce the restrictive potential of mergers and alliances. Similarly, there are demands that TNCs should have obligations in enforcing minimum environmental controls, standards

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of work and other social standards, and not simply rights to entry and national treatment. Moreover, information technologies not only allow firms to manage disparate and decentralized facilities. They also allow many more interest groups, both economic and non-economic, to influence the process of intergovernmental negotiations.

## **Conclusions**

The key to the new approach to TNCs is that policy on FDI and policy on endogenous growth have converged. TNCs are regarded as central to the creation and diffusion of knowledge, within and between firms, and in cooperation with Governments.

The development and diffusion of knowledge is central to endogenous growth. Hence the key to policy is to improve the country-specific capabilities which attract and retain the increasingly mobile firm-specific intangible assets embodied in commercial knowledge. This is a policy approach which accepts the gains, or the inevitability, of the integration driven by technological change, and attempts to make the most of it from a national viewpoint. Of course, there are qualifications. Markets must be contestable. Governments must follow growth-oriented policies which facilitate market development over time rather than distort resource use permanently. Countries in different circumstances will need to vary the timing and composition of policies. And more consistent, intergovernmental rules are needed if the sometimes conflicting objectives of firms and Governments are to be reconciled.

Such an approach might have a broad appeal. One issue which needs further thought is the demands placed on policy-making in order to implement it. The question can be put in terms of exogenous shocks to policy on the one hand, and the nature of endogenous approaches to policy, on the other.

The first point can be put in terms of whether policy change is cyclical or unidirectional. Our outline of policy implied that it could be cyclical: policy was tightened for a time, then was liberalized. The argument that liberalization is here to stay is based mainly on the irreversibility of the technological changes which are driving

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economic integration. Yet we know from history that exogenous shocks to the system can reverse a growing degree of economic integration, as war and depression did for much of the first half of this century. One cannot predict how the next round of major innovations will affect integration, or how Governments will yet react to some of the disruptions caused by, or at least associated with, the present round. But one should leave open the possibility that the present round of liberalization is neither continuing nor irreversible.

In terms of endogenous forces, one wonders what has changed about the influences on public policy-making to warrant an optimistic view about its imperfections in welfare terms. It is true that the failure of Governments to implement policies designed to enhance local capabilities imposes huge costs in an era of increasing integration and competitive pressures. But those costs can be imposed on parts of the population, or on other countries. That is what can happen with at least some types of export promotion policies, subsidies to FDI, industrial policies, and appeals to sovereignty and cultural independence. There appear to be many obstacles to improving country-specific assets and very large pressures for improving firm-specific assets, even though the latter have become more mobile (Dunning, 1997; Ham and Mowery, 1997). None of this should be surprising in terms of the older interest-group models. The ways in which non-tariff barriers to trade and fiscal incentives to investment have proliferated as tariff and FDI regulations were reduced should be a warning in this regard. Not many societies have the organizational capabilities to play a strategic trade and investment game successfully, and even if it succeeds in national terms it does not necessarily succeed in terms of global welfare.

Perhaps the point can be put more precisely by referring to Dunning (1994, table 4), where the possible contributions of inward FDI to upgrading the comparative advantages of host countries are noted. The idea is that countries will form and implement policies to influence the benefits and costs listed for inward FDI, recognizing also that the balance of these will vary by country, type of investment and other variables. As one looks at the list of possible negative contributions, at least three questions arise. To what extent is any negative effect due to FDI as distinct from local circumstances? To

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what extent is any such effect the flip side of integration, and thus associated with a possible positive contribution? Most of all, to what extent is any negative effect worth correcting, given the size of the effect and costs of correction? Some related questions arise in considering possible positive contributions and net effects. Dunning is aware of these problems, of course, for he goes on to discuss the information problems involved in implementing such a policy. If effective national policies are difficult to construct and implement, one can imagine the problems involved in getting agreements between many Governments and any necessary cooperation of other interests. There are many such agreements, but I suspect the more successful ones have been focusing on particular aspects or relatively few countries. Some of us have serious doubts, for example, about the large number of industry and other exemptions now entrenched in the investment sections of the North American Free Trade Area and the vast number proposed for the draft multilateral agreement on investment.

This is not a plea, I would emphasize, against appropriate policies at either the national or multilateral levels. It is a plea for relatively straightforward and clearly welfare-enhancing rules which take account not only of the strategies and effects of the firms but also of similar thinking about government policy. This raises larger issues about how one gets Governments to do the right thing. Issues of incentives for appropriate public policy, policy design, and policy effects need to be highlighted in future work on this topic. ■

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## List of John H. Dunning's and Raymond Vernon's works published in *Transnational Corporations*, 1992-1999

### John H. Dunning

Title	Volume	Issue	Pages
The competitive advantage of countries and the activities of transnational corporations (review article)	1	1	135-168
The global economy, domestic governance, strategies and transnational corporations: interactions and policy implications	1	3	7-45
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The geographical sources of then competitiveness of firms: some results of a new survey	5	3	1-29
Towards a general paradigm of foreign direct and foreign portfolio investment (co-author: John. R. Dilyard)	8	1	1-52
Forty years on: <i>American Investment in British Manufacturing Industry</i> , revisited	8	2	1-34

### Raymond Vernon

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Book review on John H. Dunning, ed., <i>Governments, Globalization and International Business</i>	7	2	152-154
The Harvard Multinational Enterprise Project in historical perspective	8	2	35-49



# BOOK REVIEWS

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## *Japanese Multinationals in the Global Economy*

Paul W. Beamish, Andrew Delios and Donald Lecraw

(Cheltenham and Northampton, MA, Edward Elgar, 1997),  
xvii and 328 pages

This book makes a significant contribution to the interpretation of Japan's outward FDI statistics. The authors have clarified the statistical and econometric utility of the *Toyo Keizai* (TK) database, renowned in Japan for its detailed data on each affiliate owned by Japanese companies in the world. These data are collected by *Toyo Keizai Sinpoo Sya*, one of Japan's most famous publishers and specializing in economics and business analysis. TK data are revised annually with the help of questionnaires and interviews. The database is organized in two systems. One of them presents data by host countries. The other displays data by parent companies responding to *Tokyo Keizai*. The database is well known to Japanese experts as a very convenient and comprehensive directory of FDI data.

As Raymond Vernon has pointed out in the preface to this book, official FDI statistics prepared by Governments are neither very exact nor suitable for thorough FDI analysis. This reviewer believes that Japan's official FDI statistics, for example, are unsatisfactory in comparison with those of the United States. The latter have detailed FDI figures for actual FDI flows and stocks by host country and by industry. They also break down FDI by equity investment, intra-company loans and reinvested earnings. In Japan, the same breakdown is available only in the form of notification statistics, published by the Ministry of Finance. Notification statistics are based on reports by Japanese investors planning to transfer funds to their FDI projects to be realized in the near future. The figures based on notification are not identical with actual FDI flow because some of the notified transactions will not appear in the final count. Moreover, notification statistics do not cover negative investment flows resulting from divestment from terminated FDI projects in foreign countries.

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Actual FDI data are reported in the Bank of Japan's balance-of-payments statistics. Regrettably, however, those statistics highlight detailed FDI data only for a limited number of key host countries.

Fortunately, Japanese private companies, banks and some governmental institutions, by providing precious supplementary details on Japan's outward FDI, including the *Toyo Keizai* database, fill the gap left by the unsatisfactory official FDI statistics.

The authors of the book have suggested that, apart from the standard work already done, TK data could be used for new empirical work. For example, various past hypotheses formulated by FDI experts could be examined for validity if econometrics tests were run on the TK database.

One outstanding point of this book is a comparison between Japanese and United States outward FDI, using the TK and the Harvard Multinational Enterprise (HMNE) databases. Chapter 3 analyzes the similarities and differences of entry dates. Chapter 4 highlights the fact that both Japanese and United States affiliates have more intensive sales activities in developed countries than in developing Asia, although Japanese parent firms tend to own a higher percentage of key affiliates than their United States counterparts. Chapter 5 indicates that Japanese and United States TNCs have a similar geographical pattern of equity and a similar relationship between equity ownership and sales. Chapter 6 shows that total employment in Japanese affiliates is smaller than in United States affiliates, and that Japanese affiliates tend to employ relatively few people in developed countries and relatively many people in developing Asia. Chapter 7 demonstrates that expatriate management is employed quite frequently by Japanese TNCs. Chapter 8 proves that Japanese firms prefer to own greater shares in larger affiliates as part of a strategy to avoid risks. According to the findings of chapter 9, the joint venture ownership structure shows the uniqueness of Japanese-style overseas management. In this chapter, joint ventures are classified into four main types: intra-firm, cross-national domestic, traditional international and tri-national international joint ventures. While Japanese firms are eager to have a larger ownership of larger affiliates, gradually these firms, just like their United States

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counterparts, start to undertake more mergers and acquisitions (M&A) and more minority shareholdings. Finally, chapter 10 indicates that the performance of Japanese affiliates is better in developing Asia than in developed countries.

This book is unique in terms of examining the differences and similarities between Japanese and United States FDI through observation of compiled data. This kind of empirical comparison is in itself very rare and valuable. Among the issues presented in the book is K. Kojima's hypothesis of a Japanese-style FDI, which is quite distinct from United States FDI. Based on his observations of Japan's FDI in the 1960s and 1970s, Kojima has hypothesized that Japan's outward FDI took place in industries already in decline in Japan itself, and that FDI was accelerated when the same industries lost further international competitiveness. He has also emphasized that a minority share holding of overseas affiliates was another prominent characteristic of Japan's FDI. Moreover, he suggests that Japanese FDI is more appropriate to prompt the development process of host developing countries than United States FDI.

According to Kojima, United States transnational corporations (TNCs) tend to invest abroad in industries that are the most competitive in the United States itself. He also claims that United States firms prefer to have a 100 per cent or majority share holding of their overseas affiliates.

The authors show that the TK and HMNE databases can provide useful data for testing Kojima's hypothesis. First, regarding the ownership issue, the authors point out that Kojima's argument can be challenged, as the TK data indicate that in the 1960s and 1970s, Japanese firms preferred to acquire wholly or majority-owned foreign affiliates. The authors admit later that, on average, United States firms tend to have a higher share holding of their overseas affiliates than Japanese firms in almost every dimension. However, it is noteworthy that Japanese firms generally preferred a 100 per cent share or majority of their affiliates, even in the early stage of Japan's FDI. The detailed analysis of the ownership patterns in chapter 8 demonstrates that generally speaking, in Asia, minority share holding is more popular than majority or 100 per cent share holding. This

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tendency is true of both Japanese and United States TNCs. On the other hand, in the case of both Japanese and United States TNCs in most developed markets, 100 per cent or majority share holding is more popular than in Asia. The preference for minority share holdings in developing Asia is the product of relatively severe ownership regulation in Asian countries in the 1960s, 1970s and the first half of the 1980s in comparison with other regions. The reason for the Japanese firms' taste for minority share holdings as found by Kojima may have been the concentration of Japanese outward FDI in Asia, especially when compared with the geographical pattern of United States outward FDI. Kojima's general argument for Japanese-style FDI may have been based on a generalization of a specific observation of Japanese FDI in Asia in the 1960s and 1970s. However, it should be noted that the contents of Japan's FDI have drastically changed in the 1980s and 1990s.

Second, regarding the relationship between FDI and competitiveness, according to Kojima, one basic characteristic of Japanese-style FDI is that declining industries try to use outward FDI to recover international competitiveness by utilizing advantageous production factors of host developing countries. Kojima observed Japanese textile, chemical and food processing FDI in East and South-East Asian countries in the 1960s and 1970s to construct his famous hypothesis. Those industries gradually lost their international competitiveness through high economic growth and rapid structural change in Japan. The sudden appreciation of the yen in the early 1970s accelerated that structural change and outward FDI in Japan. The authors' discussion of the entry date of affiliates in chapter 3 may support Kojima's argument. But at the same time, they introduce another hypothesis that Japan's outward FDI follows the basic patterns of United States FDI with a time lag. Interestingly, this idea, too, is supported by the observations on TK data in chapter 3. The authors suggest that more analysis, based on econometrics, is required to test Kojima's hypothesis and the opposite hypothesis. However, it is noteworthy that the nature of outward FDI of Japanese manufacturing firms in the 1980s and the 1990s is quite different from that of the 1970s, and that FDI has had a greater impact on both host and home countries. According to a survey by the Ministry of International Trade and Industry (MITI), the share in Japan of overseas manufacturing production in total domestic manufacturing production increased from



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5 per cent to 10 per cent in this ten years. Most of the expansion of manufacturing FDI took place in the automobile and electronic/electric industries, which are probably the most competitive industries in Japan. Therefore, recent Japanese FDI has some similarity with United States FDI. This makes it rather difficult to use Kojima's hypothesis to explain the whole trend of outward FDI in the past and present, as that FDI has also experienced the structural changes of the past 30 years.

Third, regarding the geographical distribution of Japan's outward FDI, the authors find that, according to TK data, the newly established affiliates of Japanese TNCs are heavily concentrated in Asia, especially in comparison with TNCs from other developed countries, which prefer to invest in developed countries. Certainly, part of the Japanese bias towards Asia is characteristic of Japanese-style FDI as described by Kojima. However, a comparison of the Ministry of Finance and Bank of Japan statistics with the TK database points a more balanced picture. In terms of values, about 50 per cent of the annual FDI outflow from Japan has been oriented towards North America (mostly the United States). Western Europe has received another 20 per cent of Japan's annual FDI outflow; this share is almost the same as the share of FDI in developing Asia. It seems that FDI projects in developed countries are on a much larger scale than in Asia. In fact, chapters 4 and 5 of this book indicate that the sales values and equity holdings of Japanese affiliates are generally larger in developed countries than in developing Asia, Latin America and Africa/West Asia. Moreover, Japan's outward FDI has increasingly been concentrated in large-scale manufacturing industries over the past 30 years. Japan's FDI to developed countries expanded particularly rapidly in the late 1980s because of heavy investments by automobile and electric/electronic companies as well as real estate, finance and insurance and other services.

In relation to the above three issues, chapter 3 of the book argues that, unlike Japanese investment in other developed countries, which is motivated by the firm-specific advantages (or ownership advantages) of Japanese TNCs, Japanese FDI to Asia is motivated by the *keiretsu* system. But this observation is complicated by three factors.

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First, according to questionnaire surveys conducted by MITI and the Japanese Export-Import Bank (JEXIM), the profit performance of affiliates in Asian countries is better than in developed countries, although the latter, especially in North America, have improved in recent years. The superior profit performance of Japanese FDI in Asia is also mentioned in the last chapter of the book.

Second, a principal motivation for FDI in developed countries is to preserve local markets of host countries (market-seeking FDI), while a principal motivation for FDI in Asia is to establish export bases to developed countries (efficiency-seeking FDI), according to the JEXIM questionnaire survey. This means that Japanese outward FDI is strongly region-specific.

Third, according to some Japanese executives and FDI experts, despite significant improvements in affiliate productivity in recent years, even the most efficient Japanese affiliates' productivity is less than that of parent companies in Japan. For example, the foreign affiliates of Japanese automobile TNCs have failed to reach the productivity level of parent companies' factories in Japan. Hence, achieving OLI advantages abroad is not easy for Japanese firms.

The above arguments suggest that we need a new model to explain the recent trend of Japanese FDI, based on solid econometric analysis. As the authors of this book point out, their observations do not allow for a strict analysis of the validity of each hypothesis. In this respect, the TK database may be extremely useful for a more sophisticated econometric analysis of that validity. However, this lack of a basic model may be the only "missing link" in this valuable work. ■

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## *Direct Investment in Economies in Transition*

Klaus E. Meyer

(Cheltenham and Northampton, MA, Edward Elgar, 1998), xii  
and 308 pages

UNCTAD estimates that global FDI inflows in 1998 increased by 39 per cent over 1997, to \$644 billion (UNCTAD, 1999a). This increase occurred against the background of a slowdown in world economic growth to 2 per cent in 1998 (from 3.4 per cent in 1997) and of the financial crisis that hit many emerging markets in 1997-1998. Global FDI rose despite instability in Asia, the Russian Federation and Latin America, the decline in the value of world trade, decreases in commodity prices, a completion or slowdown of privatization programmes, and excess capacity in such industries as automobiles, steel and petroleum-related products. In Central and Eastern Europe (excluding the Russian Federation), FDI reached a new peak of over \$16 billion in 1998, compared to \$13 billion in 1997 (UNCTAD, 1999b).

Writing about such a powerful trend is both rewarding and risky. Klaus E. Meyer seems to have succeeded in managing these risks very well. Through his application of the developmental model, he not only examines the determinants of FDI under the unique conditions of transitions from central planning to market economies -- a line of inquiry which already has some tradition (e.g. Samonis, 1995) -- thereby challenging the "environmental" theory, but also applies the second line of inquiry with definite linkages to the first one (via the "common governance" paradigm). In this respect, he sees FDI as playing a major or even crucial role in enterprise restructuring, which is the current frontier in transitions to markets (international business frontiers being the leitmotif of the entire series, edited by Peter J. Buckley).<sup>1</sup> FDI not only brings longer-term capital badly needed to finance growing current account deficits of transition

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<sup>1</sup> This book was published by Elgar as part of the "New Horizons in International Business" series.

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economies (especially in view of the risks of “hot” capital so apparent in the Asian and Russian crises) but, even more importantly, serves as a powerful transfer channel for technologies, technical and managerial know-how that have a direct impact on the speed and the scope of the restructuring of enterprises. And this is true not only for directly affected enterprises but also for larger networks of cooperating enterprises and, via spin-offs, for entire national economies of countries in transition (Samonis, 1998).

The book begins by reviewing the business environments and the conditions facing foreign investors and assessing the available statistical and qualitative evidence, which leaves quite a lot to be desired. The author then analyses the theoretical literature and extends this in a fairly rigorous empirical analysis investigating the investment decisions of Western firms entering Central and Eastern Europe. The methods of investigation change with each stage of analysis. The database for the study was developed with a questionnaire survey of a stratified random sample of 269 German and United Kingdom manufacturing enterprises.

The book critically examines the ruling transaction cost theory and the eclectic theory of the transnational firm under the special conditions of transitions to markets. It suggests a reorientation of international business research, which will need to focus on firms as organizations rather than firms as substitutes for imperfect markets, as the ruling orthodoxy has it. This is important in the context of growing competition (and improving markets) and the new theory of the firm paradigms brought about by the advancing “global digital economy”.

The criticism which might be levelled at the book relates not so much to the work done, which is theoretically excellent, solid and painstaking (especially with regard to the empirical part), but to the work which should still be done as an extension of this type of research and (perhaps) should have been alluded to in the book, published in 1998. For example, rapid advances in the global digital economy will influence the shape, boundaries and so forth of future firms as well as how a firm in general is defined. Also, FDI might influence, or be influenced by, the emerging or future digital networks. Transition

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economies will be well advised to jump at these new opportunities and thereby realize “latecomer advantages”. The author might consider adding these dimensions in subsequent editions of this important book, especially in view of his leanings towards the study of organizations and new management challenges.

An in-depth analysis providing original insights into Central and Eastern Europe, while at the same time successfully challenging some of the theoretical foundations of the transnational firm, the book will be essential reading for both analysts and policy makers in the fields of international business and transition economics. ■

**Val Samonis**

The Center for European Integration Studies (ZEI)  
Bonn, Germany and  
SEMI Online

## References

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***Las multinacionales latinoamericanas: sus estrategias en un mundo globalizado***

Daniel Chudnovsky, Bernardo Kosacoff and Andrés López, in collaboration with de Celso Garrido

(Buenos Aires, Fondo de Cultura Económica de Argentina S.A., 1999), 396 pages

Since the late 1980s, Latin American countries, particularly Argentina, Brazil, Chile and Mexico, have attracted large flows of FDI. This book looks at this phenomenon from the perspective of outward FDI. Its purpose is precisely to shed light on and draw lessons from the experience of firms of these four countries in their cross-border activities. The book also examines the existing policy framework under which these firms operate.

This pioneering and informative book is organized in six chapters. The first chapter is of a conceptual nature, dealing broadly with FDI and transnational firms from developing countries. Chapters two to five cover, respectively, the cases of Argentina, Mexico, Chile and Brazil. The final chapter deals with Latin American transnational firms, their features, evolution and prospects.

The book considers the main features of what it calls the “third wave” of outward FDI from developing countries. The “first wave” took the form of a traditional presence of developing-country firms in foreign markets both at the beginning of this century and, more recently, in the 1960s and 1970s. The “second wave” was dominated by the dynamic expansion of South and South-East Asian firms in the global economy. Finally, the “third wave” is characterized by the expansion of new Latin American firms in global markets. The authors relate this phenomenon to the economic reform processes introduced in those countries. The new rules of the game based on open-door policies to trade and FDI forced firms rapidly to restructure and modernize their production, making internationalization a key consideration. The book highlights the complexity of these processes, which can lead to successes and failures.

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One of the main theses of the book is that the internationalization of Latin American firms is an essential component of their strategies to compete in open economies and cannot be viewed, simplistically, as a form of exporting jobs and domestic investment. In many cases, internationalization is a sine qua non of survival or growth. It can also be seen as a natural institutional evolution of the firm based on its own accumulated assets and advantages throughout its history and of the learning process that this entails, which has enabled firms to adapt to the new competitive scenario. However, considering the dynamics and the evolution of their home economies and of their own history, Latin American firms, unlike the South and South-East Asian conglomerates, continue to be limited to mature industries and activities. In other words, their activities are not technology- or skill-intensive.

According to the authors, in the present complex, risky and globalized context, it is plausible to predict that an increasing number of Latin American firms will be forced to enter into this internationalization path of production in order to sustain growth and maintain a competitive position. The dynamic and aggressive behaviour of big global firms puts Latin American firms into the difficult dilemma of “buying or being bought”.

The internationalization phenomenon has taken place spontaneously. No specific public policy has supported it. The authors are of the view that the social benefits of this phenomenon could be enhanced if inward as well as outward FDI were conceived as part of a national strategy of integration into the international economy that values creative assets, forward and backward linkages and synergies with local firms and institutions. From a microeconomic perspective, FDI is indispensable for enterprise development and domestic business groups to compete in open economies. From a macroeconomic perspective, FDI increases and strengthens trade in value-added services and goods, contributes to a better and increased utilization of highly qualified human resources and allows a better use of existing local capacities.

The authors recommend two types of broad policies aimed at the promotion of FDI and at strengthening systemic competitiveness. In the first category, the book dwells on fiscal and exchange-rate

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policies (e.g. double taxation treaties), investment promotion policies (e.g. active policy to promote inward FDI as well as opportunities for outward FDI), and the strengthening of negotiating capacities in multilateral forums (e.g. bilateral and multilateral promotion and protection treaties). Under the second category of policies, the authors examine such issues as human resource development, environmental standards and the functioning of national innovation systems.

This book will be of particular interest to researchers and particularly to policy makers in understanding the multifaceted aspects of FDI in developing countries and the new issues facing emerging home countries. ■

**Pedro Roffe**

Inter-regional Advisor  
UNCTAD  
Geneva, Switzerland



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## JUST PUBLISHED

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### *World Investment Report 1999: Foreign Direct Investment and the Challenge of Development*

(Sales No. E.99.II.D.3) (\$ 45)

The *World Investment Report 1999: Foreign Direct Investment and the Challenge of Development* (WIR99) is the ninth report in an annual series that has been recognized as the most up-to-date and comprehensive source of information and analysis of foreign direct investment. As in past years, WIR99 offers useful empirical information and policy analysis for decision-makers in government and business and for researchers. Part I, entitled Trends, examines the most recent global and regional trends in foreign direct investment. It briefly describes the investment strategies of the world's 100 largest transnational corporations; analyses the momentum for an increasing globalization of economies through foreign direct investment and the activities of transnational corporations; and explores the growing importance of mergers and acquisitions in fuelling foreign-direct-investment flows. It also reviews recent developments in bilateral and regional investment agreements including the key issues of the discussion on a possible multilateral agreement on investment. Part II, entitled Foreign Direct Investment and the Challenge of Development, looks at the impact of foreign direct investment on key objectives of economic development: increasing financial resources for investment, enhancing technological capabilities, boosting export competitiveness, generating and upgrading employment, and protecting the environment. WIR99 concludes that although foreign direct investment can yield major economic benefits for the host country, such benefits do not materialize of their own accord: Government policy does matter, at both national and international levels. Governments therefore have an important role to play in creating the conditions that attract foreign direct investment and in maximizing the positive contribution that foreign direct investment can make to growth and development.

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## **World Investment Report 1999: Foreign Direct Investment and the Challenge of Development. Overview**

(UNCTAD/WIR/99(Overview))

Available free of charge in Arabic, Chinese, English, French, Russian and Spanish.

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### **Foreign Direct Investment in Africa: Performance and Potential**

(UNCTAD/ITE/IIT/Misc. 15)

Foreign direct investment (FDI) is welcomed and, indeed, actively sought by virtually all African countries. The contribution that FDI can make to their economic development and integration into the world economy is widely recognized. For this reason, African countries have made considerable efforts over the past decade to improve their investment climate. They have liberalized their investment regulations and have offered incentives to foreign investors. More importantly, the economic performance of the region had substantially improved from the mid-1990s.

However, the expected surge of FDI into Africa as a whole has not occurred. Too often, potential investors discount the African continent as a location for investment because a negative image of the region as a whole conceals the complex diversity of economic performance and the existence of investment opportunities in individual countries.

While the problems many African countries face are widely known and dominate the perceptions of the continent as a whole, there are a number of positive aspects that, although highly relevant for foreign investors, are little known. Most African countries have substantially improved their FDI framework, and a number of them

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have already attracted significant amounts of FDI, in absolute or relative terms, or both, from an increasing number of home countries, including developing countries. In addition, FDI in Africa is no longer concentrated in the traditional natural resources sector; manufacturing and services industries have also received considerable amounts of FDI in recent years. It has proven to be highly profitable, and fairly consistently so over time. Direct investors need therefore to differentiate. They need to look at Africa country by country, sector by sector, and opportunity by opportunity. As in other continents, there are profitable investment opportunities to be found. Available free of charge.



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## **Books received on foreign direct investment and transnational corporations since April 1999**

Hill, Charles W.L. , *International Business: Competing in the Global Marketplace*. Third Edition (Boston: Irwin McGraw-Hill, 1999), 692 pages.

Moore, Karl and David Lewis, *Birth of the Multinational. 2000 Years of Ancient Business History -- from Ashur to Augustus* (Copenhagen: Copenhagen Business School Press, 1999), 341 pages.

Okposin, Samuel Bassey, *The extent of Singapore's Investment Abroad* (Aldershot: Ashgate, 1999), 207 pages.



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## GUIDELINES FOR CONTRIBUTORS

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E. **Abbreviations** should be avoided whenever possible, except for FDI (foreign direct investment) and TNCs (transnational corporations).

F. **Bibliographical references** in the text should appear as: “John Dunning (1979) reported that ...”, or “This finding has been widely supported in the literature (Cantwell, 1991, p. 19)”. The author(s) should ensure that there is a strict correspondence between names and years appearing in the text and those appearing in the list of references.

All citations in the list of references should be complete. Names of journals should not be abbreviated. The following are examples for most citations:

Bhagwati, Jagdish (1988). *Protectionism* (Cambridge, MA: MIT Press).

Cantwell, John (1991). “A survey of theories of international production”, in Christos N. Pitelis and Roger Sugden, eds., *The Nature of the Transnational Firm* (London: Routledge), pp. 16–63.

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United Nations Centre on Transnational Corporations (1991). *World Investment Report 1991: The Triad in Foreign Direct Investment*. Sales No. E.91.II.A.12.

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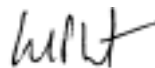
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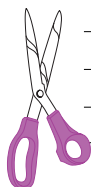
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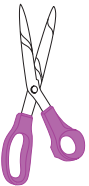
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