Location and the Multinational Enterprise: A Neglected Factor?

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This article first traces the changing world economic scenario for international business over the past two decades, and then goes on to examine its implications for the location of foreign direct investment and multinational enterprise activity. It suggests that many of the explanations of the 1970s and early 1980s need to be modified as firm-specific assets have become mobile across natural boundaries. A final section of the article examines the dynamic interface between the value-added activities of multinational enterprises in different locations.

INTRODUCTION

In 1986, the economist Wilfred J. Ethier, in seeking to explain the existence of multinational enterprises (MNEs), concluded that "internalization appears to be emerging as the Caesar of the OLI triumvirate" (Ethier, 1986, p. 803). I did not agree with this statement then; nor do I do so now. The OLI triad of variables (ownership, location and internalization, discussed below) determining foreign direct investment (FDI) and MNE activity may be likened to a three-legged stool; each leg is supportive of the other, and the stool is only functional if the three legs are evenly balanced. In so far as the third leg completes this balancing it may be regarded as the most important, but there is no reason to suppose one leg performs this task better than another.

In the case of the eclectic paradigm, I would accept that the I component is the critical leg, if, given the O advantages of firms and the L advantages of countries, one is trying to explain why firms internalize the cross-border market for these advantages, rather than sell them or their rights to independent firms. But, I would aver it is no less correct to argue that, given its O specific advantages, the critical choice of a multi-activity firm is whether it should internalize its intermediate product markets within its home country or in a foreign country; and that the outcome of this choice is primarily determined by the costs and benefits of

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adding value to these products in the two locations. I say primarily because the geography of international business activity is not independent of its entry mode; nor, indeed, of the competitive advantages of the investing firms. This interdependence is particularly apparent when one examines the dynamics of knowledge-intensive MNE activity.

In the 1960s, scholars, such as Raymond Vernon and his colleagues at Harvard (see especially Vernon, 1966, 1974 and Wells, 1972) working on the determinants of FDI, gave pride of place to locational variables, particularly those determining the siting of U.S. market seeking FDI by U.S. firms in advanced industrial countries (see also the work of some European scholars, such as Bandera and White, 1968 and Scaperlanda and Mauer, 1969). In the mid-1970s — apart from research on the internationalization process of firms (see, for example, Johanson and Vahlne, 1977) — attention switched from the act of FDI *per se* to the institution making the investment. Here the main focus of interest was why firms should choose to set up or acquire foreign value-adding activities, rather than export the intangible assets (or the right to use these assets) underpinning such activities, directly to foreign firms (see especially the writings of Peter Buckley and Mark Casson, J. C. McManus, Jean-François Hennart, Alan Rugman, and Birgitta Swedenborg, all of which are cited in Caves, 1982 and 1996).

While I would be the first to acknowledge the value of this approach in advancing our understanding of MNE, *qua* MNEs, I believe that the contribution of the internalization school has done more to explain the existence and growth of the multi-activity firm than that of the MNE *per se*. This is because, with relatively few exceptions,[1] the transaction and coordination costs identified with arm's-length intermediate product markets have not, in general, been specific to cross-border markets, or, indeed, to traversing space.

The emphasis on the firm-specific determinants of international economic activity, while still driving much academic research by scholars in business schools, is now being complemented by a renewed interest in the spatial aspects of FDI; and of how these affect both the competitive advantages of firms and their modes of entry into, and expansion in, foreign markets. We believe there are two main reasons for this. The first is that the changing extent, character and geography of MNE activity over the past two decades – itself a reflection of a series of path-breaking technological, economic and political events – is demanding an explanation by international business scholars. The second is that new research agendas, particularly those of economic geographers, trade theorists and international political economists, are not only paying more attention to the spatial aspects of value-added activity, but are also seeking to incorporate these aspects into the mainstream thinking about the growth and competitiveness of firms, the relationship between trade and FDI, and the economic structure and dynamic comparative advantage of regions and countries.

This paper seeks to review some of these happenings, most of which come into prominence between the two editions of the publication of Richard Caves, *Multinational Enterprise and Economic Analysis* (1982 and 1996). To his credit, Richard Caves acknowledges many of these in his second (1996) edition. But, since much of his analysis relates to the work of scholars in the 1980s,[2] his chapter on the international allocation of eco-

nomic activity (Chapter 2) does not fully embrace the events and academic research of the last decade or so. It is these which will be the main concern of this contribution. The paper will proceed in the following way. First it will briefly describe the changing global economic scenario in which MNE activity has been conducted since the mid-1970s, and also the various strands of intellectual thought which have sought to explain this. Second, it will examine how the micro-locational determinants of international production have changed; and how the location portfolio of MNEs may itself help promote their dynamic competitive advantages. Third, it will consider how, from a more macroeconomic standpoint, the emergence of the MNE as a leading vehicle of cross-border transactions has affected our thinking about the determinants of trade and other non-MNE related transactions.

THE CHANGING WORLD SCENARIO FOR INTERNATIONAL BUSINESS ACTIVITY

The last two decades have witnessed a gradual movement towards a world economy characterized by three features. The first is the emergence of intellectual capital as the key wealth creating asset in most industrial economies. In the 1990s, the market value of industrial corporations has been variously calculated (e.g., by Blair, 1995, Handy, 1989 and Edvinsson, 1997) at between 2½ and 5 times the value of their tangible assets, compared with 1½ times in 1982. The annual capital expenditure on information technology by U.S. corporations now exceeds that on production technology (Stewart, 1997). The knowledge component of the output of manufacturing goods is estimated to have risen from 20 percent in the 1950s to 70 percent in 1995 (Stewart, 1997); while those workers whose main task is to create new knowledge or disseminate information (viz. professional and technical workers, managers, sales and clerical workers — the so called "white collar" workers) increased their share of the American labor force from 42 percent in 1960 to 58 percent in 1990, and this share is expected to rise to more than 60 percent by 2000.

A further indicator of the rising significance of non-material assets as creators or facilitators of wealth is the growth of services, and particularly those which are, themselves, knowledge or information intensive. In 1995, on average, services accounted for 63 percent of the world's gross national product (GNP), compared with 53 percent in 1980 and 45 percent in 1965 (World Bank, 1997). Insofar as knowledge intensive and knowledge supporting production has its unique spatial needs, and tends to require resources and capabilities which MNEs are particularly well suited to provide, it is not unreasonable to hypothesize that both these features will impinge on the geographical distribution of FDI and related activities.

Secondly, and even more transparent, is the increasing globalization of economic activity, made possible, *inter alia,* by advances in transport and communications technologies and the reduction in trade and investment barriers throughout the world (UNCTAD, various issues and World Bank, various issues). Over the last two decades, the growth of world trade has consistently outstripped that of world output, while in the mid-1990s the sales of the foreign affiliates of MNEs exceeded the value of world trade by 27 percent (UNCTAD, 1997). Moreover, between one-third and one-half of trade in non-agricultural products and between one-half and three-fifths of capital and

knowledge flows are currently internalized within MNEs.[3]

At the same time, the ease at which MNEs can transfer intangible assets across national boundaries is being constrained by the fact that the location of the creation and use of these assets is becoming increasingly influenced by the presence of immobile clusters of complementary value-added activities. This is particularly the case where the transaction costs of traversing distance are high, or where the transactional benefits of spatial proximity are significant.[4] Thus while globalization suggests that the location and ownership of production is becoming geographically more dispersed, other economic forces are making for a more pronounced geographical concentration of such activity both within particular regions and countries.[5] In the words of Ann Markusen (1996), these events are presenting scholars and policy makers with a paradox of "sticky places within slippery space."

The third feature of the contemporary global economy is the emergence of what may be called "alliance" capitalism (sometimes called relational, collective, stakeholder and collaborative capitalism — see Dunning, 1995). While retaining many of the characteristics of hierarchical capitalism, the distinctive feature of alliance capitalism is the growing extent to which, in order to achieve their respective objectives, the main stakeholders in the wealth-seeking process are needing to collaborate more actively and purposefully with each other. Such collaboration includes the conclusion of closer, continuing, and more clearly delineated intra-firm relationships, e.g., between functional departments and between management and labor; the growth of a variety of inter-firm cooperative agreements, [6] e.g., between suppliers and customers and among competitors; and the recognition by governments and firms alike of the need to work as partners if the economic goals of society (for which the former are ultimately responsible) are to be best achieved.

Once again, the growing propensity of firms to engage in cross-border alliances has implications not just for the modality by which knowledge and other intangible assets are transferred across national boundaries, but for the location of value-added activities – especially high value asset-augmenting activities.

Underpinning and reinforcing each of the events just described are two other factors which also have had a profound effect on both the macro and micro geography of MNEs. The first is the advent, in the 1980s, of a new generation of technological advances which, according to Alan Greenspan (in a speech given to New York bankers in April 1997) are only now, in the later 1990s, fully bearing fruit.[7] The second factor is the renaissance of the market economy, and the consequential changes in the macroeconomic policies and macro-organizational (micro-management) strategies of many national governments. This is most vividly demonstrated by the happenings in China and Central and Eastern Europe, but, almost as far reaching, is the reappraisal of the role of the State and markets in economic development now being played out in India, and in several African and Latin American economies (World Bank, 1997). Both factors have had a major impact on the economic and political risk assessment of FDI by MNEs.

THE CHANGING GEOGRAPHY OF MNE ACTIVITY

The developments just described have all impacted on the geography of FDI and MNE activity (as described in more detail

in Dunning, 1998). In the period 1991-1996, 64 percent of global FDI inflows were received by the developed countries, 33 percent by developing countries and 3 percent by Central and Eastern European countries. The corresponding percentages for the period 1975-1980 were 77 percent, 23 percent and less than 0.1 percent (UNCTAD, 1997). No less noticeable have been the changes in the distribution of inbound FDI within these regions. While the shares of Western Europe and the United States, c.f. all FDI in developed countries, have remained broadly the same,[8] those within developing countries have markedly changed. For example, between 1975-1980 and 1991-1996, South, East and Southeast Asia (including China and India) increased their share of inbound investment to developing countries from 26 percent to 62 percent, while that of Latin America and the Caribbean fell from 53 percent to 34 percent.

It is perhaps worth observing that although the share of inbound FDI to the gross fixed capital formation of the countries more than doubled between the second half of the 1970s and the first half of the 1990s (UNCTAD, 1988, 1996a), the changing geography of FDI parallels reasonably well that of all investment, independently of its ownership. Between 1975 and 1980, and 1990 and 1995, for example, the share of world inbound FDI accounted for by developed countries fell from 78 percent to 70 percent, while that of world gross fixed capital formation (including that part financed by foreign firms) fell from 84 percent to 73 percent. The corresponding figures for all developing economies were 21 percent and 30 percent, and 15 percent and 26 percent; and for Asia 7 percent and 19 percent, and 7 percent and 19 percent. Although there are differences in the geography of FDI which can be specifically attributed to the political or economic conditions in the host country[9] — and it is most certainly the case that the geography of outward FDI is quite strongly country specific[10] — the data suggest that many of the factors which explain the location of FDI may not be unique to its country of origin. We shall not elaborate on this point here; but it is, perhaps, worthy of more attention.

THE MICRO-ECONOMICS OF THE LOCATION OF MNE ACTIVITY

With the caveat of the last paragraph, we now consider how scholarly thinking about the location of MNEs has evolved over the last two decades. Incidentally, we suspect that the fact that this subject has not been given much attention by international business scholars is partly because scholars have believed that the principles underlying the locational decisions of firms within national boundaries can be easily extended to explain their cross-border locational preferences;[11] and partly because economists were either generally satisfied with existing explanations, or just not interested in the subject. Certainly, until the early 1990s, there was little in common between the methodologies of international trade economists and locational economists, excepting the work of Bertil Ohlin (1933) and his successors. This was primarily because the former were concerned with country-specific general equilibrium models or models under very restrictive conditions, whereas the latter were mainly interested in firm or industry-specific partial equilibrium models with fewer constraints (Krugman, 1993).

Earlier in this paper, we identified three major developments in the global economy which have impinged upon both the capabilities and strategies of

MNEs, or potential MNEs, and the locational attractions offered by particular countries to mobile investors. In particular, we emphasized first the growing significance of firm-specific knowledge-intensive assets in the wealth-creating process, and the kind of customized assets, e.g., skilled labor and public infrastructure, which needed to be jointly used with these assets if they were to be effectively harnessed and deployed;[12] secondly, the reduction of many natural and artificial impediments to trade, but the rise of other spatially related transaction costs; and thirdly, the growing need and ease with which firms are able to coordinate their cross-border activities and form alliances with foreign firms.

Some of these factors have led firms to own and concentrate particular types of value-added activities within a limited number of locations; others have led them to disperse such activities across several locations. Some have favored a realignment of MNE activity towards advanced developed economies; others have favored a location in emerging market economies. All are symptomatic of a changing international division of labor, which, because of their increasing role in the world economy, and their need to capture the economies of interdependent activities, MNEs have helped to fashion.

The literature on the locational preferences of foreign direct investors has long acknowledged that these will not depend on the types of activities in which they are engaged, but on the motives for the investment and whether it is a new or a sequential one. Different kinds of investment incentives are needed to attract inbound MNE activity of a natural-resource-seeking, c.f. that of a market- or efficiency-seeking, kind. Export-oriented FDI is likely to be less influenced by the size of local markets than is import-substituting FDI. Investment in R&D facilities requires a different kind of human and physical infrastructure than investment in assembling or marketing activities, and so on.

But, perhaps, the most significant change in the motives for FDI over the last two decades has been the rapid growth of strategic asset-seeking FDI, which is geared less to exploiting an existing O specific advantage of an investing firm, and more to protecting, or augmenting, that advantage by the acquisition of new assets, or by a partnering arrangement with a foreign firm. In some ways, such FDI is similar in intent to that of a natural resource-seeking investment in earlier times but, its locational needs are likely to be quite different. Partly this is because it is frequently motivated by strategic considerations (especially in oligopolistic industries), and partly because the availability of the assets sought, viz. technical knowledge, learning experiences, management expertise and organizational competence, tend to be concentrated in advanced industrial countries, or the larger developing countries. The growth of strategic asset-seeking FDI in recent years is best demonstrated by the increasing role of mergers and acquisitions as modalities of FDI. According to UNCTAD (1997), between 55 percent and 60 percent of FDI flows over the period 1985-1995 was accounted for by mergers and acquisitions. Most of these were concentrated within North America, Europe and Japan, and in knowledge and information-intensive sectors.

The locational preferences of firms making more traditional forms of FDI have also changed — as, indeed, have the attitudes of recipient countries to these investments. We might mention two of these. First, as foreign affiliates have become more embedded in host coun-

tries, this has led to a deepening of their value chains, and a propensity for them to engage in higher-order (e.g., innovatory) activities. This fact has been documented in numerous studies both on the geographical distribution of R&D and on that of patents registered by MNEs (as recent examples of these, see Dalton and Serapio (1995), Almeida (1996), Dunning (1996), Kuemmerle (1996), Shan and Song (1997), and various studies of John Cantwell and colleagues, e.g., Cantwell and Harding (1997), and Bob Pearce and Marina Papapanastassiou, e.g., Papanastassiou and Pearce (1997), of the University of Reading). *Inter alia,* the Cantwell and Harding study showed that between 1991 and 1995, 11 percent of the U.S. registered patents of the world's largest firms were attributable to research locations outside the home country of the parent company. Only in the case of Japan there was not a rise in the proportion of patents registered by foreign affiliates since the early 1970s (for a more general discussion on asset-augmenting FDI, see an interesting dissertation by Wesson, 1993). So far, however, this tendency of engaging in higher-order activities has been largely confined to developed countries. In 1994, for example, some 91 percent of the foreign R&D undertaken by U.S. MNEs was located in developed countries, compared with 79 percent of their total foreign sales (Mataloni and Fahim-Nadar, 1996).

Second, the location-specific assets which MNEs perceive they need to add value to the competitive advantages they are exporting (via FDI) are changing as their downstream activities are becoming more knowledge intensive. Various surveys have demonstrated that, except for some labor or resource investments in developing countries, MNEs are increasingly seeking locations which offer the best economic and institutional facilities for their core competencies to be efficiently utilized. For example, in a field study by Fabrice Hatem (1997), apart from market access and market growth, economic and institutional facilities were not only valued much higher than traditional criteria of access to raw materials, cost of labor, and fear of protectionism, but in all cases they were also thought to increase in significance over the five year period 1996-2001. There is a suggestion, too, that the presence of other foreign investors in a particular country is becoming more significant, both as an "investment-stalk" or signaling effect to other foreign firms less familiar with that country (Srinivasan and Mody, 1997; Liu, 1998), and as an agglomerative magnet by which firms benefit from being part of a geographical network or cluster of related activities and specialized support services. In a study of the location patterns of U.S. MNEs between 1982 and 1988, Wheeler and Mody (1992) identified three agglomeration benefits, viz. infrastructure quality, degree of industrialization, and existing level of FDI. They found that these exhibited a high degree of statistical significance and had large positive impacts on investment (p. 66). In an analysis of Swedish outbound FDI, over the period 1975-1990, Braunerhjelm and Svensson (1995) confirmed a positive and significant statistical relationship between that variable and the presence of pecuniary externalities associated with demand and supply linkages, including the diffusion of knowledge, e.g., spillover effects, resulting from a clustering of related firms.

A more formal examination of the changing nature and significance of external economies, and of how these are leading to a more concentrated pattern of certain kinds of FDI — particularly that of

strategic asset-seeking investment in knowledge-intensive-sectors — is set out in Krugman (1991). Indeed, it was his study which helped spark off the fruitful dialogue now taking place between industrial geographers, economists and business analysts. Though this dialogue is principally concerned with the role of sub-national spatial units as repositories for mobile investment, it is also offering a number of valuable insights on the changing role of transportation and communication costs as they affect the coordination and supply of end products from existing agglomerations, and the decentralization of intermediate production;[13] and also on the changing competitive advantages of regions — particularly as they impinge upon spatial transaction costs and dynamic external economies, such as those to do with complex technologies, uncertain or unpredictable markets, inter-active learning, face-to-face discussions and the exchange of uncodifiable knowledge (Florida, 1995; Storper and Scott, 1995).

Certainly the incentives offered by regional authorities within the European Union (EU) and of states within the United States, have been shown to be a decisive factor in influencing the intra-regional location of inbound MNE activity (for some interesting case studies, see, for example, Donahue, 1997 and Ohmae, 1995). There is also a good deal of casual evidence to suggest that the promotional campaigns and incentives — in the form of the speedy processing of planning applications, land grants, subsidized rents, tax holidays and generous investment allowances – offered by local or regional development agencies to attract FDI tend to resemble those of "location tournaments"[14] (Taylor, 1993, UNCTAD, 1996b). Again, the experiences of the United States and the EU – or, indeed, of some of the larger countries in the EU, e.g., the United Kingdom — are salutary in this respect.

In Table 1, we attempt to summarize some of the differences between the kind of variables posited to influence the locational decisions of MNEs in the 1970s — most of which are well documented in Chapter 2 of *Multinational Enterprise and Economic Analysis* — and those which scholars are hypothesizing, and field research is showing to influence these same decisions of MNEs in the 1990s. In doing so, we have separately classified the four main kinds of FDI identified earlier. However, we readily accept that other contextual variables, e.g., size of firm, degree of multinationality, country or region of origin and destination and industry, insofar as these have different situational needs, may be no less significant.

The contents of the table are largely self-explanatory, but we would highlight just four main findings. The first is the changing role of spatial transaction costs, which reflect both the liberalization of cross-border markets and the changing characteristics of economic activity. While, in general, the reduction of these costs has led to more aggressive market-seeking FDI, and has promoted a welfare-enhancing international division of labor, it has also favored the spatial bunching of firms engaged in related activities, so that each may benefit from the presence of the other, and of having access to localized support facilities, shared service centers, distribution networks, customized demand patterns and specialized factor inputs (Maskell, 1996; Rees and McLean, 1997).

The second finding is that the complementary foreign assets and capabilities sought by MNEs wishing to add value to their core competitive advantages are

TABLE 1
Some Variables Influencing the Location of Value Added Activities by MNEs in the 1970s and 1990s

Type of FDI	In the 1970s	In the 1990s
A. Resource Seeking	1. Availability, price and quality of natural resources. 2. Infrastructure to enable resources to be exploited, and products arising from them to be exported. 3. Government restrictions on FDI and/or on capital and dividend remissions. 4. Investment incentives, e.g., tax holidays.	1. As in the 1970s, but local opportunities for upgrading quality of resources and the processing and transportation of their output is a more important locational incentive. 2. Availability of local partners to jointly promote knowledge and/or capital-intensive resource exploitation.
B. Market Seeking	1. Mainly domestic, and occasionally (e.g., in Europe) adjacent regional markets. 2. Real wage costs; material costs. 3. Transport costs; tariff and non-tariff trade barriers. 4. As A3 above, but also (where relevant) privileged access to import licenses.	1. Mostly large and growing domestic markets, and adjacent regional markets (e.g., NAFTA, EU etc.). 2. Availability and price of skilled and professional labor. 3. Presence and competitiveness of related firms, e.g., leading industrial suppliers. 4. Quality of national and local infrastructure, and institutional competence. 5. Less spatially related market distortions, but increased role of agglomerative spatial economies and local service support facilities. 6. Macroeconomic and macro-organizational policies as pursued by host governments. 7. Increased need for presence close to users in knowledge-intensive sectors. 8. Growing importance of promotional activities by regional or local development agencies.
C. Efficiency Seeking	1. Mainly production cost related (e.g., labor, materials, machinery, etc.). 2. Freedom to engage in trade in intermediate and final products. 3. Presence of agglomerative economies, e.g., export processing zones. 4. Investment incentives, e.g., tax breaks, accelerated depreciation, grants, subsidized land.	1. As in the 1970s, but more emphasis placed on B2, 3, 4, 5 and 7 above, especially for knowledge-intensive and integrated MNE activities, e.g., R&D and some office functions. 2. Increased role of governments in removing obstacles to restructuring economic activity, and facilitating the upgrading of human resources by appropriate educational and training programs. 3. Availability of specialized spatial clusters, e.g., science and industrial parks, service support systems etc.; and of specialized factor inputs. Opportunities for new innitiatives by investing firms; an entrepreneurial environment, and one which encourages competitiveness enhancing cooperation within and between firms.
D. Strategic Asset Seeking	1. Availability of knowledge-related assets and markets necessary to protect or enhance O specific advantages of investing firms – and at the right price. 2. Institutional and other variables influencing ease or difficulty at which such assets can be acquired by foreign firms.	1. As in the 1970s, but growing geographical dispersion of knowledge-based assets, and need of firms to harness such assets from foreign locations, makes this a more important motive for FDI. 2. The price and availability of "synergistic" assets to foreign investors. 3. Opportunities offered (often by particular subnational spatial units) for exchange of localized tacit knowledge, ideas and interactive learning. 4. Access to different cultures, institutions and systems; and different consumer demands and preferences.

increasingly of a knowledge-facilitating kind, and that this is particularly the case as their affiliates become more firmly rooted in host economies (Grabher, 1993). Examples include the deepening of value-added activities by Japanese manufacturing subsidiaries in Europe and North America. An exception to this finding is some low value-adding activities in the least developed areas of the world.

The third finding is that as strategic asset-acquiring investment has become more important, the locational needs of corporations have shifted from those to do with access to markets, or to natural resources, to those to do with access to knowledge-intensive assets and learning experiences, which augment their existing O specific advantages.

The fourth finding is that much of the recent FDI in developing countries is prompted either by traditional market-seeking motives (e.g., as in the case of China, Indonesia and India), or by the desire to take advantage of lower (real) labor costs, and/or the availability and price of natural resources. Yet, even there, where firms have a choice, the physical and human infrastructure, together with the macroeconomic environment and institutional framework of the host country, tend to play a more decisive role than they once did.

MACROECONOMIC ASPECTS OF THE CHANGING INTERNATIONAL ALLOCATION OF ECONOMIC ACTIVITY

In the previous section, we set out some of the reasons for the changing locational patterns of MNE activity over the past two decades. We concluded that developments in the global economy over these years had not only opened up or enlarged markets for products normally supplied by MNEs, but, by affecting the production and transaction costs of FDI, had markedly influenced its industrial structure and geography. In general, the 1990s are witnessing a closer integration in the international value-added activities of MNEs. In the case of some kinds of FDI, falling material, transportation and communication costs, and rising transactional benefits arising from the common governance of interdependent activities have made for a more concentrated pattern of FDI, both between and within regions and/or countries. In other cases, however, the emergence of new – and often important – markets, and the lowering of tariff and non-tariff barriers have made for a more dispersed pattern of FDI.

We now turn to consider some macroeconomic, or country specific, issues. In particular, we wish to address two questions. First, to what extent is the changing locational pattern of FDI affecting our understanding about the determinants of the optimal international allocation of economic activity; and second, how far, in light of the growing significance and integration of MNE, does one need to reconsider the policy implications for national and regional governments as they seek to advance their particular economic and social objectives?

Until the 1950s, most explanations of the allocation of economic activity were based on the distribution of natural resources – especially labor, land and finance capital. The principle of comparative advantage espoused that countries should specialize in the production of those products which required the resources and capabilities in which they were relatively the best endowed; and trade these for those which required resources and capabilities in which they were relatively poorly endowed. This was the basis for a general equilibrium model of trade. Its restrictive assumptions – viz. perfect competition, the

immobility of factors, homogeneity of traded products, constant returns to scale and zero transportation costs – as recently reiterated by Krugman (1993), are well known. In that model, there was little or no room for innovatory activities, or for the deployment of such created assets as intellectual capital, organizational expertise, entrepreneurship and interactive learning, either by countries or firms; and even less for the distinctive characteristics of MNEs.

Over the last four decades, these restrictions have been gradually relaxed in three main ways. First, independently of the work of scholars on FDI and MNE activity, there has been a growing appreciation by trade economists of the need to incorporate such variables as economies of scale, fabricated assets, learning experiences and market structure into their models, and to recognize that the role of these varies with types of economic activity. It is, for example, now generally accepted that different parts of the value chain may be distributed between countries, or regions within countries, according to their knowledge, capital, natural resource and labor content, and to the geography of these inputs. Second, more attention is now being paid to the extent to which the external economies which arise from the clustering of related activities, may lead to a concentration of economic activity in certain countries or regions. Third, more recognition has been given to the differences in consumer tastes between countries, while, very gradually, institutional factors, such as those specific to the multi-activity or multi-firm, and to the role of governments have begun to be acknowledged.

In incorporating these changes into their thinking, the proponents of the positive theory of trade are now able to offer a more realistic explanation of the international allocation of economic activity; while, from a normative viewpoint, though dented, the principle of comparative advantage still has much going for it as a guiding light as to how best to allocate scarce resources between countries (Wood, 1993). This is particularly the case when it is widened to embrace created assets, including those which are institutional, policy and culturally related (Lipsey, 1997).

However, a second intellectual lacunae remains, which makes it difficult to reconcile the approaches of location theorists and international trade economists in explaining the international allocation of production. This is the presence – and the increasing presence – of the MNE, whose central feature is its common ownership of cross border value-adding activities. Here we need to turn once again to the work of the internalization scholars. For to explain how MNEs, *qua* MNEs, affect the international location of economic activity, we need to consider how they differ from uni-national firms. Otherwise, one should be able to use the tenets of contemporary trade and/or location theory to explain such activity. It is here that research by international business scholars is particularly relevant.

An earlier section of this paper suggested that the changes in the geography of FDI over the last two decades have been broadly in line with that of the capital expenditures of all firms. This could mean that the ownership or multinationality of firms was not a significant variable in explaining such changes; and that trade in intermediate or final products internalized, and/or controlled, by MNEs, is no differently determined than trade between independent firms, i.e., arm's-length trade.

However, as copious research shows (as reviewed, for example, in Caves, 1996

and Dunning, 1993), the main impact of the foreign-ness, or multi-nationality, of firms has not been on the level of economic activity and/or trade of the countries in which they operate, but on the structure of these variables. From the very earliest of studies on FDI, scholars have shown that the foreign affiliates of MNEs tend to be concentrated in different industrial sectors than do their indigenous counterparts. Since each sector is likely to have its distinctive locational and trading propensities, it follows that FDI will have a differential impact on the geography of economic activity. Sometimes, this impact will reflect the characteristics of the country of the investing firms, e.g., Japanese FDI in the European auto and electronics industries in the 1980s; sometimes a very unique competitive advantage, or set of advantages; and sometimes their pattern and degree of multinationality. For it is the geographical diversity of asset-agmenting and asset-exploiting FDI, and the costs and benefits associated with their common governance, which is one of the singular features of contemporary MNE activity – especially in developed countries.

Scholars, such as Bruce Kogut, recognized these specific attributes of MNEs many years ago (see, for example, Kogut, 1983 and 1985), but as the degree, scope and intensity of the foreign operations of firms has increased over the last decade (as demonstrated, for example, in the annual *World Investment Reports* of UNCTAD), and as these are now used to harness new resources, capabilities and markets, as well as to exploit the existing O advantages of firms, so have these particular qualities of multinationality become more prominent.

Though such qualities can be readily embraced into location theory, they are less easily incorporated into general equilibrium trade models. Primarily, this is because, unlike industrial organization theory, trade theory has not come to grips with the multi-activity firm, or multi-plant production, or has embraced innovation into its thinking (one notable exception is that of Grossman and Helpman, 1991). Recent papers by James Markusen (1995) and Markusen and Venables (1995) have made a brave attempt to integrate the OLI framework paradigm of international production and the newer models of trade (i.e., those embracing firm-specific economies of scale, product differentiation and imperfect competition), but they tend to concentrate on how the cross-border specialization of specific knowledge intensive activities may differ from that predicated by traditional trade theory. In a similar vein, research by Brainard (1993) and Horstman and Markusen (1992) has concluded that MNE-related production will be in equilibrium when firm-level fixed costs and spatial transaction costs are large relative to plant level economies.[15] None of these approaches, however, fully takes account the key properties of multinationality, as distinct from the foreign ownership of firms. While embracing some of the characteristics of internalized markets for O specific assets, they ignore others – and especially those which elsewhere we have referred to as transaction-cost-minimizing O advantages.[16]

Considering the normative implications of the work of Markusen and others, and using the language of traditional trade theory, we might say that it will be to the benefit of countries if their firms engage in outward FDI in two very different situations. The first is where the utilization of their O specific advantages, the production of which is relatively well suited to the resources and capabilities of the home countries, is best undertaken in

a foreign country (or countries)[17] and within the same firm (i.e., the benefits of "first best" internalized intermediate product markets exceed those of "first best" arm's-length transactions). The second is when to protect or augment their global competitive advantages, firms engage in buying assets in a foreign country (or countries) more favorable to their creation, but not to their deployment. By contrast, a country will benefit from inward direct investment when it has a comparative advantage in adding value to the services of the imported created assets – again within the investing entity – rather than producing these assets itself, or where a foreign firm chooses to buy assets created in the country (at the right price) and utilize these assets in a foreign country (or countries).

In most cases, given the presence of MNEs, the recipe for an optimal allocation of economic activity between countries is quite similar to that in a world in which there is no FDI. But, the relative roles of markets, hierarchies and governments in this recipe are likely to be different. In conditions other than that of perfect competition, hierarchies, or heterarchies – in the guise of multi-activity and/or multi-national firms – may be a more efficient coordinator of resources and capabilities than arm's-length markets (Caves, 1996). This is particularly likely to be so in a dynamic knowledge-based economy in which some of the ingredients of endemic market failure, and particularly those of uncertainty, irregularity, complexity, externalities, scale economies, vertical integration, and the interdependence of markets, are present, as it is these which tend to generate the kind of value-added activities which can be coordinated more efficiently under a single governance. In such cases, and providing that the final goods' markets served by MNEs are contestable, and national governments pursue positive and non-distorting market facilitating macro-organizational policies (Dunning, 1997b), MNEs may act as surrogates for markets. By internalizing intermediate product markets, they may help protect or enhance, rather than inhibit, the efficiency of final goods' markets.

While not wishing to undervalue the role of governments in curtailing the anti-competitive behavior of firms, and in pursuing market friendly macro-organizational strategies, we believe that contemporary changes in the ways in which resources and capabilities are managed are facilitating a more appropriate balance between cross-border hierarchical (i.e., internalized) and external market transactions. Perhaps, the one area for potential concern is the widespread growth of international mergers and acquisitions and strategic alliances (UNCTAD, 1997). Insofar as these may assist firms to be more innovatory, entrepreneurial and competitive in global markets, they are to the good; but, where they make it easier for companies to engage in structurally distorting business practices, they need to be carefully monitored.

The unique impact of MNEs on the international allocation of production rests on the extent to which the internalization of cross-border intermediate product markets produces a different and more efficient structure of economic activity than would otherwise have occurred. Herein lies an interesting paradox. On the one hand, the liberalization of markets and the reduction of some kinds of spatial costs are easing the trans-border movement of goods, intangible assets and services. On the other, technological and organizational change, whenever it enhances the interdependence of value-added activity, is encouraging

international production to be undertaken within plants and firms under the same ownership, and for at least some of this production to be spatially concentrated. It would seem that as fast as structural and distance-related market failures are removed, others, making for internalized intermediate product markets and untraded spatial interdependencies are becoming more important.

Hints of this "new" international division of labor are shown not only by the growing participation of MNEs in global production – as described earlier in this paper – but also by their increasing share of world export markets, at least in the manufacturing sector (documented by, *inter alia*, Dunning, 1993, UNCTAD, 1996a and Caves, 1996). Other data also suggest that the export propensity of MNEs, or their affiliates, in the sectors in which they are most active exceeds that of indigenous competitors. Except in the case of a few countries, notably Japan, the payments for the services of knowledge-intensive assets received by U.S. MNEs from their foreign affiliates, expressed as a proportion of their total exports, is considerably greater than the equivalent proportion between U.S. and independently owned firms. For example, in 1996, royalties and fees received by U.S. firms from their foreign affiliates amounted to 6 percent of their exports to these affiliates. The corresponding proportion of non-affiliation royalties and fees received by all U.S. firms as a proportion of total U.S. exports was 3 percent (U.S. Department of Commerce, 1997). Furthermore, of all royalties and fees received by U.S. firms from foreign-based firms in the years 1993 to 1996, 79 percent were internal to U.S. MNEs. [18]

The extent to which MNEs promote, or gravitate to, spatial clusters within a country or region is an under-researched area. Clearly, some older clusters, e.g., the Portuguese cork industry, the Swiss watch industry, the North Italy textile industry and the City of London financial district, developed without much MNE participation. But, many of the newly established clusters, which are geared more to accessing the external economies of knowledge creation, interactive learning and the upgrading of the competitive advantage of the constituent firms, are influenced by a rather different set of costs and benefits; and a casual examination of the membership of science and technology parks, export processing zones, research and development consortia and service support centers, would certainly suggest that MNEs are actively involved – often as flagship firms. Certainly among developed regions (e.g., the European Union) and countries (e.g., United States), knowledge-intensive and export-oriented activities tend to be more geographically concentrated than other kinds of activities (see, for example, illustrations given in Porter, 1990, Dunning, 1997b, Chap. 3 and Dunning, 1997c).

Any modern theory of international economic activity must then take account of how the common ownership of cross-border production and transactions may result in a different value added and spatial configuration than that which would arise if such functions were separately undertaken by uni-national firms. *Inter alia*, the extra attributes comprise the spreading of firm specific overheads and risks; the intra-firm sharing and transference of knowledge, experience and markets; and the external economies arising from jointly organized innovatory, production and marketing activities. For many of these activities, there is no external market; the output of one part of the firm can only be sold as an input to another part of the same firm. However,

these interdependent activities may not need to be undertaken in the same region or country. For other activities, internal markets may offer more coordinating benefits and/or less transactional costs than arm's-length markets. In both cases, however, it may be preferable to think of the MNE not as a second best substitute for the market, but as a partner with the market to promote first-best allocative efficiency throughout and across value chains.

The notion of efficiency-promoting internal markets needs to be more formally built into both positive and normative macro models of international economic activity. In addition to acknowledging the different geographical needs of asset-producing and asset-exploiting activities, models of trade need to incorporate the benefits of organizing the two sets of activity under common ownership *vis-à-vis* that of the external market. This, in principle, is not a difficult thing to do. Essentially, it comes down to an identification and evaluation of the country, activity and firm-specific variables which determine whether the different transactional and coordinating functions are best organized within market friendly hierarchies, or by the market *per se*. We have already argued that markets for created assets, and for the goods and services arising from them, are likely to be intrinsically more imperfect than those for natural assets and for the goods and services arising from them. In some instances, too, it may be efficiency enhancing for these markets to be internalized. We also contend, with Behrman and Grosse (1990) and Meyer (1998), that most cross-border markets are likely to be more imperfect than their domestic equivalents, and that, because of this, MNE activity may be more welfare enhancing than multi-plant activity within an economy. We say "most" cross-border markets, because some domestic markets, particularly in emerging developing economies, are likely to be more imperfect than those in developed countries. But issues such as foreign-exchange uncertainty, institutional and cultural differences, and the differential role of governments are obviously likely to play a more important role in affecting the workings of cross-border than domestic markets. And we say "may" be more welfare enhancing, because much will depend upon the conditions under which foreign investment takes place.

At the same time, the extent to which cross-border markets are internalized via MNE activity will itself depend on the characteristics of the trading partners and the countries involved, as well as on the types of assets, goods and services being exchanged. In their attempts to explain the alternative forms of trans-border trade, and to advance both the positive and normative theories of trade, international economists need to delve deeper into the structure of country-specific advantages in organizing trade (particularly in knowledge-related products), through FDI and inter-firm alliances, as compared with arm's-length markets.

CONCLUSIONS

The previous two sections of this paper have examined how changes in the global economy over the past two decades are affecting scholarly thinking about both the micro-economic geography of FDI and MNE activity, and the more macro-economic explanations of the international allocation of all value-added activity. In particular, we focussed on three points. The first is the growing importance of intangible assets – and particularly intellectual capital – in the wealth-creating process, and of the need of com-

panies to harness, as well as to exploit, these assets from a variety of locations. Secondly, we emphasized the changing role of location-bound assets, which mobile investors look for as complements to their own core competencies. In doing so, we again underscored the increasing significance of created assets (and particularly those which governments, in their macro-organizational policies, can and do influence), and, also, the benefits which spatial clusters offer whenever distance-related transactions and coordination costs are high.

Thirdly, we argued that, to adequately incorporate the activities of MNEs within existing trade-type theories of the international allocation of economic activity, more attention needs to be given both to the specific motives, determinants and consequences of the common governance of related cross-border activities, and to the conditions in which internalizing intermediate product markets might make for a more efficient (in the sense of the "next best" realistic alternative, assuming that all cross-border avoidable structural market imperfection have been removed) spatial configuration of economic activity in the contemporary global and innovatory economy. We have also suggested that any paradigm of the geography of FDI, as contrasted to that of the investments of all firms, needs to be constructed on similar lines.

What are the implications of our analysis and findings for future international business research? First, to return to the starting point of this paper, and in line with the thinking of Michael Porter (1994, 1996), I believe more attention needs to be given to the importance of location per se as a variable affecting the global competitiveness of firms. That is to say, the locational configuration of a firm's activities may itself be an O-specific advantage, as well as affect the modality by which it augments, or exploits, its existing O advantages. With the gradual geographical dispersion of created assets, and as firms become more multinational by deepening or widening their cross-border value chains, then, both from the viewpoint of harnessing new competitive advantages and more efficiently deploying their home-based assets, the structure and content of the location portfolio of firms becomes more critical to their global competitive positions.

Second, in seeking to make an optimal use of the existing location-bound assets within this jurisdiction, and to promote the dynamic comparative advantage of their resource-capabilities, governments need to give more attention to ensuring that their actions help fashion, support and complement those of efficient hierarchies and markets. This involves a greater appreciation both of the changing locational requirements of mobile investments, and of how, in the case of those markets where endemic failure is the most widespread, governments may work in partnership with firms either to improve markets (i.e., by a "voice" strategy[19]), or to replace these markets (by an "exit" strategy). With the growing importance of knowledge-related infrastructure, and accepting the idea of sub-national spatial units as nexus of untraded interdependencies (Storper, 1995),[20] this presents both new challenges and opportunities to both national and regional governments in their macro-organizational and competitive enhancing policies.

NOTES

1. Such international-specific transaction costs have recently been explicitly identified by Klaus Meyer in a volume (Meyer, 1998) based upon his doctoral

dissertation at the London Business School.

2. For example, of the 1,150 or so publications cited in his volume, only 13 percent are to monographs or articles published after 1990.

3. Author's estimate, based on data on the royalties paid for managerial know how; and of the relationship between foreign portfolio and foreign direct investment.

4. There have been only a few attempts to use transaction cost analysis to explain the spatial distribution of economic activity. One example is that of the industrial geographers Michael Storper and Allen Scott. See, for example, Storper (1995), Storper and Scott (1995) and Scott (1996). Yet, such analysis offers a powerful tool for explaining why firms requiring idiosyncratic inputs, e.g., tacit knowledge of various kinds, and/or those supplying idiosyncratic and uncertain markets tend to value proximity with their suppliers and/or customers. Perhaps the best illustration of a spatial cluster, or agglomeration, of related activities to minimize distance-related transaction costs, and to exploit the external economies associated with the close presence of related firms is the Square Mile of the City of London.

5. Scott (1996) gives some examples, including the growing concentration and specialization of both manufacturing and service activities in large metropolitan areas within both developed and developing countries. In an interesting recent paper, Davis and Weinstein (1997) conclude that intra-national concentration of value-added activity is likely to obey the dictates of economic geography more than that of the inter-national concentration of such activity.

6. Estimates of such ventures vary enormously. A recent study by Booz, Allen and Hamilton (1997) has put the number of cross-border alliances (including mergers and acquisitions) formed in 1995 and 1996 to be as high as 15,000. Another assessment by Hagedoorn (1996) suggests that between 1980 and 1994, the number of newly established cross-border technology-related inter-firm agreements rose by over three times. Finally, the value of international mergers and acquisitions over the same period were estimated to have accounted for between 50 percent and 60 percent of all new FDI (UNCTAD, 1997).

7. For a detailed exposition of the development of a new trajectory of technological advances, see Lipsey (1997) and Ruigrok and Van Tulder (1995).

8. Though there have been marked fluctuations in the shares within and between these periods, which reflect, *inter alia,* changes in exchange rates and the positioning of countries in their cycles of economic development. For example, during 1975-1980, the United States attracted 32 percent of FDI received by developed countries; by 1985-1990 that share had risen to 42 percent. However, it fell again to 18 percent in 1991 and 1992; but since then it has recovered, and in 1995-1996 it stood at 35 percent.

9. Japan is a classic case in point. In the period 1990-1994 it accounted for 29 percent of the world's gross fixed capital formation, but only 0.8 percent of inbound FDI flows.

10. To give just one example; in the period 1990-1994, 49 percent of U.S. direct investment flows were directed to Western Europe, 10 percent to Asia and 25 percent to Latin America. The corresponding percentages for Japanese direct investment flows were 20 percent, 19 percent and 10 percent (UNCTAD, 1997, Dunning, 1998).

11. Unlike the theory of the firm;

although if there had been a well developed theory of the multi-activity firm prior to the work of scholars such as Buckley, Casson and Hennart, one wonders if this aspect of international business activity would have attracted so much attention!

12. We use the word "customized" deliberately, following the contention of Peck (1996) that host governments may sometimes need to individualize or customize the upgrading of their physical and human infrastructure both to meet the specific needs of mobile investors, and promote the competitive dynamic advantage of the location-bound resources within their jurisdiction.

13. I am indebted to the reviewer of this paper for making this point.

14. An expression first used in David (1984), and since taken up by Wheeler and Mody (1992) and Mytelka (1996).

15. In Markusen's words "multinational enterprises in this framework are exporters of the services of firm specific assets ... subsidiaries import these assets" (Markusen, 1995 p. 175).

16. Abbreviated, Ot transaction (or coordinating) cost-minimizing advantages, c.f. Oa = asset-specific advantages.

17. Which foreign country, or countries, is decided by the normal locational criteria.

18. Other data on royalties and management fees received by U.S. firms from foreign firms are regularly published by the *United States Department of Commerce in the Survey of Current Business,* and in the *Benchmark Surveys of U.S. Direct Investment Abroad.* See also UNCTAD (1995, 1996a and 1997).

19. The concepts of "voice" and "exit" strategies as applied to MNE-related activity are explained in Dunning (1997a).

20. The idea of a region as a spatial unit which internalizes distance-related transaction costs which otherwise would fall upon its constituent firms is an interesting notion worth pursuing by international business scholars. For, like a firm, the strategies pursued by a region to provide a set of unique, non-mobile and non-imitatable locational advantages for its firms may well determine its own competitive advantages relative to those of other regions. At the same time, regions, like firms, may decline as well as prosper; but our knowledge about the focus leading to the spatial dis-agglomeration of related activities is woefully inadequate.

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