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the record assessed**

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TRANSPACIFIC FOREIGN DIRECT INVESTMENT AND THE INVESTMENT DEVELOPMENT PATH: THE RECORD ASSESSED

1. INTRODUCTION

The aim of this paper is to examine and explain the growth and structure of trans-Pacific direct investment (TPDI)¹ between Japan and the U.S. over the past three decades. In doing so, it draws upon the eclectic paradigm of international production (Dunning 1988a, 1993a), and the application of this paradigm to an understanding of the interaction between foreign direct investment (FDI) and a country's competitive advantages as it passes through different stages of economic development. More specifically, it considers the changing configuration of the ownership, location and internalisation (OLI) variables facing Japanese firms with respect to their value-added activities in the U.S., and those facing U.S. firms with respect to their value-added activities in Japan over the period 1945-1990. The investment development path (or cycle) suggests that the propensity of countries to attract inward direct investment or generate outward direct investment is a function of their income levels and economic structure (Dunning 1981 and 1988a, Tolentino, 1993). Each stage of development brings with it a change in the composition of a country's absolute and comparative advantage (which might itself be modified by the inward and/or outward investment it attracted in a previous stage); and this, in turn, will affect the configuration of its future international investment patterns. A framework that examines the dynamic aspects of the investment development path forms the theoretical basis of this paper.

This paper seeks to examine the post World War II interaction between U.S. -Japanese MNE activity in the light of the propositions of the analytical framework just described. To what extent for example, has U.S. investment in Japan helped to fashion the location-bound competitive advantages of the Japanese economy and/or the more transferable competitive advantages of Japanese firms. How far have changes in the cross-border exchange rates - particularly between the yen and the dollar - and the organisation of trans-Pacific intermediate product markets affected

the flow and form of Japanese investment into the U.S? To what extent have the activities and actions of the U.S. and Japanese governments aided or inhibited the ability of their own MNEs to compete in global markets and the willingness of foreign MNE's to invest in their countries? These are the kind of questions which the paper seeks to answer. In particular, its objectives are fourfold:

- i. To depict how the investment interaction between Japan and the U.S. changes over time using the concept of the investment development path; In doing so, it introduces a fifth stage to the received analysis of this path;
- ii. To make use of the eclectic paradigm to explain the changing balance of the OLI advantages of U.S. and Japanese MNEs and the U.S. and Japanese economies;
- iii. To distinguish between 'natural' and 'created' assets as factors affecting the O, L and I variables and their configuration. In particular, the paper examines the the role of government in the innovation and maintenance of 'created' assets, and how this role might change at different stages of the investment development path;
- iv. To identify the different types of FDI in the context of TPDI over the last 40 years; in doing so the paper highlights the differences between the role of MNE activity in *exploiting* existing firm or country specific assets and *acquiring* new assets.

Section 2 presents a summary of the extant theory, and extends this to consider the dynamic aspects of the investment development path. The third and the main part of the paper reviews the extent and the pattern of TPDI and the effect it has had on the post-war development and economic restructuring of the Japanese and U.S. economies.

2 ANALYTICAL FRAMEWORK

2.1 The Theory of International Production

The eclectic paradigm (Dunning, 1981, 1988a, 1993a) offers a framework to explain patterns and the extent of international production undertaken by firms involved in foreign value adding activities. The eclectic paradigm suggests that the extent and nature of the overseas activities of a firm of a particular nationality depends on the extent to which they possess or can gain access to, technology, know-how, resources or some other form of income generating asset/s which their competitors either do not possess or do not have access to. These are referred to as *ownership (O) specific advantages*. Second, given that the firm possesses certain O advantages, to engage in FDI, it must consider it advantageous to own or control these value adding activities. These advantages are called *internalization (I) specific advantages*. Third, there must exist natural endowments or created assets in a foreign country that firms find beneficial to combine with or add value to their ownership advantages, rather than undertake the production in their home country. These are called *locational (L) specific advantages*.

The nature and value of these three advantages are not assumed to be constant; indeed, they are likely to change over time. Further, any given configuration of OLI variables is likely to affect different types of FDI activity differently: The literature (Dunning 1993a) distinguishes between four kinds of FDI viz, market seeking, natural resource seeking, strategic asset seeking, efficiency seeking and strategic asset seeking². These four types of MNE activity are not necessarily mutually exclusive. International production may initially be undertaken as a market seeking strategy, but as the factor endowments of the host country change (such as the availability of skilled labour) the investing firm may integrate the operations of its foreign subsidiaries into a regional or global network of efficiency seeking or strategic asset seeking investments. It is also possible that the host country possesses factor endowments or intangible assets that make it attractive to efficiency or resource based investment but, because of its market or government induced barriers to trade, to market seeking investment as well. Until the mid-1980's, TPDI was

primarily of the market seeking kind and to a lesser extent, resource seeking FDI as well. More recently, however - and this particularly applies to Japanese MNE activity in the U.S. - there has been some restructuring of market seeking investment to take advantage of the economies of common governance; and also some strategic asset acquiring investment as part of a regional or global strategy to acquire or sustain competitive advantages. In this present paper, our attention will be focussed on the OLI configuration likely to be most relevant in explaining TFDI in manufacturing and services, rather than in natural resource based activities.

Likewise, the exact configuration and relevance of the OLI characteristics facing MNEs will depend on country (or region), industry and firm specific factors. Thus the propensity of firms of a particular nationality to engage in foreign production will be affected by the level of political, cultural and economic conditions of both their home countries and those in which they are contemplating investment. In the present context for instance, inward direct investment into the U.S. by Japanese firms will be partly U.S. (host country) specific, and partly Japanese (home country) specific. Therefore, the character and composition of FDI undertaken by MNEs has to deal with at least two sets of country specific factors. Attributes such as government policy and attitudes, natural factor endowments, the quality of human capital, the commercial, technological and communications infrastructure, and entrepreneurial and business culture are, perhaps, the most important. In the case of industrialised countries, the characteristics of the particular industry such as the production and transactional conditions peculiar to that industry, the extent of vertical/horizontal integration and the locational limitations of resources are examples of industry specific advantages. At a firm level, the OLI characteristics are dependent on variables such as size, degree of international involvement, management and organizational strategies, and the innovatory capabilities of firms. Our intention in this paper is to concentrate on the country specific factors that we believe best explain the changes in the bilateral U.S.-Japan investment flows in the period in question.

2.2 The Investment Development Path: A Dynamic Approach

The investment development path represents an attempt to relate a country's net international direct investment position to its stage of development *relative* to that of the rest of the world. The stage of economic development is proxied by its GNP per capita and is assumed to be an indicator of its absolute and comparative competitive advantages.

Therefore changes in its OLI characteristics indicate a country's propensity to invest abroad, or to attract inward direct investment, and as changes occur in its OLI configuration, its net outward investment position³ will change. This presents the scholar with two questions: First, what activates these changes, and second, what are the dynamics that lead to and result from these changes? It should be noted that we assume, for the sake of simplicity of analysis, that this interaction is sequential in nature, and that the causes and effects are independent of each other.

In a developmental context, the evolution of competitive advantages derive from country specific characteristics that determine domestic and foreign investment patterns. The capability of a country's firms to supply either a domestic or a foreign market from a foreign location depends on their ability to acquire, and/or efficiently utilise, assets not available - or not available as cheaply - to another country's firms. By 'assets' we mean resources capable of generating a future income stream⁴. These are of two kinds. The first are natural assets, which comprise natural endowments such as unskilled labour and resource endowments. The second are created assets which are those which derive from the upgrading of these natural assets. These latter assets may be tangible or intangible and include capital, technology, as well as those pertaining to skilled manpower such as technological, managerial and entrepreneurial skills. When assets of either kind are available to all firms and are specific to a particular location they are considered to be L specific advantages, whereas if they are proprietary to a particular firm irrespective of where they are used they are considered to be O advantages. Natural assets are normally less mobile than created assets even though their use may be monopolised by a single firm. Trade between countries in the neoclassical sense is based entirely on the geographic distribution of natural assets. The

ownership of such assets alone does not lend itself to production, and in order to derive rent from such assets it must utilise them in conjunction with both intangible (such as managerial and technical manpower) and tangible (such as capital) created assets. The evolution of the competitive advantages of both firms and countries can be said to rest on the extent to which they are able to create or acquire new assets, or more effectively utilise existing assets.

We shall now consider two types of catalyst for change; those which are non-FDI induced and those that are the direct result of FDI.

(a) **Non-FDI induced changes:** These essentially represent those which are exogenous to particular firms but endogenous to countries, and mainly reflect the influence of government policy and the economic system associated with the country. By economic system we mean the overall system adopted by a government to determine the way in which resources and markets are organised. In the past most economic systems have been somewhere along a continuum between free markets at the one extreme and central planning on the other; in the 1990's it is a little more complicated than this! From a developmental perspective, there are two possible economic orientations, viz, outward-looking, export-oriented (OL-EO) and inward-looking, import-substituting (IL-IS) (Ozawa 1992). Depending on the orientation of an economy, the use of either (or a hybrid of the two) will substantially affect both the structure of economic development, and hence the nature of the investment development path taken by a particular country. Government involvement embraces specific actions taken by governments towards ensuring that the system works in a way which achieves (or comes the nearest to achieving) their objectives. These include macro-organisational policies (e.g., towards resource allocation, innovations, education, trade, FDI competition), macroeconomic policies (fiscal, monetary, exchange rates, etc) and the setting up and maintenance of an efficient legal system and commercial infrastructure. Over time, each of these variables is likely to critically affect the OLI configuration facing MNEs. However, the point we wish to emphasise here is that the way in which they influence the level and nature of the L advantages of a country, insofar as they determine the restructuring of an economy through the

development of created assets such as new technology, better access to information, upgraded human capital and improved communications infrastructure. In other words, we hypothesise that both government policy and the economic system determine how the L specific natural and created assets are *organised*. The investment development path in its idealised form may be applied to all countries, but implies the assumption of a free market economy. Therefore, throughout the ensuing discussion, we shall define government as a variable that encompasses only government involvement as defined above.

(b) **FDI induced changes:** The activities of domestic MNEs abroad through outward direct investment, and foreign MNEs in the domestic economy through inward direct investment represent two ways in which the location bound competitive advantages of particular economies may interact with each other. Such interaction may also occur through other forms of international commerce, e.g., non-equity strategic alliances, but because FDI both shifts resources and capabilities, and changes the ownership or control over the use of these resources, it is likely to exert a very specific impact.

As Figure 1 illustrates, it is hypothesised that these two forces at a period t influence the nature of OLI in that period, and lead to the dynamic evolution of OLI in consecutive periods.

PUT FIGURE 1 HERE

Firstly, there is the static, or intra-period interaction at a particular stage of development. During any given time frame, country specific characteristics influence the kind of O advantages possessed by firms and the L advantages offered by countries. They also may affect the propensity of firms to internalise cross-border transactions, or, in the parlance of the eclectic paradigm, influence the configuration of their I advantages. Some of these country specific characteristics such as the quantity and quality of natural and created assets are assumed to be fixed in a single time frame, but the manner and extent to which these are utilised, and *by whom*, may vary according to the actions of governments.

Government may influence the L advantages of a country in various ways. It may do so directly through the fiscal and/or regulatory framework it provides to encourage investment, and indirectly, through a wide range of policies designed to affect both the supply capabilities and the demand characteristics of a nation. Policies that influence the modality through which international business activity is undertaken, i.e., whether firms use a hierarchical, cooperative, or market route to undertake cross-border activities are also created L-specific advantages. Government may further impact on the creation and development of technology of firms operating within its jurisdiction through its policies towards property rights (patenting, trademark laws etc) as well as subsidies or tax breaks it might provide for R&D. However, these government induced L advantages are related to general or overall policies, insofar as they apply across the board, and affect, all firms operating within its governance. But when, for example, subsidies for exports are provided exclusively to domestic firms, they change the O advantages of these firms *vis-à-vis* foreign firms. Similarly, if foreign firms are prevented from undertaking inward direct investment in certain sectors, this affects the I advantages of these firms. This interaction may also affect the strategy of foreign and domestic firms in that period. During a single time frame, the extent of international business activity is taken as a constant and is assumed to be a consequence of the OLI configuration facing firms in that period.

Secondly, we are faced with the *dynamic change* associated with changes in the stage of development, or that of inter-period interaction. The point we wish to highlight here is that the OLI configuration in period $t1$ will affect not only the strategy of firms (both foreign and domestic) in that period but the OLI configuration in $t2$. A shift in stages implies a change in the nature of the competitive advantages of firms and countries, due primarily to a change in the relative significance of their natural and created assets. Essentially, a forward inter-period interaction leads to an increasing significance of created assets, and a decreasing significance of competitive advantages due to natural assets, and leads to economic restructuring. The nature and form of the impact of FDI induced changes will vary according to (i) the kind of FDI undertaken, and (ii) the particular stage of a country's development. The extent of the change of the OLI

variables will vary across industries and firms. In a similar manner, non-FDI induced changes will also occur. It is pertinent to note that these two types of changes are, themselves, interrelated - and it is the configuration and interaction of these forces which will determine the OLI characteristics facing firms in t_2 . It may also lead to a reorganisation of the balance between natural and created assets as well as affecting the efficiency of markets, thereby influencing the extent of international business activity in this period.

Given that the O, L and I variables are themselves interdependent, it is clear that we are faced with an exceedingly complex phenomenon (Aggarwal and Ramaswami, 1992). To conduct a thorough examination of all these links is outside the scope of the present paper. Here we are concerned with examining the relationship between FDI and the economic performance of two countries. In this context, we shall give special attention to two kinds of interactions which are critical to the process of economic restructuring. The first is that between the O advantages of a country's firms in one period of time (O_{t1}) and those of a subsequent period (O_{t2}); and the second is the effect that O_{t1} will have on the L advantages of a country in subsequent periods (L_{t2} -- L_{tn}).

The O_{t1} -- L_{t2} relationship occurs through the upgrading of resources, changes in the conditions of demand, and the evolution of support and related industries partly due to technological spillovers from firm (domestic and foreign owned) activity. The O_{t1} -- O_{t2} relationship will especially be reflected in the process of technology accumulation (i.e., development of created assets) that occurs through a gradual and cumulative process. It has been suggested by various scholars⁵ that the firms of a particular nationality develop technological capability⁶(and assets) through an incremental process in which they build upon their existing and prior O advantages, which have either been acquired (in which case they will most likely be based on exclusive use of natural assets) or developed (i.e., created assets), and, through a dynamic interaction with other firms and market forces, develop and modify technologies that are idiosyncratic and more firm specific. The development of O advantages through interaction is not limited to that involving domestic firms,

but also those involving foreign firms both in the domestic economy (through inward direct investment) and in foreign economies (through outward direct investment).

The relationship between the Ot1--Ot2 and the Ot1--Lt2 interaction is self-evident: Government induced L variables affect the O advantages in the same period, and therefore Lt2 will affect Ot2.

This raises the issue of cumulative causation of trade, technology and production (Cantwell 1987, Dunning 1988b, Dunning and Cantwell 1989). A forward shift in a country's stage of development is not only associated with the occurrence of a virtuous technology circle, but the ability to maintain a virtuous circle is associated with structural adjustments that may be necessitated by, among other things, wage rates rising faster than productivity in particular sectors of the economy. Here the role of government is relevant in sustaining growth in mature industries, and creating and fostering innovation in nascent ones, as well as maintaining an appropriate macroeconomic climate. Markets, on their own, are unlikely to respond to such shifts to the extent necessary to prevent a vicious circle.⁷

Two caveats in respect to the significance of a country's L specific characteristics need to be noted here. The O specific advantages of firms from countries at early stages of the investment development path are primarily a function of the economic structure of their home economies. In the context of the eclectic paradigm, this refers to the ownership advantages of other (mainly domestic) firms, which, in the aggregate may be said to define the technological capability of the country, or its L advantages. The pattern and extent of the outward investment of its firms will be therefore be based on their competitive advantages derived from their home country's economic structure. Likewise, inward investment will be based on these advantages vis-a-vis those possessed by the home country of the investing MNEs⁸. Regardless of whether the motives for investment activity are market seeking, resource seeking or strategic asset acquiring, firm specific technological capability will grow, leading to the generation of new O advantages which are transferred back to the parent firm in the home country. Over time and as the firm becomes increasingly internationalised, this interactive process therefore, will result in the O advantages of

firms of a particular nationality becoming increasingly firm specific, i.e., less a function of the economic structure of its home country and more a function of the economic structure of the various locations of its operations. Therefore, *ceteris paribus*, the significance of country specific characteristics in determining the extent and pattern of FDI activity and its relation to the economic structure of a country becomes increasingly complex as its extent of internationalisation increases.

Secondly, the presence of certain level of natural assets are assumed in an economy at the initial stages of the idealised investment development path. These include the presence of some extent of natural resources, unskilled labour and domestic market potential. The absence of one or more of these country specific characteristics will lead domestic firms, *ceteris paribus*, to undertake FDI in overseas markets to acquire these assets. For the same reasons inward investment in such an economy at an early stage will be muted. In sum, the net outward investment position of such a country is likely to be more positive at all points of the investment development path relative to the 'average' path discussed below. Likewise, a country with unique factor endowments that provide it an absolute advantage in some natural asset (for instance, a large domestic market potential such as the United States, or natural resources such as in Australia) will have a net outward investment position that is more negative at all points relative to the 'average' path⁹.

So much for the way in which MNE activity might interact with economic development. Let us turn to examine its role at different stages of development. The investment development path suggests that countries (especially industrialising countries) tend go through five main stages of development - and that these stages can be usefully classified according to their propensity to be outward or inward direct investors. A diagrammatic representation of these stages, not drawn to scale, is presented in figure 2.

PUT FIGURE 2 HERE

STAGE 1

During the first stage, the L advantages of a country are insufficient to attract inward direct investment, with the exception of those due to the possession of natural assets. Its deficiency in created factor L advantages may reflect inadequate domestic markets - demand conditions are minimal because of the low per capita income - inappropriate economic systems or government policies; insufficient infrastructure such as transportation and communication facilities and and most important of all, a poorly educated, trained or motivated labour. Government induced L advantages (or disadvantages) are likely to be significant in this stage. O advantages of domestic firms are few as there is little or no indigenous technology accumulation and hence few created assets. Those that exist will be in labour intensive manufacturing and the primary product sector (such as mining and agriculture), and may be government influenced through infant industry protection such as import controls. Domestic firms from countries at this stage do not have the necessary O advantages to engage in outward direct investment. At the same time, there is unlikely to be much inward direct investment except for the purpose of exploiting natural resources and trade supportive activities, as the L and I advantages of the recipient nations are too few to attract foreign investors to undertake higher value-added operations. *Ceteris paribus*, they will prefer to export to and import from this market, or conclude cooperative non-equity arrangements with indigenous firms.

Government intervention during stage 1 will normally take two forms. First it may be the main means of providing basic infrastructure, and the upgrading of human capital via education and training. Governments will attempt to reduce some of the endemic market failure holding back development. Second, they engage in a variety of economic and social policies, which, for good or bad, will affect the structure of markets. Import protection, domestic content policies and export subsidies are examples of such intervention at this stage of development. At this stage however, there is likely to be limited government involvement in the upgrading of the country's created assets e.g., innovatory capacity.

STAGE 2

In Stage 2, inward direct investment starts to rise, while outward investment remains low or negligible. Domestic markets may have grown either in size or in purchasing power, making some local production by foreign firms a viable proposition. Initially this is likely to take the form of import substituting manufacturing investment - based upon their possession of intangible assets e.g. technology, trademarks, managerial skills etc. Frequently such inward FDI is stimulated by host governments imposing tariff and non-tariff barriers. In the case of export oriented industries, (at this stage of development, such inward direct investment will still be in natural resources and primary commodities with some forward vertical integration into labour intensive low technology and light manufactures) the extent to which the host country is able to offer the necessary infrastructure (transportation, communications facilities and supplies of skilled and unskilled labour) will be a decisive factor. In summary, a country must possess some desirable L characteristics to attract inward direct investment, although the extent to which foreign firms are able to exploit these will depend on its development strategy, and the extent to which it prefers to develop technological capabilities of domestic firms.

The O advantages of domestic firms will have increased from the previous stage through technology accumulation, due partly to the government-induced advantages that have generated a virtuous circle of technology accumulation. These O advantages will exist due to the development of support industries clustered around primary industries, and production will move towards semi-skilled and moderately knowledge intensive consumer goods. Outward direct investment begins to grow at this stage. This may be either of a market seeking or trade related type in adjacent territories, or of a strategic asset seeking type in developed countries. The former will be characteristically undertaken in countries that are either lower in the investment development path than the home country, or, when the acquisition of created assets is the prime motive, these are likely to be directed towards countries higher up in the path. The extent to which outward direct investment is undertaken will be influenced by the home country government induced 'push'

factors such as subsidies for exports and technology development or acquisition (which influence the I advantages of domestic firms), as well as the changing (non government induced) L advantages such as changing relative production costs. However, the rate of outward direct investment growth is likely to be insufficient to offset the rising rate of growth of inward direct investment, and, in consequence, during the second stage of development, countries will increase their net inward investment, although towards the latter part of the second stage the growth rates of outward direct investment and inward direct investment will begin to converge.

STAGE 3

Countries in stage 3 are marked by a gradual decrease in the rate of growth of inward direct investment¹⁰, and an increase in the rate of growth of outward direct investment that results in increasing net outward investment. The technological capabilities of the country are increasingly geared towards the production of standardised goods. With rising incomes, consumers begin to demand higher quality goods, fueled in part by the growing competitiveness between the supporting firms. Comparative advantages in labour intensive activities will deteriorate, domestic wages will rise, and outward direct investment will be more to countries at lower stages in their investment development path. The original O advantages of foreign firms also begin to be eroded, as domestic firms acquire their own competitive advantages and compete with them in the same sectors.

The initial O advantages of foreign firms will also begin to change, as the domestic firms compete directly with them in these sectors. This is supported by the growing base of created assets of the host country due to increased expenditure on education and innovatory activities. These will be replaced by new technological, managerial or marketing innovations in order to compete with domestic firms. These O advantages are likely to be based on the possession of intangible knowledge, and the public good nature of such assets will mean that foreign firms will increasingly prefer to exploit them through cross-border hierarchies. Growing L advantages such as an enlarged market and improved domestic innovatory capacity will make for economies of

scale, and, with rising wage costs will encourage more technology intensive manufacturing as well as higher value-added locally. The motives of inward direct investment will shift towards efficiency seeking production and away from import substituting production. In industries where domestic firms have a competitive advantage, there may be some inward direct investment directed towards strategic asset acquiring activities.

Domestic firms' O advantages will have changed too, and will be based less on government induced action. Partly due to their increase in their multinationality, the character of their O advantages will change arising from the coordination of geographically dispersed assets. At this stage of development their O advantages based on possession of proprietary assets will be similar to that of firms from developed countries in all except the most technology intensive sectors. There will be increased outward direct investment directed to stage 1 and 2 countries, both as market seeking investment and as export platforms, as prior domestic L advantages in resource intensive production are eroded. Outward direct investment will also occur in stage 3 and 4 countries, partly as a market seeking strategy, but also to acquire strategic assets to upgrade their O advantages.

The role of government induced O advantages will have become less significant, as those of FDI induced O advantages take on more importance. Although, created factor L advantages will increase relative to natural resource L advantages, government policies will continue to be directed to reducing structural market imperfections in resource intensive industries. Thus governments may attempt to attract inward direct investment in those sectors in which the comparative O advantages of its enterprises are the weakest, but the comparative advantages of location bound assets are the strongest, while encouraging its own enterprises to invest abroad in those sectors in which its O advantages are the strongest, and its comparative L advantages are the weakest. Structural adjustment will be required if the country is to move to the next stage of development, with declining industries (such as labour intensive ones) undertaking direct investment abroad.

STAGE 4

Stage 4 is reached when a country's outward direct investment flows exceeds or equals the inward investment flows from foreign-owned firms, and the rate of growth of outward direct investment is still rising faster than that of inward direct investment. At this stage, domestic firms can now not only effectively compete with foreign-owned firms in domestic sectors in which the country has developed a competitive advantage, but they are able to penetrate foreign markets as well. Production processes and products will be state-of-the-art, using capital intensive production techniques as the cost of capital will be lower than that of labour. In other words, the L advantages will be based almost completely on created factor endowments. Inward direct investment into stage 4 countries is increasingly sequential (Kogut 1983) and directed towards rationalised and asset seeking investment by firms from other stage 4 countries. The O specific advantages of these firms tend to be more 'transaction' than 'asset' related (Dunning 1993a), and to be derived from their multinationality *per se*. Some inward direct investment will originate from countries in lower stages of development, and is of a market seeking, trade related and asset seeking nature.

Outward direct investment will continue to grow, as firms seek to maintain their competitive advantage by moving operations which are losing their competitiveness to offshore locations (in countries at lower stages), as well as responding to trade barriers installed by both countries at stage 4, as well as countries at lower stages. Firms will have an increasing propensity to internalise the market for their O advantages by producing in a foreign location rather than through exports. Since the O advantages of countries at this stage are broadly similar, intra-industry production will become rise in significance, and generally follows prior growth in intra-industry trade (Dunning 1988a). However, both intra-industry trade and production will tend to be increasingly conducted within MNEs.

The role of government is also likely to change in stage 4. While continuing its supervisory and regulatory function e.g., to reduce market imperfections and maintain competition, it will give more attention to structural adjustment of the country's resources and capabilities by fostering technological accumulation in infant industries (i.e., promoting a virtuous circle) and phasing out declining industries (i.e., promoting a vicious circle). Put another way, the role of government is now moving towards reducing transaction costs of economic activity and facilitating markets to operate efficiently. At this stage too, because of the increasing competition between countries with similar structures of resources and capabilities, governments begin taking a more strategic position in their policy formation. Direct intervention is likely to be replaced by measures designed to aid the upgrading of domestic resources and capabilities, and to curb the market distorting behaviour of private economic agents.

STAGE 5

As illustrated in figure 2, in stage 5 net outward investment begins to fall back as outward and inward investment become more balanced. This is the situation to which advanced industrial nations are approaching as the century draws to a close, and it possesses two key features. First, there is an increasing propensity for cross-border transactions to be conducted not through the market but internalised by and within MNEs. Second, as countries converge in the structure of their competitive advantages, and as these advantages increasingly take the form of the ability of countries to create and efficiently organise technological and human assets, and to tap new markets, their international direct investment positions are likely to become more evenly balanced. It has been suggested elsewhere (Dunning 1988a) that these phenomena represent a natural and predictable progress of the internationalisation of firms and economies. Thus the nature and scope of activity gradually shifts from arms length trade between nations producing very different goods and services (Heckscher-Ohlin trade) to trade within hierarchies (or cooperative ventures) between countries producing very similar products.

Unlike previous stages, stage 5 in the investment development path represents a situation in which no single country has an absolute hegemony of income creating assets. Moreover, the O advantages of MNEs will be less dependent on their country's natural resources but more on their ability to acquire assets and on the ability of firms to efficiently organise their advantages and to exploit the gains of cross-border common governance. Another development is that, as firms become globalised, their nationalities become blurred. As MNEs bridge geographical and political divides and practise a policy of transnational integration,¹¹ they no longer operate principally with the interests of their home nation in mind, as they trade, source and manufacture in various locations, exploiting created and natural assets wherever it is in their best interests to do so. Increasingly, MNEs, through their arbitraging functions are behaving like mini-markets. Both the ownership and territorial boundaries of firms becomes obscured¹² as they engage in an increasingly complex web of trans-border cooperative agreements.¹³

The tendency for income levels to converge among the Triad countries has been noted, among others, by Abramovitz (1986), Baumol (1986) and Dowrick and Nguyen (1987). And, indeed, during the 1970s and 80's Japan, the EC and EFTA countries have experienced a 'catching-up' in their productivity and growth relative to the U.S. (the 'lead' country); while a range of the newly industrialising countries began to move from stage 2 to stage 3 in their investment development path. As a result of these developments, the economic structures of many industrial economies have become increasingly similar. Countries which were once the lead countries in stage 4 now find themselves joined by others. This tends to reduce their net outward investment position and pushes them into stage 5 of the investment development path. At the same time, there has also been a 'catching up' effect among MNEs since the 1970's (Cantwell and Sanna Randaccio, 1990). Firms that have had relatively low levels of international operations have been internationalising at faster rates than their more geographically diversified counterparts. These two effects are not unrelated; firms have had to compensate for slowing economic growth in their home country by seeking new markets overseas. Given the similarity in income levels, the factors of production are broadly similar, and, as Cantwell and Randaccio (1990) have shown, firms that

are trying to catch up seek to imitate competitors and develop similar O advantages as their competitors in the same industry, but not necessarily in the same country.

To take this argument a step further, as income levels, economic structures and patterns of international production among the Triad countries converge, the relative attractions of a particular location will depend less on the availability, quality and price of their natural assets and more on that of their created assets. It has been noted elsewhere that the prosperity of modern industrial economies is increasingly dependent on their capacity to continually upgrade, or make better use of their technology and human capital (Dunning and Cantwell, 1991). Since many of these advantages are transferable across national boundaries, it may be predicted that, in the long run, this should lead to a more balanced international investment position, and to an increasing convergence of created asset L advantages. However, the ability of a country to upgrade its technology and human capital is a function of its country specific characteristics and, in particular, the extent of its natural assets, demand characteristics and macro-organisational strategies of its government. We believe the role of government in affecting dynamic economic restructuring cannot be overstated. In an myriad of ways governments can promote new trajectories of economic growth which some countries are better able to cope with than others. This has been amply illustrated by the evolution of Japan's economy compared to that of the U.S., especially in the 1980's.

In terms of their inward and outward direct investment positions, stage five countries, after an initial burst of new inward direct investment (e.g., as occurred in the U.S. in the 1980s), may be expected to settle down to a fluctuating equilibrium around a roughly equal amount of inward and outward investment. Inward investment will be of two kinds. The first will come from countries at lower stages of the investment development path and will be essentially of the market seeking and knowledge seeking type. The second will be from stage 4 (or stage 5) countries who will continue to indulge in rationalised investment among themselves, as well as making outward direct investment in less developed countries, especially in the natural resource intensive sectors.

In other words, truly rationalised or efficiency seeking investment will take place as plant and product specialisation is encouraged in sectors where economies of scale and scope are important. As the world economy begins to resemble a global village, strategic asset seeking investments will continue to take place, and this too, will lead to increasing convergence among countries as firms seek to improve their O advantages by cross-border mergers and acquisitions (M&A) or strategic alliances. Therefore, in the shorter time frame, inward and outward investment will fluctuate depending on relative innovatory and organisational strength of the participating countries. But as Cantwell (1989: p 45) has noted,

"The sectoral pattern of innovative activity gradually changes as new industries develop and new technical linkages are forged between sectors. Yet this is a slow process which in general only slightly disturbed the pattern of technological advantages held by firms of the major industrialized countries in the 20 years between the early 1960's and the early 1980's"

Thus, *pro tem*, at least, it is possible for one country to be a net outward investor compared to another. But over time, according to the extent and speed at which created assets are transferable¹⁴, the investment gap will close again, leading to a fluctuating investment position around an equilibrium level. It is within this context that the fifth stage will exist.

In other words, an equilibrium of sorts will be perpetuated, but it will not be a stable equilibrium as the relative comparative and competitive advantages of countries and firms are likely to be continually shifting. Hence, along with these fluctuations in relative comparative advantages, when combined with external and internal changes in the domestic economy, gradually so will the number of countries at stage five.

The acquisition, diffusion and transfer of O advantages will be influenced by the cumulative causation in trade, production and technology, and whether the industry or sector in each of the countries at Stage 5 experiences a 'vicious' or a 'virtuous' circle (Dunning 1988b, Cantwell

1989). In the former case, it may serve to increase technological divergences between countries: In the latter, it may strengthen the technological linkages between them.

In summary, Stage 5 is marked by a gradual convergence of industrial structures among countries and a change in the character of international transactions. MNE activity, in particular, will be directed to efficiency seeking investment with greater emphasis on cross-border alliances, mergers and acquisitions; and the governance and equity position of MNEs will become increasingly *transnational*. The success of countries in accumulating technology as well as inducing continued economic growth, will depend increasingly on the ability of their firms to coordinate their resources and capabilities at a regional and global level. The simultaneous trend of economic convergence of industrialised countries on one hand, and high rate of intra-triad FDI growth on the other will lead to an increasing economic interdependency as well as lessening the role of natural assets as a country specific determinant of FDI. In stage 5, governments will increasingly assume the role of strategic oligopolists, taking into account the behaviour of other governments in the formation and execution of their own macro-organisational strategies. In this stage too, governments are likely to play an increasingly pro-active role in the fostering of efficient markets, and cooperating with business enterprises to reduce structural adjustment and other transaction costs.

We conclude. Beyond a certain point in the investment development path, the absolute size of GNP is no longer a reliable guide of a country's competitiveness: Neither indeed is its net outward investment position. This is for two reasons. First the competitiveness of a country is better measured by the rate and character of growth of GNP *vis-à-vis* that of its major competitors. Second, as the motivation of FDI has evolved away from being primarily geared to the exploitation of existing O advantages to the simultaneous acquisition of new O advantages, countries which offer L advantages for the production of such advantages may increase their attractiveness to inward investment. Investments made to acquire or exploit indigenous competitive advantage, far from representing a weakness of the recipient country, could represent

a strength. Certainly, recent evidence seems to suggest that in the Triad at least, inbound and outbound FDI are increasingly complementary to each other, especially at a sectoral level (UN 1993b).

3. TRANSPACIFIC DIRECT INVESTMENT AND THE INVESTMENT DEVELOPMENT PATH

3.1 INTRODUCTION: Underlying Differences in Country Specific Characteristics

What now of the relevance of the investment development path to explaining the level and structure of TPDI? We shall confine our attention to the post World War II period. First we offer some general observations about the interaction between FDI and the investment development path of Japan and the U.S., and the underlying reasons for the differences in the character of their direct investment patterns.

Since 1945, Japan has progressed through the first four stages of the investment development path. At the same time, the role of MNE activity in its development path has been quite unique with outward direct investment from Japan exceeding and growing much faster than inward direct investment for almost the entire period. In the very early stages of her post-war development, there were three main reasons for this unusual interaction between MNE activity and Japan's investment development path. The first was Japan's lack of domestic natural resources, which forced Japanese firms to seek access to these in foreign locations - and to do so at least partly, by outward direct investment. The second reason was the critical and unique role played by the Japanese government in fostering outward investment, although behind and supporting that role were Japan's distinctive L characteristics, and particularly her need to acquire the resources in which she was poorly endowed. The third reason was that in spite of the wholesale devastation caused by World War II, Japan was able to retain a relatively sophisticated infrastructure, an

educated and well-trained workforce, a relatively well developed market structure and a mission oriented, well organised and authoritarian administration. Its previous accumulated experience in industrialisation provided Japanese firms with a valuable base of accumulated technology and well trained manpower (Nakamura, 1981). At the same time, the presence of a domestic oligopolistic market structure in the form of well-established networks of firms, the *zaibatsu*, (which formed the basis of the *keiretsu* after the war) together with a restrictive government policy, discouraged the flow of inward direct investment.

By contrast to the Japanese situation, for the first part of the post-war period, the U.S. was in stage 4 of its investment development path, and enjoyed almost total economic and technical hegemony. Furthermore, it possessed two other important country specific advantages that affected the character of its international investment activity. First, being relatively well endowed in natural resources, it has had a less pressing need than Japan to engage in resource seeking FDI. Secondly, its domestic market size has always acted as a locational attraction to domestic and foreign firms, simultaneously discouraging outward investment and encouraging inward investment. This has meant that its net investment position has been lower on a per capita basis than other, industrial countries. Since the mid 1970's the U.S. has been showing increasingly signs of being in stage 5 of the investment development path - that is to say its rate of growth has stabilised or has been declining relative to that of its major competitors while its inward investment has grown faster than outward investment.

In the case of the United States, for both historical and cultural reasons, government policy has not played a significant role in the changes that have taken place, save for its decisive impact on defence and space activities and sporadic protectionist moves, such as voluntary export restraints and tariffs. But in general, its role has been largely limited to macroeconomic policy, through bilateral and multilateral negotiations for the removal of trade and investment barriers to its firms and their products, as well as currency devaluations. This contrasts with more activist Japanese macro-organisational intervention.

In the next section, we shall examine the evolution of TPDI in the framework of the investment development path. For each time period we shall first present the prevailing 'pull' factors that have attracted U.S. outward direct investment to Japan as well as the 'push' factors that have led to the expansion of U.S. MNE activity in Japan. This will provide the background for us to examine the evidence on the changes in the OLI variables that are consequent on these facts. An identical analysis will then be conducted for Japanese outward direct investment in the U.S. over the same period.

3.2. THE EVIDENCE¹⁵

3.2.1 1945-1960 - Japan's Resource Dependency; The US's Economic Hegemony

(i) U.S. Direct Investment in Japan

Background

Between 1950 and 1960, Japan's GNP per capita grew from \$171 to \$460. In the first stage of the post-war period, the L advantages of Japan and the O advantages of Japanese firms were insignificant. While Japan had progressed through the first two stages of her investment development path prior to the war, she was now faced with a massive reconstruction task. Moreover, as a direct result of the war, Japan had been forced to surrender her natural-resource-rich colonies which had earlier supplied a considerable proportion of the raw materials for her domestic industries. Much of its plant capacity in light industry (a sector responsible for a substantial proportion of its pre-war export earnings) had been scrapped or destroyed, although its installed capacity in heavy and chemicals industry had increased.¹⁶ Export trade had fallen by over 50% between 1940 and 1950, thereby curtailing severely the country's import earning capacity.

Until 1952, the Japanese post-war economy operated under the general supervision of the allied powers. More particularly, during this time, a general economic framework was developed under the Dodge Plan,¹⁷ the purpose of which was to encourage a free market economy not unlike that of the U.S., and far removed from the pre-war oligopolistic structure that relied heavily on state support. At the same time, to protect Japan's balance of payments position prior to full economic recovery, a Foreign Exchange Control Law was passed in 1949¹⁸ which provided a mechanism to limit imports. Inward investment, though generally welcomed, was also to be restricted so as not to inhibit the development of indigenous assets. Thus the Foreign Investment Law of 1950 was used to limit foreign equity participation to those ventures, "...which will contribute to the self

support and sound development of the Japanese economy and to the improvements of the international balance of payments".¹⁹

After full independence in 1952, an important change in Japanese economic policy occurred. Many of the laws and policies introduced in the previous seven years were re-interpreted so as to give more protection to indigenous firms. In preference to acquiring foreign technology via inbound direct investment, local firms were encouraged to engage in cross-border contractual agreements such as technology agreements to obtain new technology and management skills. Yoshida (1987) suggests that the foreign exchange controls provided MITI with the leverage it needed to influence the strategy and actions of Japanese firms. By restricting manufacturing imports, Japan's infant industries were guaranteed a domestic market and sufficient breathing space to upgrade their competitive assets *vis-à-vis* foreign firms. A similar situation existed in the resource intensive sectors such as the oil industry where domestic firms were granted preferential treatment over joint ventures in obtaining import allocations. Where FDI was allowed, majority ownership and control was discouraged, except where it was impossible to obtain critical technology by other means. Foreign loans were generally preferred to equity investments. In 1956, equity acquisition by foreign firms in yen was allowed only if the investing firms were prepared to forego the explicit right to remit profits and capital.²⁰

Another important change to the pre-independence economic policy was the 1953 revision of the anti-monopoly law which authorised cartels and sanctioned retail price maintenance. The exclusion of foreign firms in these cartels, effectively discriminated in favour of their domestic competitors. During this period, domestic industrial policy was directed to developing its post-war competence in light manufacturing sectors, as well as encouraging import substitution.

Thus, the policies designed to promote the O advantages of Japanese firms while inhibiting foreign firms from exploiting their O advantages in Japan, resulted in subdued FDI inflows.

The considerable technological capabilities of U.S. firms coupled with rising domestic production costs led to a rapid growth of U.S. outbound direct investment in the post-war period. By the 1950's, domestic real wage costs were rising and there was a real shortage of U.S. currency throughout the world. As a consequence, to service their foreign markets, U.S. firms had to increasingly manufacture in foreign locations. One indication of this trend was that the U.S. share of world exports accounted for by U.S. firms fell between 1948 and 1960 from 23.9% to 17.2%, while the share of global outward direct investment accounted for by U.S. MNEs between 1938 and 1960 increased from 27.7% to 48.3%. However, investment by U.S. firms in Japan was limited despite their having absolute competitive advantages in most industrial activities.

The Evidence

As might be expected of a country in the first stage of its investment development path, and whose government restricted inward investment, there was comparatively little U.S. MNE activity in Japan prior to 1960. As Table 1 indicates, in 1950, when the first post-war census of U.S. overseas assets was carried out, U.S. direct investment in Japan was \$19 million or 0.16% of its total worldwide stake. The corresponding figures for manufacturing industry alone were \$5 million and 0.13%. The comparative percentage figures of the U.S. stake in West Germany, another war-ravaged nation, were 1.7% and 3.2% respectively.

PUT TABLE 1 HERE

By 1960, U.S. direct investment in Japan had risen to \$254 million or 0.80% of the total worldwide stake. The corresponding figures for manufacturing industry were \$91 million and 0.76%, but much of this increase (35% of the increase in total investments) occurred in the period from 1950 to 1953, before the structural impediments to inward direct investment were introduced.²¹ However, despite the introduction of restrictions on inward direct investment, U.S. manufacturing investments continued to grow at faster rate than investment in other sectors. Allowing for the case-by-case screening of inward direct investment, this would suggest first that

the U.S. manufacturing firms possessed O advantages not available to Japanese firms and therefore unlikely to compete directly with them; and second that the Japanese authorities considered such inward direct investment necessary for the development of the Japanese economy. Between 1952 and 1960, manufacturing as a percentage of total U.S. stake in Japan increased from 17.3% to 35.8%

Table 1 further shows that the total U.S. direct investment stock as a percentage of the GDP of Japan grew between 1953 and 1960 from 0.52% to 0.59%, whereas that of manufacturing investment rose from 0.09% to 0.21%. This latter figure would suggest that the competitive position of at least some U.S. manufacturing firms improved over this period, although, over the same time, U.S. exports as a percentage of Japanese GDP fell from 3.5% to 1.3%. The improving L advantages of supplying goods from a Japanese location is illustrated by the fact that while U.S. exports grew by a factor of two, U.S. direct investment in Japan grew by a factor of 3.4.

It is not difficult to imagine that had Japanese government policy remained as it was before 1953, the U.S. capital stake would have risen much faster. For example, examining the ratio of U.S. capital stake as a percentage for Germany for 1952 and 1960 are 0.73% and 3.1%. Corresponding ratios for Japan are 0.43% and 0.79% respectively.

The subdued participation of U.S. MNE's in the growth of the Japanese economy compared to that of her war time ally Germany was not so much due to the natural L disadvantages of Japan, but due to the country specific controls that prevented U.S. firms from exploiting their O advantages through hierarchies rather than markets. Government policy curtailed inward direct investment as a mode of inbound technology transfer, and encouraged in its stead, non-equity participation such as licensing and technology agreements.

While the role of U.S. firms was constrained, the presence of U.S. firms was not insubstantial relative to that of other foreign firms. Of the 88 foreign controlled subsidiaries operating in Japan

in December 1954, 63 were U.S. owned. The increasing importance of all non-equity technological agreements relative to FDI can be gauged from the ratio of foreign direct investment stock to capitalised value of technology agreements, which in 1953 was 0.15. In 1954, this ratio had dropped to 0.13²². The corresponding ratios for technology agreements signed with U.S. firms to U.S. FDI stock decreased from 0.81 to 0.62. In 1954, of the 431 technological assistance contracts with foreign firms, 307 were with U.S. firms. In terms of their capitalised value, they accounted for 62.1% of all technology agreements. Therefore, while the importance of the U.S. as a source of technological capability is in no doubt, it is also clear that U.S. firms possessing these advantages could not fully exploit them through FDI in Japan because of restrictions imposed by the Japanese government.

(ii) Japanese Direct Investment in the U.S.

Background

In terms of the investment development path, the U.S. was already at Stage 4 - its outward investment flows exceeded its inward investment flows. Its GNP per capita was \$1890 in 1950 and \$2830 in 1960. At the end of the second world war, the U.S. was at the height of its technological and economic supremacy. Indeed it was one of the only developed countries to survive with its industrial base not only intact, but strengthened. Its firms found themselves, not unsurprisingly, in the enviable position of having a competitive advantage in almost all industrial activities.

At the same time, given the relatively high cost of labour intensive manufacturing, the U.S. was not an attractive location for direct investment by firms from developing countries including Japan. Even though the U.S. was well endowed with natural resources, the L advantages of the U.S. for labour intensive investment (including resource seeking investments), were low, despite the fact that there were no restrictions on inward direct investment in the U.S. The affluence of

the U.S. market made it an attractive location for exports from foreign countries, and much of the FDI in the U.S. was at this time in trade-supportive activities.

As with inward investment, outward direct investment by Japanese firms was controlled by the Japanese government. The Foreign Exchange Control Law of 1949 laid down the guidelines and was implemented by a case to case screening. According to Ozawa (1989), the guidelines used for approving such investment were that it should be export supporting, or directed to securing natural resources vital to the Japanese economy. Moreover, it was required that the outcome of outbound FDI not be detrimental to the competitive position of Japanese firms in Japan; nor must it adversely affect domestic monetary policy. In other words, outward direct investment activity was intended to be supportive rather than complementary to the interests of domestic production. However, when it was approved, it was often protected by investment guarantee schemes through the Export-Import Bank of Japan, which had been set up in order to provide loans to overseas investors and to promote exports.

In these years, Japan's domestic economic development was geared towards re-establishing its competitive advantages in labour intensive, light manufactures industries; and indeed these accounted for the bulk of its exports during this period, which grew substantially between 1950 and 1960 during which time Japan's share of total world exports increased from 1.5% in 1950 to 3.6% in 1960. Nonetheless, the government -induced O advantages of Japanese firms in manufacturing were largely of a location specific kind, and they were generally insufficient to exploit through outward direct investment in developed countries such as the U.S. Much of the outward direct investment of Japanese firms in the 1950's was directed towards other developing countries especially Latin America and were either resource seeking, or where large protected markets existed,²³ market seeking in nature.

The Evidence

At the beginning of the period, Japan had negligible investments overseas, and none in the U.S. Table 2 shows that by 1959, Japanese direct investment in the U.S. stood at \$80 million²⁴ which represented 0.016% of U.S. GDP. This stake was entirely in non-manufacturing sectors such as financial services (20%) and trade (80%)²⁵. Its exports to the U.S. as a percentage of its total exports increased from 2.2% in 1950 to 27.2% in 1960. This confirms that Japanese firms had begun to develop their own O specific assets, although these were still much lower than those of U.S. firms. Where O advantages existed, they were better exploited by exports than by FDI due to the L disadvantages of producing in the U.S.

PUT TABLE 2 HERE

3.2.2 1960-1972 - Rapid Growth of Japan: The U.S. Loses Some its Hegemony

(i) U.S. Direct Investment in Japan

Background

The years between 1961 and 1970 were the era of the National Income Doubling Plan²⁶. During the duration of this plan, real GNP in Japan grew by 10.7% against a planned growth rate of 7.7%. The corresponding GNP growth rates for Germany and the U.S. were 4.6% and 3.9%. By 1970, Japan had a GNP per capita in current dollars of \$2593, 56% of that of the U.S. and 61% of that of West Germany, although the total value of Japan's GNP was second only to that of the U.S.

For most of this second period, inward FDI continued to be restricted, and, with the exception of yen-based investments²⁷, it was subject to a case-by-case screening. However, the latter mode was not popular among foreign firms because such investments could only be used to buy new

issues of stock; nor could the remittances of dividends be guaranteed. Nevertheless, these yen based firms accounted for two-thirds of all majority owned subsidiaries established through 1963, when this form of inward direct investment was discontinued. However, beginning in 1967 and in response to international pressures²⁸, the Japanese began the first of a series of liberalisation rounds which permitted the majority foreign ownership of firms in selected sectors. Two groups of industries were identified, - one in which 100% foreign participation was to be allowed, and the other in which it was to be restricted to 50%. By the time the fourth round of liberalisation took place in August 1971, 77 sectors had been cleared for 100% foreign participation, whereas all except seven sectors were open to 50% foreign ownership. This gradual and stepwise removal of regulations was timed to coincide with the perceived improved competitiveness of the Japanese economy in the same sectors (Buckley et al, 1984). Minority-ownership and joint ventures continued were granted automatic approval. However, foreign acquisitions of Japanese firms were still restricted and required a case-by-case screening if they involved an equity stake greater than 10%. Not surprisingly, there was no large rush of inward MNE activity. The use of technology agreements remained the most important form of foreign involvement, and was further facilitated by the automatic approval of technology contracts of values not exceeding \$50,000.

Japan's industrial policy during this stage shifted towards the development of its heavy manufacturing industries especially chemicals, machinery, and away from metals and light manufactures. Although wage rates rose more quickly in Japan than in the U.S. (163.0% compared to 28.7% between 1965 and 1970), labour productivity grew by 68.3% compared to 10.8% in the U.S. Over the same period²⁹, unit costs in Japan remained highly competitive. The competitiveness of Japanese industry was also helped by the government pegging the yen at ¥360 to the U.S. dollar. As such, Japanese L advantages were superior to those of the U.S. in labour intensive manufacturing, but government policy continued to prevent U.S. firms from exploiting their O advantages through direct investment.

The Evidence

Table 1 sets out details of the growth of U.S. direct investment stake in Japan. In 1961, this was \$302 million of which \$103 million or 34.1% was in manufacturing. By 1972, it had risen to \$2.3 billion of which \$1.2 billion or 51.0% was in manufacturing. This represented an annual average rate of growth of 55.8% in all sectors and 87.5% in manufacturing. The corresponding growth rates of the U.S. capital stake over the same period in Germany were 36.6% and 34.9 %. In 1961, the investment by U.S. firms in Japan represented 0.9% of the total U.S. direct investment stake, but, by 1972, this had almost tripled to 2.6%. During the same period, the percentage of cumulative U.S. direct investment stake in Germany doubled from 3.4% to 6.6%.

At the same time, the competitive advantages of U.S. firms continued to earn them attractive profits. While comparable data are not available prior to 1967, the average rate of return on U.S. investments in manufacturing for the period 1967-72 was about 21%, whereas the average rate of return for all U.S. foreign direct investment in manufacturing for the same period averaged 15%³⁰. This would suggest that, despite the restrictive government policies of the Japanese government, Japan still remained quite an attractive location to U.S. MNEs.

Though limited³¹, data on a sectoral distribution of U.S. stake in manufacturing suggest that growth was not uniform across sectors. It was greatest in chemicals and machinery, and least in sectors such as metals, food and transportation. Interestingly, the revealed trading advantages of Japanese firms had grown during this period in chemicals and machinery, and declined in metals, food and light manufactures. This suggests that the O advantages of U.S. firms were sufficiently superior to those of its Japanese competitors in at least some of the sub-sectors within these industries.

Table 1 also gives details of the rising importance of U.S. direct investment stake in the Japanese economy. During this period, the share of U.S. stake in manufacturing as a percentage of Japanese GDP grew from 0.19% to 0.42%. These data confirm the superior O advantages of

U.S. affiliates over their domestic rivals or at least that their activities concentrated in the fastest growing sectors in the Japanese economy.

PUT TABLE 3 HERE

The extent to which local production by U.S. firms replaced exports of U.S. firms to Japan over this period provides us with an indication of the changing L advantages of Japan. Sales data of U.S. affiliates in Japan are unavailable before 1966, but between 1967 and 1972, they increased by over three times, while imports from the U.S. increased by a factor of 3.5. Table 3 presents a breakdown of the sales of U.S. manufacturing affiliates in Japan, exports from the U.S. and the ratio of the two broken down by industry. This ratio is seen to increase substantially over the period 1967-1972 in the chemicals and non-electrical machinery industries. Moreover, while the sales of U.S. affiliates in the electrical machinery industry also rose, exports from the U.S. posted an even greater increase viz., from \$23.1 million to \$228 million. At least some of the increase in exports represent intra-firm exports due to the presence of U.S. MNE's, and to the extent this is the case, it is an indicator of their rising I advantages. However, such data, as well as that on the relative importance of technology agreements compared with FDI another indicator of I advantages, are not available for this period.

This evidence would suggest then, that, whereas in the 1960's U.S. MNE's possessed considerable O advantages over Japanese firms the L and I advantages of Japan as a manufacturing base for U.S. firms prevented these from being exploited through direct investment.

(ii) Japanese Direct Investment in the U.S.

Background

While for much of the period and in most sectors, the competitive prowess of U.S. firms remained unsurpassed, Japanese firms were beginning to make inroads into U.S. markets by the late 1960's. With a GNP per capita of \$7115 in 1972, compared with \$4570 of Japan, the U.S. remained the most lucrative outlet for manufactured goods, and was therefore the objective of Japanese firms' export oriented strategy. Beginning in 1965, Japan's merchandise trade surplus with the U.S. began to grow.

The U.S. market was served primarily through exports from Japan, given the relatively high wage rates in the U.S.³², and Japanese exports grew especially quickly in sectors in which they had a comparative advantage. Outbound MNE activity was mainly directed to developing countries, especially in Asia. Capital exports continued to be discouraged by the Bank of Japan until 1969, when automatic approval was granted, initially to finance small (less than \$200,000) projects. By 1971, however, the ceiling on automatic approvals was eliminated. This was prompted both by the growing current account surpluses, as well as trade disputes with the U.S., which led to voluntary export restraints (VERs) in steel and synthetic textiles towards the end of the period.

In the early part of the period, Japanese *sogo sosha* were responsible for most of the trade supportive FDI (sales outlets, service facilities) in the U.S., as they strove to promote Japan's manufactured exports, as well as to secure vital imports such as capital goods, foodstuffs, coal, lumber and pulp. Exports had shifted in this period from light industrial production (such as textiles sporting goods, toys) to a more diversified pattern with technology based exports such as motor cycles, cameras and automobiles becoming increasingly important (Ozawa, 1979). Along with the restructuring of exports, so to did the ownership of, and motivation for, some of the newer FDI. For example, independently of the trading companies, some technology based Japanese firms began to set up foreign facilities to acquire or strengthen their domestic O

advantages, as well as to seek low cost inputs (such as industrial chemicals, soybeans)³³. Nonetheless, such strategic asset seeking investments were the exception rather than the rule; for example, according to Yoshida (1987), only 22 Japanese manufacturing affiliates were established in the U.S. before 1971.

The Evidence

As Table 2 shows, total Japanese direct investment in the U.S. in 1961 was only \$92 million, of which \$51 million was in manufacturing. While comparable figures are not available³⁴, it is estimated that this accounted for about a third of total Japanese outward direct investment. In the years which followed, Japan's FDI was directed mainly towards Asia and Latin America. These two areas alone accounted for more than two-thirds of FDI outflows from Japan³⁵. While investments in Latin America were of a market seeking kind designed to overcome import restrictions, those directed to East Asian countries were more export-oriented³⁶. By 1970, the total stock of Japanese direct investment in the U.S. was only about a quarter of total Japanese stock of FDI worldwide, valued at \$229 million, of which \$70 million was in manufacturing. Over the previous decade, the annual average rate of growth of such investment had been 16.5% overall and 4.1% in manufacturing.

Therefore the relative importance of the U.S. as a location for outward direct investment had diminished over this period. But the state of Japanese O advantages relative to that of its indigenous competitors in the U.S. market can be ascertained from the following facts:

- i. The Japanese direct investment stake in manufacturing as a percentage of total FDI in the U.S. actually *decreased* during this period from 1.85% to just under 1%.
- ii While no data are available for sales of Japanese affiliates in the U.S. during this period, the ratio of the cumulative investment stake of Japanese firms in the U.S. to U.S. GDP also decreased over this period from 0.010% in 1961 to 0.006% in 1972.

iii At the same time, as Table 4 shows, the ratio between U.S. manufacturing investments in Japan to Japanese manufacturing investments in the U.S., increased from 2.02 in 1961 to a peak in 1972 of 16.5. This point is underlined by the fact that both the total FDI by U.S. MNEs and the total inward direct investment into the U.S. rose between 1967 and 1973, but the ratio between the two decreased from 5.7 to 4.9.

iv. Japanese exports to the U.S. grew eightfold between 1960 and 1972, while as a percentage of U.S. GDP, they increased from 2.5% to 2.9% during this interval.

PUT TABLE 4 HERE

These data clearly suggest that the Japanese competitive position with respect to its rivals was weak during the 1960's, and that in general, the U.S. economy was outpacing the growth of these Japanese affiliates.

Moreover it would seem that any O advantages possessed by Japanese firms *vis-à-vis* their foreign competitors were more likely to be exploited through exports than by FDI. But in what industries were these competitive advantages developing? Taking the share of particular sectors in total exports provides us with some clues. For example, the share of textiles as percentage of total Japanese exports dropped from its 1955 peak of 37.3% to 9% in 1970. The share of steel also fell from its peak of 34.2% in 1960 to 14.7% in 1970³⁷. By contrast, Japanese exports to the U.S. grew rapidly in transportation equipment and fabricated metals, followed by chemicals and non-electrical machinery. Taking a revealed comparative advantage (RCA) index based on a ratio of total exports to total imports, the RCA index of the Japanese food and metals industry fell respectively from 0.47 and 6.98 in 1962 to 0.19 and 3.87 in 1972. By contrast, the ratio increased for machinery, transportation and chemical sectors.

Data on trade in technology are sparse. However, Japanese figures for 1974 suggest that the ratio of royalty and licensing fees paid to Japanese firms by foreigners to those received from Japanese firms on a worldwide basis was 0.35. Taking the same ratio for technology payments to and

receipts from North America over the same period the figure is 0.06. North America accounted for 66.9% of the total flows payments and 12% of the receipts (Sekiguchi, 1979).

3.2.3 1973-1982 - Elementary Japanese Multinationalism: Declining U.S. Competitive Advantages

(i) U.S. Direct Investment in Japan

Background

The period between 1972 and 1982 marked Japan's passage through the third stage of its investment development path. There was a gradual decrease in the rate of growth of inward direct investment to Japan as domestic firms began to compete successfully with MNE's from countries further along the development path.

During Stage 3, the growth in GNP experienced by Japan in the second stage of the investment development path decelerated, although it still remained higher than that of the U.S. or Germany. The average growth rates for 1973-1982 were 4.5% for Japan³⁸, 2.8% for Germany and 2.9% for the U.S. The GNP per capita for Japan and the U.S. grew from \$3230 and \$6410 in 1973 to \$10,280 and \$13,620 in 1982.

There were various changes in the attractions of Japan as a manufacturing base during this period. These were mainly brought about by the restructuring of resource allocation in the Japanese economy and a series of exogenous events, which resulted in a change in the status of Japan as a host country.

The two most important exogenous events of the 1970's were the devaluation and floating of the dollar and the oil crisis. The first was responsible for the sharp rise in the value of the yen to ¥308/\$1 at the end of 1971, from ¥360/\$1 where it had been pegged for the post-war period. This was followed by the floating of the yen in 1973. The net result of these events was an appreciation of the yen against the dollar of about 35% by the summer of 1973³⁹. This further

increased the cost of manufacturing in Japan . The yen continued to appreciate until October 1978, when it reached ¥170/\$1. This represented an appreciation of about 40% from its January 1977 value. After this, the dollar strengthened *vis-à-vis* the yen for the rest of this period.⁴⁰

Simultaneously with the rise in the yen, the Japanese government embarked on a programme of R&D and education and training which was intended to provide her industries with the necessary human and physical capabilities to upgrade their value-added activities. At the same time, the L advantages of Japanese resources and the O advantages of Japanese firms became more competitive, the restrictions on inward FDI were gradually relaxed. By the fifth stage of liberalisation in 1973, the government had removed the 50% ceiling on foreign participation in certain sectors, and reduced the list of restricted industries to agriculture forestry and fishing, mining, oil, leather manufacturing and retail trade (Sekiguchi 1979).

However, despite some liberalisation of restrictions on inward investment, a host of non tariff barriers (NTBs) continued to exist.⁴¹ Some of these pertained to investment-related trade issues in service sectors, while other institutional barriers such as unequal treatment in standards and approvals, complex import clearance procedures and unequal treatment of foreign and domestic companies⁴². Effective from March 1980, the government abolished the Foreign Investment Law and the Foreign Exchange Control Law, thereby removing formal capital controls and allowing MNEs to invest without licensing applications.

U.S. firms continued to invest in foreign production facilities, particularly in high technology industries and differentiated consumer goods⁴³. There was also an increasing emphasis on the European Economic Community (EC) as a host region. Historically, U.S. MNEs have always had a substantial presence in several European countries, and some of the new investment represented a higher degree of internationalisation as they adapted their motives from market seeking to a rationalised production. Despite the growing competitiveness of European firms and the rising value of currencies in these countries, the potential of the evolving single market

outweighed these considerations, and as such, the EC represented the largest destination for U.S. direct investment during this period.

The largest inflow of U.S. direct investment to Japan was from the automobile manufacturers who took substantial (albeit minority) stakes in several Japanese auto firms. The purpose of these investments was not so much to exploit their own O advantages but to secure an offshore source of components and automobiles. The subsequent six-fold increase in stock led to an almost equal increase in U.S. imports from these affiliates (Encarnation 1992). Unlike U.S. investment in other industrialised host countries, mergers and acquisitions accounted for a growing share of their new investments, this mode of growth was relatively unimportant in Japan. This was initially due to the restrictions placed on such activities, but even after the liberalisation of regulations the U.S. recorded only eight acquisitions in Japan between 1979 and 1983, compared to 169 in the UK and 53 in Germany. (Encarnation 1992)

The Evidence

The U.S. direct investment stake in Japan experienced a decelerating growth between 1972 and 1982. Total U.S. direct investment grew from \$2.67 billion in 1973 to \$6.63 billion in 1982, a growth rate of 15.8%. Manufacturing investment grew at the lower rate of 13.1%. The share of manufacturing investments as a proportion of the total U.S. investments fell from 52.4% to 48.7% (see Table 1) - in spite of a more liberal attitude by the Japanese authorities to inbound MNE activity. This slowing down reflected not only a deterioration in the L advantages of Japan, but the decline in the O advantages of U.S. affiliates relative to Japanese firms in a number of industries.

Some evidence in support of the above points include:

- i A gradual deceleration of the rate of growth of U.S. direct investment stake in Japan. However, U.S. direct investment in Japan as a percentage of total U.S. direct investment increased from 2.64% to 3.20% over this period. This contrasts with a relative decline of the

U.S. direct investment stake in the EC as a whole⁴⁴. In the case of Germany in particular, the U.S. direct investment stake experienced a marginal decrease as a percentage of all U.S. outward direct investment.

ii. The percentage of the investment stake directed towards manufacturing, as given in Table 1, slipped from 52.4% to a low of 42.8% in 1977 before recovering somewhat by 1992 to 48.7%.

iii. The U.S. capital stake as a percentage of Japanese GDP fell slightly from 0.72% in 1973 to 0.67 in 1977 and 0.61% in 1982. U.S. exports as a proportion of Japanese GDP fell from 2.2% in 1973 to 1.5% in 1978 before returning to 2.2% in 1982.

iv. The ratio of U.S. manufacturing direct investment in Japan to Japanese manufacturing direct investment in the U.S. began to decrease from its high point of 16.5 in 1972 to 1.99 in 1982 (Table 4)

v. The U.S. manufacturing direct investment stake as a percentage of Japanese GDP fell from 0.42% to 0.30%. U.S. manufactured exports also experienced a slowing of growth, recording a rate of 19.8% over the period 1967-72 to 7.6% over the next five years.

vi. The average rate of return on Japanese direct investment stake between 1973 and 1982 was about 14%, whereas in the five years prior to that it was 17%.

vii. The growth rate of sales of U.S. manufacturing subsidiaries in Japan increased at the rate of 4.9% over the period 1972 -77, and 17.5% between 1977 and 1982, much less than that between 1967 and 1972, during which the annual growth rate was 33.3%.

Taken together, these facts suggest a decline in the O advantages of U.S. MNE's operating in Japan. These figures also reflect the appreciation of the yen, which reduced the attractiveness of Japan as a location for overseas production. An indication of this declining L advantage is provided by the falling ratio of sales of Japanese affiliates of U.S. firms to the exports of the U.S. to Japan. As illustrated in Table 3, this ratio decreased from 1972 to 1982, falling from 1.37 to

1.27 overall, and 1.32 to 0.44 in manufacturing. On a sectoral level, this ratio declined in chemicals, electrical machinery and transport equipment, but grew in food, metal products and non-electrical machinery.

It might be hypothesised that the reason for the fall in the rate of increase of U.S. FDI in Japan was that U.S. firms were using external markets for the transfer of technology. In fact the opposite seemed to be the case. One measure of the extent to which U.S. firms were internalizing the exports of their proprietary skills and technology to Japan is the ratio of royalties and fees received from affiliates of U.S. firms to those received from non-affiliate firms. Some details are set out in Table 5. The hypothesis is that the higher the net hierarchical costs of organizing cross-border transactions the higher the ratio should be. However, this ratio increased from 0.48 in 1972 to 1.09 in 1981. This suggests that, although the overall significance of U.S. FDI had fallen and the relative attractions of its O advantages had dipped in relation to their previous status, the modality of exploiting these advantages had shifted towards hierarchies and away from external markets.

PUT TABLE 5 HERE

(ii) Japanese Direct Investment in the U.S.

Background

U.S. GNP per capita grew \$6,410 to \$13,620 during this period. The U.S. was still at Stage 4 of its investment development path, and continued to be the target of Japanese exports, although direct investment activity by Japanese MNEs still remained in its nascent stage.

While the removal of restrictions that began in 1971 eventually led to the abolition of case by case screening of outward direct investment, the Japanese government still discouraged it wherever it was thought likely to adversely effect the Japanese economy and the balance of payments in particular. However, with the floating of the yen and a strong balance of payments surplus,

Japan's policy was re-directed to reduce government controls, and both the laws that restricted outward direct investment - the Foreign Exchange Control Law and the Foreign Capital Law were revised in 1979⁴⁵ to allow near-complete freedom in outbound MNE activity⁴⁶.

Developments in the international economy also affected the growth pattern of Japanese investments abroad. The change in the exchange rate regime encouraged FDI, as did the oil crisis of the mid-1970's. This second 'shock' encouraged firms to transfer energy intensive industries to locations where energy was abundant. Coupled with increasing international reserves, Japan began to induce firms that were not already undertaking FDI to do so by offering them subsidised loans. This directly led to new FDI flows to petroleum-rich locations such as the Middle East, as well as in Indonesia.

The growth of outward direct investment occurred for a number of other reasons. First, Japanese firms had further developed their O advantages; second, their indigenous production costs were rising relative to those of the countries to which they were exporting. Third, although the market for Japanese goods in the U.S. and Europe was rapidly growing, the rate of penetration by Japanese exporters into those markets, and away from domestic producers eventually led to the imposition of various forms of trade constraints, including VER's. Fourth, the Japanese yen continued to appreciate.

In the context of this study it is relevant to note that the O specific advantages that enabled Japanese firms to first penetrate foreign markets were not so much as a result of significant product innovations - but modifications of otherwise fairly standardised products and techniques which to begin with at least were primarily adapted with the Japanese market in view. They were in large part of two types (Dunning 1993c):

- i. Those to do with the tangible technological advantages of Japanese firms and associated with patentable products and process innovation. These include product modifications peculiar to the Japanese market such as the development and manufacture of compact and fuel

efficient automobiles that were *de rigueur* in a country where space and fuel were at a premium. After the oil crisis of 1973, the demand for such vehicles increased in the U.S. The revealed technological advantages (RTA)⁴⁷ of Japanese firms, as compared with U.S. and European firms has been documented by Cantwell and Hodson (1990), and indicate that during the earlier part of this period Japanese firms' advantages were largely in relatively standardised technology⁴⁸.

ii. O advantages that reduce the transaction costs of value-added activity associated with more efficient production processes and organisational methods. Examples of such advantages include superior management techniques, just-in-time delivery, leaner production, quality control circles and the ability to improve the efficiency of intermediate product markets⁴⁹.

Japanese MNE's had created distinct O advantages in the production of fairly standardised products which were relatively mature by the use of superior design, quality consistency and efficient working methods. In addition, the availability of support services and commercial infrastructure - often supplied by government - coupled with aggressive marketing techniques and the rigorous demands of Japanese consumers, - offered the cutting edge for Japanese firms to succeed in overseas markets. In fact, one estimate⁵⁰ suggests that only about 3% of Japan's cost advantage in the manufacture of small cars at this time was due to superior technology, the rest being derived from these production and organizational skills. These kinds of O specific assets tend to take longer to diffuse across national boundaries than do technological advantages (Kogut 1993), while their efficient use often requires them to be 'internalised' within the transferring company, and controlled by centralised decision taking (Dunning 1993b).

The trade friction between the U.S. and Japan in the late 1970's may explain the increase in outward direct investment by Japanese firms towards the end of the period, regardless of the changing nature of the L advantages of the U.S. Shishido (1989) refers to this shift towards U.S. production as the setting up of "survival centres" to reduce trade frictions and to counteract import restrictions. With the rising value of the yen against the dollar, this situation was affected by the relatively faster rate of economic growth of Japan compared to that of the the United States. Thus

as the yen appreciated against the dollar, the attractiveness of manufacturing sites in the U.S. increased relative to those in Japan.

While Japanese MNEs continued to exhibit a preference for greenfield investments in the U.S. - especially where they possessed distinctive O advantages, merger and acquisition activity began to grow in the 1970's. Such activity provided Japanese firms with a speedy access to the U.S. market, as well as to a source of complementary assets. In 1974, for example, there were 12 major acquisitions undertaken by Japanese firms compared with just 10 by German firms (Encarnation, 1992).

Finally, the 1970's saw the beginning of strategic asset acquiring FDI that was directed towards R&D activity and less towards manufacturing⁵¹. Such firms would tend not to be highly capitalised. Companies such as Sony, Kyocera International and Toyo Bearings were all motivated to manufacture in the U.S. to tap technology and research skills that were being developed in that country⁵². However, these investments were the exception rather than the rule. The primary Japanese motive for FDI continued to be the sustenance and control of trans-Pacific trade.

The Evidence

The Japanese manufacturing investment stake in the U.S. in 1973 was \$141 million. This represented just 1.7% of the total manufacturing FDI stock in the U.S. There was, however, considerable Japanese participation in such sectors as banking and commerce, where Japanese FDI accounted for almost a quarter of all inbound investment. The U.S. accounted for almost 68% of Japanese worldwide investment in the tertiary sector.⁵³ By 1982, Japanese manufacturing investments were \$1.6 billion, a fivefold increase from 1973. Exports to the U.S., on the other hand, remained at the 25% level of all Japanese exports over this period (Yoshida, 1987).

By 1982, the stake of Japanese manufacturing outward direct investment in the U.S. as a percentage of U.S. GDP had increased five-fold from its 1973 value. As Table 2 highlights, this increase is further underscored by the fact that, between 1975 and 1977, the ratio fell before returning and exceeding its 1974 level. The rate of growth between 1978 and 1982 was 36.3% compared with 23.9% between 1973 and 1977. This post 1978 growth was most significant in the food, machinery and transportation industries⁵⁴. It may be hypothesised that the sharp increase in Japanese investments in the U.S. between 1972 and 1974 was a result of changes in the world economy, rather than a sudden improvement in the O advantages of Japanese firms. The fact that the ratio subsequently declined implies that Japanese firms grew at a slower pace than the U.S. economy as a whole in the mid 1970's and only picked up towards the end of the decade. What were the reasons for this? In examining the relationship between changes in exchange rates and the number of Japanese affiliates established in the U.S. per year, Yoshida (1987) confirmed that the number of Japanese affiliated manufacturing plants surged shortly after the exchange rate hit a trough (i.e., a weaker U.S. dollar and a stronger yen) in 1973, 1978, 1981 and 1983. This would suggest that while the improving O advantages of Japanese firms may have accounted for some of the growth of investment in the U.S., the changing L advantages of the U.S. were a pivotal consideration and in particular the various protectionist measures introduced by the U.S. government.

Therefore, during this period, Japanese direct investment in the U.S. was, for the most part, due to 'pull' factors associated with the trade friction between the two countries. Those firms that did invest to supply markets had difficulty in optimally utilising their O advantages in the U.S., whereas other firms invested to acquire technology. Therefore, it is not surprising that the rate of return of Japanese investment in manufacturing to be consistently been negative since 1975 (except 1978 and 1979) in the U.S despite an increase in the value of its investment stock⁵⁵.

But what of the changing L advantages of the U.S. relative to Japan? Demand for Japanese products continued to grow at sometimes phenomenal rates. While this demand was partly met by

an increased output from Japanese affiliates, its main source was Japanese imports. For example, U.S. imports from Japan of electrical machinery increased by a factor of almost ten between 1980 and 1985, while sales of Japanese affiliates in the U.S. increased three fold⁵⁶. Table 6 gives details of the ratio of sales of Japanese affiliates in the U.S. to manufacturing exports from Japan. While comparable data are not available on sales until 1977, it can be seen that, between 1977 and 1982 this ratio increased in almost all other manufacturing sectors, but particularly in food products, chemicals, and non-electrical machinery.

PUT TABLE 6 HERE

Royalties and fees paid to Japanese firms by U.S. based firms were also on the increase. According to U.S. Department of Commerce data, in 1972 just 1% of all royalties and fees paid by all U.S. based firms were to affiliated firms in Japan and only 4% of those paid to unaffiliated firms. By 1981 these figures were 9% and 30% respectively. Table 5 gives the ratio of fees paid to affiliated Japanese firms to those paid to unaffiliated Japanese firms by U.S. affiliates. This ratio is seen to increase from 0.17 to 0.44 between 1972 and 1981. This gives some support to the hypothesis that there was an increasing propensity of Japanese firms to internalise the U.S. market for their O advantages rather than use external markets. While the data on intra-firm royalties and fees may be distorted by transfer pricing, the fact that 30% of all royalties and fees paid to unaffiliated foreigners by U.S. based companies were directed to Japan points to the growing strength of Japanese firms in technology-intensive sectors. The low percentage of internalised flows of technology is consistent with the actions of MNEs investing in unfamiliar territories - but ones in which there are reasonable endogenous supply capabilities - in the early stages of internationalisation.

3.2.4 1982 to the Mid-1990's - Japan Enters Stage 4: U.S. Moves to Stage 5

(i) U.S. Direct Investment in Japan

Background

In the 1980's, Japan entered stage 4 of her investment development path. Between 1983 and 1989, her GNP per capita increased from \$9,953 to \$23,443 , overtaking that of the U.S. in the process. The growth of her outward direct investment continued to outpace that of her inward direct investment, although the latter was considerably less restricted by government intervention. Through bilateral negotiations, many of the non tariff barriers that affected U.S. manufacturing firms had either been dismantled, or substantially reduced.⁵⁷ At the same time, the continuing rising value of the yen has made FDI in Japan relatively more expensive.

While the size and character of Japanese markets in the 1980's have made them extremely lucrative for foreign firms, the O advantages of Japanese firms have developed quite considerably, and particularly so in some of the sectors e.g., semiconductors, colour TVs and automobiles in which U.S. firms had traditional strengths. These facts notwithstanding, the presence of U.S. MNE's in Japan continue to grow. By 1989 for example, FDI from the U.S. accounted for 50.5% of total FDI in Japan (MITI, 1990b). Considerable investment activity occurred in the chemicals industry, an area in which U.S. firms retained considerable O advantages, and followed on the heels of increased demand for U.S. exports of goods and technology, especially pharmaceuticals⁵⁸

Manufacturing investments by U.S. MNEs in Japan in the 1980's were prompted partly by the desire to gain access to the Japanese market, partly to acquire new assets and partly to gain an insight into Japanese technological capabilities. The direction of both types of investments essentially reflected the restructuring of the Japanese economy towards higher value-added and research intensive activities. This restructuring has been coordinated through a mix of closely controlled and government-initiated educational, industrial and social strategies, although the

direct interventionism of the 1960's and 1970's was now beginning to be replaced by a market facilitating and 'signalling' role.⁵⁹

As the O advantages of Japanese firms have increased, so too has the supporting infrastructure needed to support them. This is shown by the existence of extensive research and development facilities (and the skilled manpower needed to run them) of Japanese firms in high value-added sectors in which U.S. firms had earlier held a dominant position. The features of the Japanese R&D infrastructure are multi-faceted. There is a large national R&D expenditure that represents a sustained commitment to R&D by both the private and the public sectors. As a percentage of GDP such expenditure has grown from 2.0% of GDP in 1975 to 3.1% in 1991. Corresponding figures for the United States are 2.3% and 2.7%. While the share of private R&D of total R&D expenditures in the two countries was similar (70.9% for the Japan and 69.2% for the U.S.), real annual compound growth in business R&D expenditure between 1983 and 1991 was 9.0% for Japan and 2.3% for the U.S.⁶⁰ Not surprisingly, there has been considerable growth in R&D activities: The number of R&D personnel per 1000 labour force for Japan, Germany and the United States in 1991 were 14.1, 14.1, and 7.7 respectively⁶¹.

The development of infrastructural support is exemplified by the creation of industrial zones catering exclusively to corporate R&D facilities such as Tsukuba Science City. These are aimed at encouraging the clustering of R&D activities (Japan Update 1990). Unlike earlier stages of development, the Japanese government has been providing incentive schemes to encourage affiliates of foreign firms to participate. This infrastructure, combined with the strong O advantages of firms in Japan acts as a powerful magnet to research-oriented firms, so much so that by 1989 no fewer than 156 foreign enterprises had R&D facilities in Japan. (Ozawa 1989)

The L advantages of Japan have also changed as a consequence of the structural impediments talks between Japan and the U.S. in the late 1970's and mid 1980's⁶², which were aimed at redressing the growing trade imbalances between the two countries. These resulted in several agreements covering various industries including telecommunications and semiconductors to increase the

access to the Japanese markets of foreign companies. But as Encarnation (1992) notes, the subsequent increase in inward direct investment, would not have occurred had U.S. firms not possessed considerable O advantages in these areas. The growth of U.S. direct investment in Japan during this period was, however, not helped by the decline of the dollar against most major currencies including the yen. Overall, the overseas activities of U.S. MNE's increased at a slower rate than outward FDI from other home countries in this period. For example, the stock of U.S. direct investment as a percentage of total world stock of investment decreased from 42.5% to 30.5% between 1980 and 1988, whereas that of Japan increased from 3.8% to 9.8% over the same period⁶³. *Inter alia*, this reflects the increasing competitiveness of MNE's from other countries (including Japan), as well as the increasing L attractions of the U.S. as a host country for FDI. This latter phenomena has also helped the competitiveness of U.S. exports; for example, between 1983 and 1989 U.S. exports to all countries grew at an annual rate of 13.6%, while those to Japan grew at 17.6%.

The U.S. entered Stage 5 of its investment development path during this period. This was starkly shown by the fall in the ratio of its total outward direct investment to total inward direct investment from 2.60 to 1.04 between 1980 and 1990⁶⁴. More particularly, U.S. based firms were faced with increasing competition from firms from other industrialised countries in both foreign and domestic markets, which had the effect of accelerating outward but decelerating inward investment. The motivation for, and location of FDI by U.S. firms also changed. Increasingly it was directed to the other countries of the Triad (UNCTC 1991). Increasingly too, it was allocated to high technology and R&D intensive sectors. Increasingly it took the form of mergers and acquisitions; and increasingly, it was geared towards the restructuring of existing value-added activities, or acquiring new assets to protect or strengthen the regional or global competitiveness of the investing firms.

The Evidence

U.S. outward direct investment in Japan increased from \$7.7 billion in 1983 to \$21 billion in 1990, an annual average growth rate of 24.9%. As a percentage of total U.S. outward direct investment, investment in Japan grew from 3.7% to 5.0%. However, in 1990, its total value still remained only about one-third of that in the UK, and three-quarters of that in Germany.

The U.S. manufacturing capital stake in Japan grew from \$3.9 billion in 1983 to \$10.6 billion in 1990, an annual growth rate of 24.2%. This represented 6.3% of the total U.S. stake in manufacturing in 1990, up from 4.1% in 1983. The percentage of manufacturing investment as a share of total U.S. direct investment in Japan was maintained around the 50% level. The sectors that experienced the greatest growth were transportation, electrical machinery, chemicals and fabricated metal products. This is a curious combination of industries in that they include some in which the U.S. had a competitive advantage (sectors of electrical machinery such as computers, transportation, chemicals) and others in which Japan had a competitive advantage (fabricated metal products and electrical machinery). This would suggest that, in the 1980's, U.S. firms were both exploiting existing competitive advantages in Japan and seeking to acquire new competitive advantages.

For the previous period, we observed a possible decreasing O advantage of U.S. firms compared with Japanese firms. In this period, the following facts indicate the state of U.S. competitiveness:

- i. Although comparable figures are not available, U.S. outward direct investment in Japan as a proportion of total inward direct investment in Japan appears to have been maintained at about 50% of total inward direct investment over this period. However, the corresponding percentages were 70% in 1974, and 83% in 1960.
- ii. Compared with their indigenous competitors, U.S. affiliates appeared to make little inroad into Japanese markets in the 1980's. Table 1 sets out the ratio of U.S. capital stake to the Japanese GDP, and shows that while this increased from 0.65% in 1983 to 0.70% in 1985, the year of the

Plaza Accord - by 1989 it had fallen back again to 0.65%. The corresponding proportions of U.S. manufacturing investments to Japanese GDP for the same years are 0.33%, 0.35% and 0.34%. Preliminary figures for 1990 indicate that both ratios were higher than their 1985 level, 0.73% for total U.S. investments in Japan, and 0.37% for manufacturing investments. This suggests a possible regeneration of U.S. MNE's O advantages, although at least part of this growth is due to an appreciation of the dollar.

iii. The ratio of U.S. manufacturing direct investment stake in Japan to Japanese manufacturing direct investment in the U.S. decreased from 2.44 in 1983 to 0.70 in 1990 (Table 3). *Ceteris paribus*, this would reflect a noticeable improvement in the O advantages of Japanese firms *vis-à-vis* U.S. firms, and/or a strong reduction in the L advantages of Japan, relative to the U.S., as a manufacturing base.

iv. Actual capital expenditures of U.S. affiliates doubled between 1985 and 1989, while plans for 1990 and 1991 are for an average increase of about 14% (Mataloni 1990). Capital expenditures of U.S. affiliates have been demonstrating steady growth, growing at a rate of 22.8% over the period 1985 to 1989, whereas the equivalent rate for all developed countries was 7.7% (Mataloni 1990). The implication of these data is despite (iii) above, Japan is becoming a more attractive base for outward direct investment by U.S. firms. The reason for this is the above average profits which can be earned in Japan. During the period 1980-88 for example, the rate of return of U.S. direct investment in manufacturing in Japan was 20%, much higher than the rate of return of U.S. manufacturing outward direct investment in all countries which was 13% over the same period⁶⁵.

These data imply several things. First they suggest that the decline in U.S. competitive advantages may have been arrested in certain sectors which have enabled the U.S. MNEs to better compete with Japanese companies on the latter's own turf. Popular and academic literature abounds with anecdotal evidence of the competitive pressures on U.S. firms both to reduce costs and to re-learn organization and production technology skills so successfully applied by Japanese

firms. In the auto sector in particular, U.S. firms have widely adapted Japanese systems of quality control, work methods, cost-saving techniques and organisational technology;⁶⁶ although in other sectors, e.g., digital high definition television and biotechnology they have more than held their own in international markets.

Turning next to the advantages of Japan as a production base, as Table 3 indicates, although the ratio of sales of manufactures of U.S. subsidiaries to U.S. exports of manufactures rose rapidly from 0.49 in 1982 to 0.89 in 1986, by 1989 it had dropped back to 0.70. On a sectoral level, all industries on which data are available showed a similar initial rapid growth, before dropping to ratios closer to their 1982 levels. This was due to three factors. First, several large U.S. MNEs invested heavily in Japan in the wake of the trade agreements and in response to the structural impediments initiative during the early part of this period. Second, such investments may have led to an increase in intra-firm U.S. exports, which typically lag FDI. Encarnation (1992) for example, notes that intra-firm U.S. exports accounted for one-seventh of all U.S. exports to Japan in 1988, three times their share in 1982. Third, the spurt of export growth may also be due to changes in the exchange rate which made U.S. exports more competitive.

Having outlined the L advantages of Japan the question that begs answering is this: Given the strong O advantages of Japanese firms, would this not deter inward investment? The answer is 'Yes' - as far as the exploitation of traditional O advantages is concerned. Firms producing created-asset intensive products will *require* such an infrastructure as a necessary condition for investing. This is confirmed by data on the revealed technological advantages (RTA) of Japan in the foreign research activities of its MNEs. Japan's RTA as a location for R&D activities has remained greater than one in several industries and has increased most dramatically in agricultural chemicals, telecommunications and motor vehicles (Cantwell and Hodson, 1991).

Overall, one may hypothesise that these data suggest an improvement in the L advantages in Japan facing U.S. firms, and/or an improvement in the O advantages of U.S. firms in at least some sectors of industrial activity. However, as Lawrence (1992) points out, much of the growth of

U.S. stake in Japan in the 1980's was through the reinvested earnings of existing firms rather than capital inflows from new investors from which he inferred that there still remain (perceived) obstacles to first time investment activities by foreign firms in Japan.

What of the I advantages of U.S. firms in exploiting their O advantages in Japan? As Table 5 shows, the ratio of royalties and fees received by U.S. firms from affiliated firms in Japan to those received from unaffiliated firms rose steadily from 0.61 in 1982 to 1.37 in 1990. Over the same period the ratio decreased in the rest of the world from 3.97 to 3.63. Clearly the use of hierarchial transactions by U.S. firms selling their technology to Japan was increasingly favoured relative to its use in other countries.

(ii) Japanese Direct Investment in the U.S.

Background

Between 1983 and 1990, the GNP per capita of the U.S. rose from \$14,150 to \$19,870. This represented a growth rate of 6.5% compared with a corresponding growth rate for Japan of 15.3%. The erosion of O advantages of U.S. firms that had begun in the late 1960's and continued in the 1970's, slowed down, and in some sectors was reversed in the 1980's. However, the O advantages of firms from other countries (especially the Triad countries) continued to grow, as did the extent of their overseas operations. Much of this investment was directed to the U.S. market: Between 1980 and 1989, the share of world stock of inward direct investment in the U.S. increased from 16.5% to 28.6%⁶⁷, and partly because of this, the U.S. began to experience a chronic balance of payments problem of extraordinary proportions by the early 1980's. This was further exacerbated by the strength of the U.S. dollar at this time. These changes represented not only an increasing economic interdependence between the EC and the U.S., but also the increasing convergence of patterns of FDI and domestic economic structure among the Triad countries. Indeed, the growth of inward investment into the U.S. has been

shown to be positively related to the relative GNP growth of the U.S., and especially so in the case of Japanese inward investment (Ray 1989).

The Plaza Accord, which led to the devaluation of the U.S. dollar against the currencies of the G-7 countries, came as a shot in the arm for U.S. industry. It had also a significant effect on the exports of the major trading partners of the U.S. The value of the dollar against the yen fell by 29.4% between 1985 and 1986⁶⁸ and a further 15% in the following year. Indeed, by 1988, and converted at the exchange rate of the time, the hourly wage in manufacturing industry in Japan were estimated to be \$11.41 compared to \$10.18 in the U.S. and \$10.44 in Germany⁶⁹. The circumvention of VERs, which in the last period were an important motivation for Japanese manufacturing investment in the U.S., ceased to be a prime factor in the late 1980's.

Partly as a result of these changes, Japanese exports to the U.S. were seriously jeopardised. Japanese firms immediately responded by raising domestic productivity through enhanced automation, by moving to higher value-added segments and by undertaking global rationalized production. The extent to which Japanese firms have undertaken rationalised production is much less than that of their U.S. or European counterparts. This, in part, reflects the relatively early stage of their internationalisation and in part the nature of their O advantages which until recently have been based on organization skills and other intangible assets, which take longer to transfer, and are more likely to require greater central control over their application (Dunning, 1993c). The O advantages of Japanese firms previous to the 1980's had been based more on the efficient organisation of existing technologies rather than their ability to produce new technologies i.e., they were weak in the innovation of new technology, but were world leaders in its management and application.

Nonetheless, in the 1980's, the U.S. still possessed competitive advantages in certain sectors such as pharmaceuticals, software, electrical machinery and computers. The significant portion of Japanese FDI had hitherto been knowledge seeking and market seeking. Whereas this has continued to the present day, whereas in the 1970's the investment had been primarily *defensive*,

e.g., in response to protectionism, in the last decade it has become increasingly *offensive*, and directed to sectors in which Japanese firms have strong O advantages.

The Evidence

The Japanese direct investment stock in the U.S. between 1983 and 1990 grew from \$11.3 billion to \$83.5 billion, an annual average rate of 90.9% compared to 33.7% for that from the EC. Not surprisingly, the Japanese share of total FDI stock in the U.S. increased from 8.2% in 1983 to 20.7% in 1990. The growth of Japanese manufacturing investment stock in the U.S. since 1986 has exhibited a dramatic annual average growth of 81%, compared with 41% between 1983 and 1986. As a percentage of the stock of total manufacturing FDI in the U.S., such investment rose from 3.5% in 1983 to 9.5% in 1990. The sectors that recorded the greatest gains were fabricated metals and machinery and these sectors were responsible for 20.2% and 28.7% of the total new investment respectively. That these industries were growing is not surprising, for it is these that especially benefit from economies of common governance. They are also the same industries in which exports by Japan had earlier been increasing most dramatically - and were now losing ground due to the rising value of the yen.⁷⁰

Table 4 shows that the ratio of the stock of U.S. manufacturing investment in Japan to that of Japanese manufacturing investment in the U.S. markedly fell from 2.44 to 0.57 between 1983 and 1989. For the first time in 1988, Japan had more invested in manufacturing in the U.S. than the other way round. More than anything else, these data reflect the contrast between the changing configuration of OLI advantages facing the Japanese firms and the Japanese economy compared with those facing U.S. firms and the U.S. economy. In a trans-Pacific context, Japanese outward direct investment in the U.S. clearly outpaced U.S. inward investment in Japan. On a worldwide basis and across all sectors, the ratio of Japanese outward direct investment to inward direct investment *increased* from 3.5 in 1974 to 16.8 in 1989, while the corresponding ratio for the U.S. over the same period *decreased* from 4.4 to 0.97⁷¹

Given the distinct changes in the L advantages facing Japanese firms in the U.S. it is interesting to observe the ratio of Japanese investment stake as a percentage of U.S. GDP. Table 2 shows that this ratio grew from 0.34% in 1983 to 1.52% in 1990. The ratio of Japanese manufacturing direct investment stake to GDP, also, increased from 0.05% in 1983 to 0.28% in 1990. These data confirm that Japanese firms increased their O specific advantages relative to their U.S. counterparts. However, it is also worth noting that the growth in Japanese markets in the U.S. was concentrated in the faster growing sectors.

The 1980's marked a redirection in the motives for FDI of all firms, and especially those investing in the Triad, away from the U.S. from market and natural resource seeking towards efficiency enhancing and the acquisition of critical and competitiveness-enhancing created assets. Firms from other industrialised countries had begun to 'catch up' with U.S. firms in their technological capabilities, and were trying to sustain or advance their global markets. As a consequence, they began to restructure their U.S. investments to embrace high value-added activities, especially in areas where U.S. firms have traditionally had a competitive advantage. Japanese firms had hitherto preferred to be involved in the U.S. through technology agreements or greenfield investments (in which the Japanese firm developed its own technology but used the U.S. infrastructure) In the 1980's however, joint ventures, strategic alliances and mergers and acquisitions became the preferred mode of entry. These modes of investment have the advantage of reducing the high fixed costs and lengthy development times associated with innovation in high-technology industries and in developing new markets. Between 1986 and 1989, the volume of Japanese acquisitions of U.S. companies increased five-fold, to \$13.7 billion in that latter year. In 1989, 187 deals were concluded, of which the largest 10 accounted for almost 60% of the total value of these investments. In contrast, 88 deals were concluded in 1986⁷².

Another aspect of Japanese investment needs to be mentioned. It is a well known feature of the internationalisation process of market seeking investment that investments are first made in the final stages of the the value-added chain and gradually deepen as vertical integration occurs.

Alternatively (or in addition) other foreign firms may set up to engage in supplying operations. Part of the growth of Japanese direct investment in the U.S. has been as a direct result of the Japanese affiliates of major companies developing backward linkages, to ensure a steady supply of inputs for their manufacturing operations. Often, such firms have encouraged suppliers from their home market to make direct investments in the U.S. so as to continue an established relationship (and who are often affiliated in some way to one another)⁷³. This has resulted in the agglomeration of suppliers that have set up operations around particular major manufacturers, and may have to do with Japanese firms' O advantages in process technology (such as just-in-time delivery) with which the Japanese suppliers are already familiar with. While the U.S. Department of Commerce does not report intra-firm trade, a MITI (1990a) report suggests that approximately 30.1% of all inputs were purchased from U.S. based members of the same Keiretsu.

Part of the increase in Japanese manufacturing investments in the U.S. was most certainly at the expense of her manufacturing exports to the U.S. However, it is important to remember that strategic asset acquiring FDI is not substitutable for exports. Therefore the changing sales to export ratio will both reflect the L advantages to exploit the O advantages of Japanese domestic firms and the L advantages to acquire foreign O advantages. From Table 6, which gives the ratio of sales of Japanese affiliates to exports from Japan we see that this ratio increased between 1982 and 1989 in fabricated metals from 0.21 to 1.51, in non-electrical machinery from 0.28 to 0.44 and in chemicals from 0.48 to 1.52. The ratio in food and kindred products grew from 1.78 to 4.8, whereas the ratio for all manufacturing rose from 0.13 to 0.41. This clearly implies that the L advantages of supplying these goods made by Japanese firms from a U.S. location increased substantially over this period. The ratio of sales to exports in electrical machinery fell from 0.1 in 1982 to 0.07 in 1987 despite the tripling of FDI over this period while exports increased by a factor of 8. In 1988 this ratio picked up to 0.15, and by 1989 stood at 0.29. In transportation equipment, the ratio increased from 0.03 in 1985 to 0.24 in 1989. These data also suggest that the L advantages of Japan as a production base for these manufactures were generally superior to the U.S. until 1987. However, as Japanese firms learnt how to efficiently exploit their O

advantages in foreign locations coupled with the appreciation of the yen, the L advantages of the U.S. have been increasing even in electrical machinery, an industry in which the Japanese have had a technological dominance over the previous two decades⁷⁴. Whether this trend will continue is a matter of conjecture, although it is possible that with new waves of protectionism, as well as the appreciating yen, this will most likely be the case.

Until the mid 1980's, Japanese firms obtained most of their payments for technology sales to the U.S. from arms-length transactions. In 1981 for example, the ratio of royalties and fees paid by affiliated firms in the U.S. to those paid by unaffiliated firms in the U.S. to Japan was 0.44. By 1990 this ratio had risen to 1.9, which suggests a marked increase in the propensity of Japanese firms to internalise the market for their technological advantages in the U.S. (Table 5). The world wide ratio for all payments of royalties and fees by affiliated firms to those paid by all unaffiliated firms increased from 1.44 in 1981 to 1.58 in 1990, indicating that internal and external transactions of intermediate services of Japanese firms had reached the level of those of the more internationalised operations of European MNEs⁷⁵ in a relatively short period of time. Since intra-firm transactions tend to predominate in high technology sectors as well as those subject to economies of scale and scope, these data provide an interesting insight into the changing nature of Japanese production in the U.S.

4. SUMMARY AND CONCLUSIONS

The purpose of this paper has been to apply the concept of the investment development path to explain the level and structure of international direct investment flows between the U.S. and Japan over the post World War II period. In doing so, it has confirmed the importance of country specific factors in influencing the OLI configuration of MNEs, or potential MNEs; and has also

demonstrated the ways in which the O specific advantages of firms at one period may affect, or be affected by, the L specific advantages of countries at another period of time.

The eclectic paradigm hypothesises that the propensity of countries to engage in outward direct investment, or be invested in by other countries, rests upon the O specific advantages of their own firms relative to those of their foreign competitors; and the extent to which their own or foreign firms choose to exploit their O advantages (or acquire new ones) by engaging in FDI rather than some alternative organisational form of asset deployment.

In making a clear distinction between natural and created assets, the paper has argued that, in the post World War II period, it is the innovation and efficient use of the second kind of assets which preeminently has determined the trajectory of an industrialised or industrialising country's investment development path. In particular, the paper has sought to explain why the recent level and pattern of Japanese outward and inward direct investment flows has been so different from that of its U.S. counterparts - although, in the early 1990's there has been some suggestion that they are converging. Both because of differences in their L specific endowments and their initial positions on the investment development path, the propensity of Japanese firms to internationalise their value added activities has been several steps behind that of U.S. MNEs. At the same time, the sectoral distribution of their respective competitive advantages has reflected their comparative abilities to create and exploit particular kinds of O specific assets.

While the Japanese international direct investment position in the last 40 years has moved from Stage 2 to Stage 4 - and the beginnings of Stage 5 - of the development path, the U.S. position has waivered between Stage 4 and 5. At the same time, for reasons explained in the paper, the trajectory of the Japanese path has been quite unique, in that, for most of the period, the amount of inward direct investment has been much lower than one would have expected for an industrialising (and, later, industrialised) country; and indeed much less than that which occurred in the earlier stages of U.S. industrial development. Here, as the paper has emphasised,

government policy has played a decisive role among countries whose competitive advantages rest more on the created than the natural assets they possess.

The paper has further illustrated the ways in which the competitive (or O) advantages of firms both affect, and are affected by the competitive (or L) advantages of countries, and also how each influences the ways in which resources and capabilities are organized across national markets.

The role of government as a factor affecting both the structure of a country's international direct investment position at a given moment of time, and the way it changes over a period of time, has been a central theme of this paper. Indeed, the role of government in influencing the competitive advantages of its firms and locationally bound assets may itself be considered as a critical L specific advantage (or disadvantage). In the context of trans-Pacific investment flows, we have sought to contrast a holistically managed Japanese economy and an American economy in which - except for the defence and space sectors - governments have preferred only to intervene to counteract structural distortions.

Such differences in the systemic role of governments reflect a host of historical and cultural country specific characteristics, and also, the fact that, in Japan the relative significance of created to natural assets is so much higher than in the U.S. There is also little disagreement among scholars that the trajectory of Japan's investment development path - and particularly in the earlier part of the post war period - has been strongly influenced and closely monitored by the Japanese government, even though the policies pursued have been broadly consistent with what the (dynamic) market forces. The paper has also shown how the nature and direction of the Japanese government's involvement has changed as the economy has become both more advanced and internationalised.

In at least two senses, the TPDI case study has indicated that two modifications are needed to the investment development path as originally set out in Dunning (1981). The first is that the role of government in influencing both inward direct investment and outward direct investment by the

kind of macro-organisational policies needs more explicit incorporation into the model. The second is that over the past decade, an increasing proportion of FDI - both of Japanese and U.S. origin - has been undertaken to acquire O specific advantages rather than to exploit such advantages. Clearly, such investment is likely to be directed to countries which are home to firms that possess complementary assets to those already possessed by the acquiring firms. To that degree, then, a country which attracts more investment than it exports, i.e. is a net inward investor, might be doing so from a position of economic strength rather than weakness - a situation which was not countenanced in the initial framing of the investment development path.

In conclusion, we believe that the prospects of TFDI in the 1990s are mixed. There can be little doubt that outward direct investment in Japan is currently well below that which one would expect in a country of that income level and industrial structure; and there is a tremendous potential for more U.S. MNE activity in Japan. On the other hand, the prospects for Japanese investment in the U.S. continue to remain favourable, albeit perhaps at a reduced greenfield rate. Most certainly, the higher costs of entry by greenfield foreign investors into the Japanese production and marketing systems, *vis-à-vis* those into its U.S. counterpart, seem unlikely to be much reduced in the next decade. If a speedy breakthrough is to occur, it must surely be through a M&A route. Here, if the conclusion of strategic alliances is anything to go by, the portends are not at all encouraging, as the rate of increase in new alliances concluded between U.S. and Japanese firms over the period 1985 to 1989 compared with the previous five years is well below that concluded between U.S. and European firms, or that within Europe or the U.S.

At the same time, one cannot help believe that, just as there are both economic and political pressures for Japan to do more to open its markets to U.S. imports, so these pressures will mount for Japan to follow similar principles as the U.S., with respect to the extent to which it allows its own firms to be taken over or merged with foreign firms. If such an event should occur, U.S. and European firms could regain some of their earlier global competitive advantages, one might well expect to see Japan entering the fifth stage of her investment development path by the late

1990s; and, rather belatedly, for inward direct investment to rise much more markedly than outward direct investment.

¹Defined as production in Japan financed by U.S. direct investment and production in the U.S. financed by Japanese direct investment.

² These main types of international production are examined in greater detail in Dunning (1993a)

³ Defined as the difference in the stock of its inward and outward direct investment . Note that when the former exceeds the latter net investment position will be negative.

⁴ Dunning (1993a), pg77

⁵ Amongst others, Cantwell 1989, Tolentino 1992, Cantwell and Tolentino 1987, Lall 1983 and 1990, UN 1993a.

⁶Technological capability may be regarded as the collection of largely human skills necessary to efficiently utilize tangible resources at the disposal of a firm over time. These skills, which are to a great degree non-codifiable in nature, can be related to technical, managerial, entrepreneurial or marketing know-how. See Lall (1990) for a clear exposition on this issue. The existence of national technological capability as opposed to firm-level technological capability is a more complex issue. As Lall (1990) points out, it is not simply the sum of individual firm capabilities, but there is likely to be some synergy between individual capabilities. Instead, it is more practical to speak of *national capabilities in particular industries*.

⁷This issue is explored further in Narula (1993) while the influence of technology accumulation on FDI is dealt with in greater depth in Cantwell (1989).

⁸ It is to be noted that inward investment activity precedes generally outward investment activity.

⁹ The role of country specific characteristics in determining the extent and pattern of FDI is discussed more fully in Dunning (1981), chapter 4.

¹⁰Although the actual amount of investment will almost certainly continue to rise.

¹¹ Refer to the definition of TNC as put forward by Bartlett and Ghoshal (1989).

¹²See the article by Reich (1990) for a succinct discussion on this issue.

¹³ See Gugler (1991).

¹⁴ Kogut (1991) and others have suggested that organisational and cultural based assets, not to mention the strategies and administration of governments may not be transferable. This, depending on the transaction costs associated with the creation and deployment of the assets could lead a country to having a permanently positive (or negative) net outward investment position compared with its competitors in stage 5. Also it is possible that the macro-organisational strategy of governments may deliberately encourage (discourage) outward or inward investment.

¹⁵ FDI figures used throughout this section are based on U.S. Department of Commerce data, and unless otherwise indicated, are stock figures on a historical cost basis.

¹⁶ Nakamura (1981) pg 16-17.

¹⁷ Developed and implemented by Joseph Dodge, an American economist.

¹⁸Yoshida (1987) points out that although responsibility for foreign exchange controls had been transferred to the Japanese government in 1949, it had the approval of the allies.

¹⁹Excerpted from the Foreign Investment Law of 1950 (U.S. Dept of Commerce, 1956).

²⁰Sekiguchi, 1979, pg10. Encarnation (1992) notes that this mode of investment was allowed during the occupation to pre-war investors. Remittance of principal was not permitted during the occupation, and was limited to 20% per year from 1952.

²¹, From 1950 to 1953, investments grew at an annual average rate of 107.9%, compared to the 1954-1960 period when growth tapered off to 15.3%. The corresponding figures for manufacturing direct investment are 60% and 44.8%.

²²U.S. Dept of Commerce 1956 p 100-1, based on data provided by the Japanese Ministry of Finance (MOF). Capitalized value of technology agreements was calculated by the MOF on the basis of a 5% interest rate and individual tenure of contracts.

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- ²³ such as Brazil, where an import-substitution program had been instituted.
- ²⁴ Although directly comparable data is not available, estimates are that this accounted for about 6-7% of its total worldwide stake.
- ²⁵ U.S. Department of Commerce (1984).
- ²⁶ It is interesting to note that between 1952 and 1972, this and all other plans underestimated GNP growth. There were 5 long-term economic plans instituted, and were not plans in the normal sense but 5-10 year economic forecasts which overlapped (Japan Economic Institute of America, 1984).
- ²⁷ Although takeovers through this mode were screened.
- ²⁸ Especially after Japan joined the OECD in 1964 (Sekiguchi, 1979).
- ²⁹ Sekiguchi (1979) pg 104.
- ³⁰ Based on Department of Commerce data.
- ³¹ Disaggregated data before 1966 are available only on an intermittent basis.
- ³² Hourly wage rates in manufacturing increased between 1965 to 1970 from \$0.52 to \$1.06, whereas in the U.S. they increased from \$2.61 to \$3.36. Labour productivity was also lower. (Sekiguchi 1979, pg 104)
- ³³ Ozawa (1979) presents several examples of these investments - pg 117-121.
- ³⁴ Comparisons are difficult given the different basis for estimation used by official U.S. and Japanese government agencies, and the figures are used here with some caution.
- ³⁵ Takeuchi (1990)
- ³⁶ Figures for sales of Japanese foreign subsidiaries indicate that for Latin American manufacturing subsidiaries exported less than 20% of their output, whereas for Asian subsidiaries the figure was closer to 50%, half of which was exported to Japan (Sekiguchi, 1979)
- ³⁷ Although the share of steel began to recover in the 1970's - it is possible that the undervalued yen at the time made exports of Japanese steel uncompetitive on the world market.

³⁸The 1973-77 plan had forecast a growth rate of 9.44% and 6+% for 76-82 plan.

³⁹ Ozawa (1979) pg16

⁴⁰ Although it hit a trough again in 1981.

⁴¹ Ozawa (1989)

⁴² See Saxonhouse and Stern (1989) for an exhaustive analysis of NTBs.

⁴³ Dunning (1989)

⁴⁴ The UK was an exception, which grew in importance from 10.9% of total U.S. DI stake to 13.2% by 1982.

⁴⁵ Although the revision became effective in December 1980.

⁴⁶ See Yoshida (1987) pg 124-128

⁴⁷ Revealed technological advantage measures comparative advantages in innovative activity, and is defined as the share of U.S. patents taken out by foreigners and attributable to research in the country in question. in a given industry, relative to its total share of U.S. patents taken out by foreigners. Therefore this index varies around one, with those locations (and firms from that country) that have a RTA of greater than one as being relatively advantaged in that sector. For further details see Cantwell (1989).

⁴⁸ Over the period 1969-1977, Japan had a RTA of over 1 in sectors such as metallurgical production, construction equipment, motor vehicles, non metallic minerals, electrical equipment and professional instruments (p146-7).

⁴⁹ Institute of Social Science (1990), Kogut (1990), and Dunning (1993b).

⁵⁰ New York Times April 1, 1983.

⁵¹ It is to be noted that the trend towards investment in R&D-intensive sectors during this period applies not just to Japanese investment, but all inward investment into the US (Kim and Lyn

1987). The difference between Japanese FDI and FDI from other (mainly European) countries is that Japanese firms' primarily invested to acquire O advantages, not utilise them.

⁵²Ozawa (1979) pg118.

⁵³ Prior to 1974, changes in parents claims on their U.S. affiliates resulting from capital gains of losses were treated as valuation adjustments to the year end direct investment position.(U.S. Dept of Commerce, 1984a) Figures for total direct investment stock are particularly innacurate because of the large intercompany account outflows associated with the Japanese trading firms' activities in the US.

⁵⁴ Department of Commerce data during this period had transportation machinery under the main heading of Other Manufacturing which included other items such as instruments, glass, stoneware and textiles.

⁵⁵It is also possible that this may be as a result of transfer pricing practices, given the close relationship between Japanese manufacturing enterprises and the trading houses. Compared with the profitability of the former, the rate of return on trade-related Japanese direct investment has throughout the period been very healthy (Survey of Current Business, vd).

⁵⁶ During the period 1977-1980 electrical machinery manufacturing sales increased by a factor of about 4, while imports dropped slightly, perhaps compensated for by local production.

⁵⁷ Most of the restrictions that are currently being negotiated affect U.S. exports of primary products, and NTBs that inhibit FDI in non-manufacturing sectors.

⁵⁸For example, Encarnation (1992) has estimated that between 1978 and 1982, over half of the drugs approved by the Japanese government were manufactured using foreign technology.

⁵⁹Porter (1990) p 409.

⁶⁰World Economic Forum and IMEDE (1993)

⁶¹ World Economic Forum and IMEDE (1993).

⁶² Although these negotiations are still continuing, some of the the most significant agreements made regarding market access to Japan for U.S. goods date back to the mid-1980's.

⁶³Department of Commerce, unpublished data.

⁶⁴ In 1989 this ratio had fallen to slightly below 1.

⁶⁵ Based on Department of Commerce data. This is calculated by dividing net income (after U.S. income taxes) by the average of the beginning- and end-of year direct investment positions.

⁶⁶See especially, Ouchi (1981), Destouzos et al (1989), Christopher (1986) and Suzaki (1987).

⁶⁷ U.S. Dept of Commerce (1991) .

⁶⁸ IMF data, using period averages.

⁶⁹Keizai Koho Center (1991).

⁷⁰Porter (1990) identifies the clusters of competitive industries in the Japanese economy as being: transportation equipment, office machinery, consumer electronics, fabricated metal products and computing equipment.

⁷¹MITI (1990b).

⁷² UNCTC, unpublished data.

⁷³More than 25% of the total sales in Japan are accounted for by the six keiretsu or corporate groups. Within each keiretsu firms are linked through webs of interlocking directorates and shareholdings. There are estimated to be some 12000 firms that make up the 6 keiretsu (Imai, 1990).

⁷⁴ The revealed technological advantage (RTA) of Japan in electrical equipment was 1.24 during the 1969-1977 period and 1.21 in the 1978-1986 period, whereas that of the U.S. has stayed constant at 1.03 (Cantwell and Hodson, 1990).

⁷⁵ The same ratio on payments of royalties and fees for EC firms increased from 0.98 in 1982 to 1.66 in 1990.

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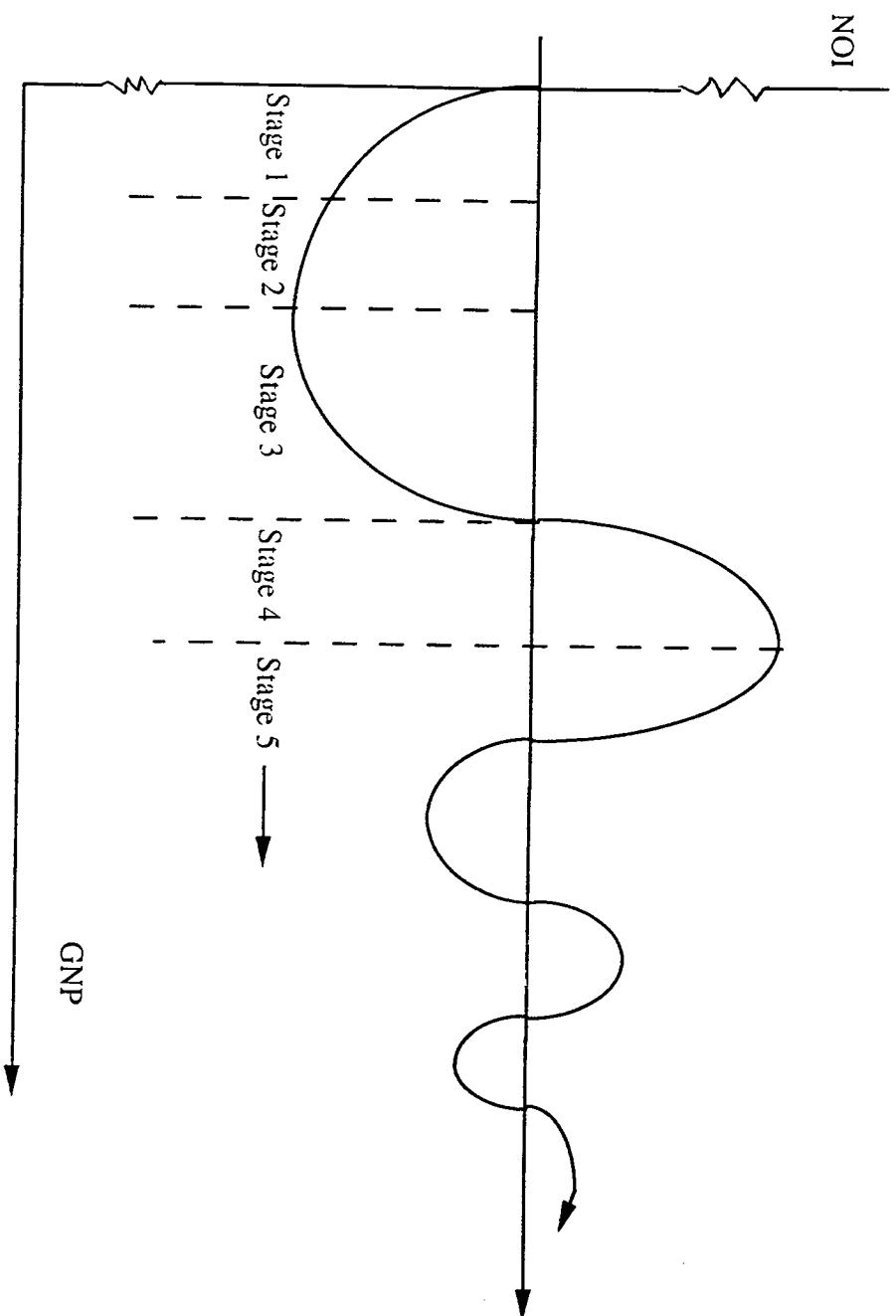
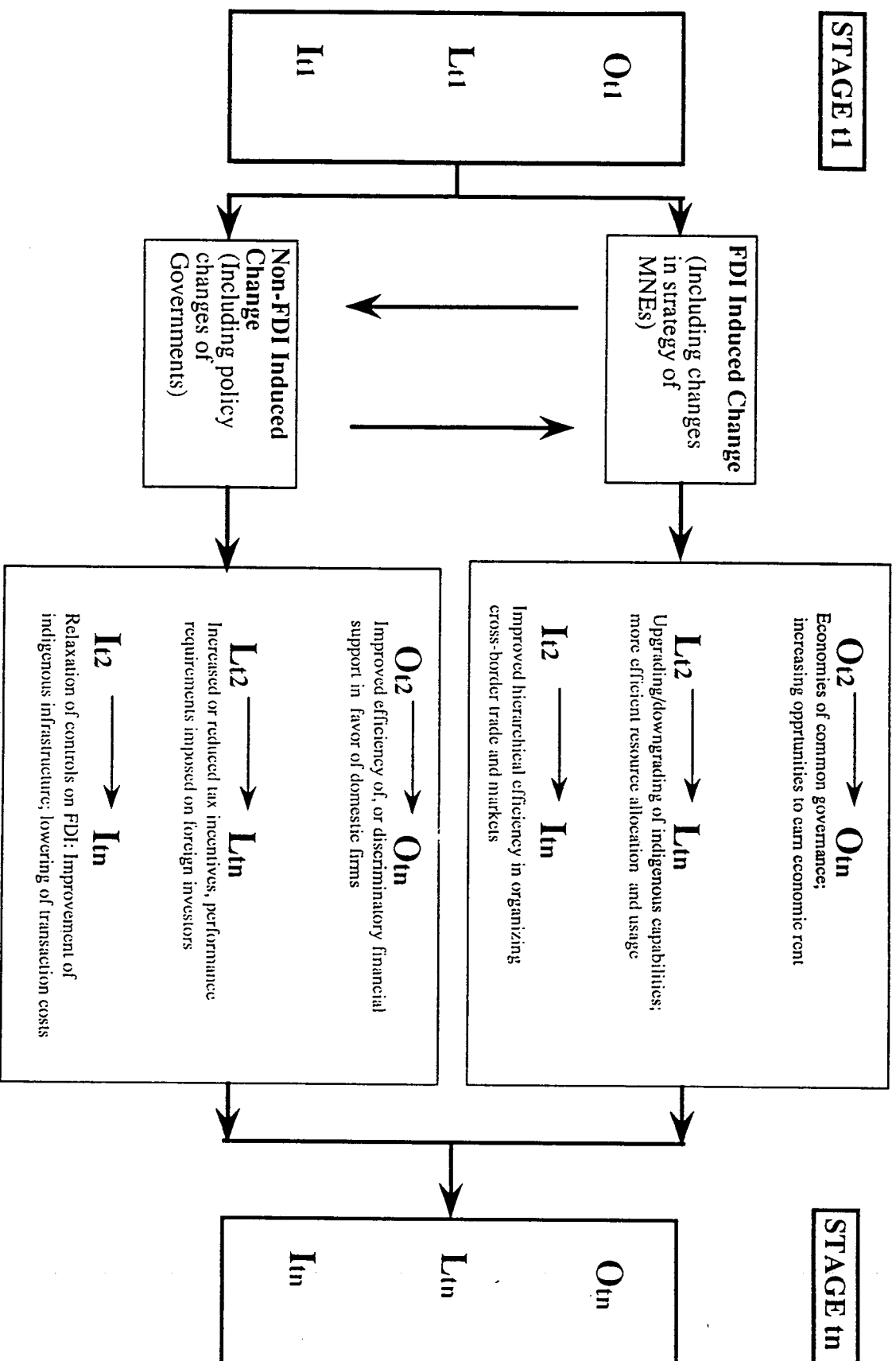


FIGURE 2: THE PATTERN OF THE INVESTMENT DEVELOPMENT PATH

NOTE: Noi drawn to scale - for illustrative purposes only

FIGURE 1: SOME DYNAMICS OF THE STAGE OF GROWTH AND THE ECLECTIC PARADIGM [ONLY TWO STAGES ILLUSTRATED]



Source: Dunning, 1993a

TABLE 1
GROWTH OF U.S DIRECT INVESTMENT STAKE IN JAPAN, 1950-1990

TOTAL INVESTMENT				MANUFACTURING INVESTMENT				
	1	2	3	4	5	6	7	8
	US\$	Annual (1) as a	% of all	(1) as %	US\$	Annual	(5) as %	(5) as a
	(mill)	increase %	US FDI	of GDP	(mill)	increase %	of (1)	% of GDP
1950	19		0.16	0.134	5		26.32	0.035
1951	48	152.63	0.37	0.294	9	80.00	18.75	0.055
1952	75	56.25	0.51	0.434	13	44.44	17.33	0.075
1953	101	34.67	0.62	0.518	17	30.77	16.83	0.087
1954	112	10.89	0.64	0.517	22	29.41	19.64	0.102
1955	129	15.18	0.67	0.540	28	27.27	21.71	0.117
1956	140	8.53	0.62	0.519	35	25.00	25.00	0.130
1957	185	32.14	0.73	0.601	58	65.71	31.35	0.189
1958	181	-2.16	0.66	0.566	63	8.62	34.81	0.197
1959	209	15.47	0.70	0.582	69	9.52	33.01	0.192
1960	254	21.53	0.80	0.590	91	31.88	35.83	0.211
1961	302	18.90	0.87	0.567	103	13.19	34.11	0.194
1962	373	23.51	1.00	0.633	122	18.45	32.71	0.207
1963	472	26.54	1.16	0.695	145	18.85	30.72	0.214
1964	599	26.91	1.35	0.747	208	43.45	34.72	0.259
1965	676	12.85	1.37	0.746	276	32.69	40.83	0.305
1966	731	8.14	1.41	0.697	366	32.61	50.07	0.349
1967	834	14.09	1.47	0.678	442	20.77	53.00	0.359
1968	1005	20.50	1.62	0.686	527	19.23	52.44	0.360
1969	1226	21.99	1.80	0.707	645	22.39	52.61	0.372
1970	1482	20.88	1.96	0.724	768	19.07	51.82	0.375
1971	1913	29.08	2.31	0.825	978	27.34	51.12	0.422
1972	2323	21.43	2.58	0.763	1185	21.17	51.01	0.389
1973	2671	14.98	2.64	0.646	1399	18.06	52.38	0.338
1974	3319	24.26	3.02	0.723	1520	8.65	45.80	0.331
1975	3339	0.60	2.69	0.669	1557	2.43	46.63	0.312
1976	3797	13.72	2.78	0.679	1691	8.61	44.54	0.302
1977	4593	20.96	3.15	0.669	1968	16.38	42.85	0.286
1978	4963	8.06	2.96	0.515	2317	17.73	46.69	0.241
1979	6208	25.09	3.32	0.622	2728	17.74	43.94	0.273
1980	6243	0.56	2.90	0.600	2971	8.91	47.59	0.286
1981	6755	8.20	2.98	0.579	3236	8.92	47.91	0.277
1982	6636	-1.76	3.20	0.613	3232	-0.12	48.70	0.299
1983	7661	15.45	3.70	0.649	3915	21.13	51.10	0.332
1984	7936	3.59	3.75	0.633	3942	0.69	49.67	0.314
1985	9235	16.37	4.01	0.696	4584	16.29	49.64	0.346
1986	11472	24.22	4.42	0.586	5439	18.65	47.41	0.278
1987	14671	27.89	4.67	0.617	8107	49.05	55.26	0.341
1988	18009	22.75	5.36	0.633	8929	10.14	49.58	0.314
1989	18488	2.66	5.00	0.652	9721	8.87	52.58	0.343
1990	20994	13.55	4.98	0.729	10623	9.28	50.60	0.369

SOURCE: US Department of Commerce, Survey of Current Business various, editions

TABLE 2
GROWTH OF JAPANESE DIRECT INVESTMENT STAKE IN THE U.S., 1950-199

<u>TOTAL INVESTMENT</u>					<u>MANUFACTURING INVESTMENT</u>			
	1	2	3	4	5	6	7	8
	US\$	Annual	(1) as a	(1) as %	US\$	Annual	(5) as %	(5) as a
	(mill)	increase	% of all	of GDP	(mill)	increase	of (1)	% of GDP
1950	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1958	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1959	80	N.A.	1.21	0.016	N.A.	N.A.	N.A.	N.A.
1960	88	10.00	1.27	0.017	50	N.A.	56.82	0.010
1961	92	4.55	1.24	0.018	51	2.00	55.43	0.010
1962	112	21.74	1.47	0.020	51	0.00	45.54	0.009
1963	104	-7.14	1.31	0.017	55	7.84	52.88	0.009
1964	72	-30.77	0.86	0.011	54	-1.82	75.00	0.008
1965	118	63.89	1.34	0.017	56	3.70	47.46	0.008
1966	103	-12.71	1.14	0.014	60	7.14	58.25	0.008
1967	108	4.85	1.09	0.014	64	6.67	59.26	0.008
1968	181	67.59	1.67	0.021	65	1.56	35.91	0.007
1969	176	-2.76	1.49	0.019	67	3.08	38.07	0.007
1970	229	30.11	1.73	0.023	70	4.48	30.57	0.007
1971	-227	-199.13	-1.63	-0.021	76	8.57	-33.48	0.007
1972	-154	-32.16	-1.04	-0.013	72	-5.26	-46.75	0.006
1973	152	-198.70	0.74	0.012	141	95.83	92.76	0.011
1974	345	126.97	1.37	0.024	330	134.04	95.65	0.023
1975	591	71.30	2.14	0.038	325	-1.52	54.99	0.021
1976	1178	99.32	3.83	0.069	304	-6.46	25.81	0.018
1977	1755	48.98	5.07	0.092	332	9.21	18.92	0.017
1978	2749	56.64	6.73	0.129	474	42.77	17.24	0.022
1979	3493	27.06	6.41	0.147	696	46.84	19.93	0.029
1980	4723	35.21	5.69	0.183	1033	48.42	21.87	0.040
1981	7697	62.97	7.08	0.257	1321	27.88	17.16	0.044
1982	9677	25.72	7.76	0.311	1624	22.94	16.78	0.052
1983	11336	17.14	8.27	0.338	1605	-1.17	14.16	0.048
1984	16044	41.53	9.75	0.431	2460	53.27	15.33	0.066
1985	19313	20.38	10.46	0.487	2738	11.30	14.18	0.069
1986	26824	38.89	12.17	0.640	3578	30.68	13.34	0.085
1987	35151	31.04	13.35	0.786	5345	49.39	15.21	0.119
1988	51126	45.45	16.24	1.065	11065	107.02	21.64	0.231
1989	67319	31.67	18.01	1.304	13978	26.33	20.76	0.271
1990	83498	24.03	20.68	1.515	15169	8.52	18.17	0.275

SOURCE: US Department of Commerce, Survey of Current Business, various editions

TABLE 3

SALES OF US MANUFACTURING AFFILIATES IN JAPAN AND US EXPORTS TO JAPAN

	All industries		Total mfg		Food & Kindred		Chemicals		Metals		Machinery except Elect.		Electrical Machinery		Transportation eqpt	
	(A)	(B) A/B	(A)	(B) A/B	(A)	(B) A/B	(A)	(B) A/B	(A)	(B) A/B	(A)	(B) A/B	(A)	(B) A/B	(A)	(B) A/B
	SALES	EXPORTS	SALES	EXPORTS	SALES	EXPORTS	SALES	EXPORTS	SALES	EXPORTS	SALES	EXPORTS	SALES	EXPORTS	SALES	EXPORTS
	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill	\$ mill
1967	2,520	2,635 0.96	944	771 1.22	63	487 0.13	357	227 1.57	1	86 0.01	395	305 1.30	52	23 2.25	2	89 0.02
1972	6,727	4,928 1.37	2,516	1,909 1.32	90	799 0.11	807	314 2.57	NSA	126	1,185	575 2.06	147	228 0.64	20	447 0.04
1977	13,232	10,419 1.27	3,132	2,757 1.14	NSA	2,516	725	975 0.74	58	153 0.38	1,532	855 1.79	163	453 0.36	3	371 0.01
1982	25,788	20,367 1.27	5,880	13,279 0.44	648	3,938 0.16	1,659	2,556 0.65	108	782 0.14	2,300	1,055 2.18	536	1,595 0.34	4	1,067 0.00
1985	28,018	21,603 1.30	10,011	15,148 0.66	NSA	4,394	2,318	2,849 0.81	165	624 0.26	NSA	1,440	991	2,348 0.42	NSA	1,713
1986	34,378	22,891 1.50	13,518	16,548 0.82	NSA	4,463	3,339	3,047 1.10	244	576 0.42	NSA	1,448	1,347	2,631 0.51	NSA	2,135
1987	42,416	26,906 1.58	17,268	19,370 0.89	NSA	5,484	4,282	3,366 1.27	291	774 0.38	NSA	1,468	1,747	3,316 0.53	NSA	2,283
1988	53,382	36,048 1.48	21,525	26,673 0.81	NSA	6,814	4,489	3,934 1.14	272	1,400 0.19	NSA	2,254	2,302	4,657 0.49	NSA	2,911
1989	58,083	42,752 1.36	22,434	32,067 0.70	1,809	7,447 0.24	4,130	4,664 0.89	312	2,044 0.15	NSA	2,693	2,681	5,775 0.46	146	2,993 0.05

SOURCE: US Department of Commerce, Survey of Current Business, various editions, and UN Commodity Trade Statistics, various editions

TABLE 4
RATIO OF U.S. DIRECT INVESTMENT STAKE IN JAPAN
TO JAPANESE INVESTMENT IN THE U.S.

<u>TOTAL INVESTMENT</u>				<u>MANUFACTURING INVESTMENT</u>			
Inward (I)	Outward (O)	I/O		Inward (I)	Outward (O)	I/O	
1950	19	N.A.	N.A.	1950	5	N.A.	N.A.
1958	181	N.A.	N.A.	1958	63	N.A.	N.A.
1959	209	80	2.61	1959	69	N.A.	N.A.
1960	254	88	2.89	1960	91	50	1.82
1961	302	92	3.28	1961	103	51	2.02
1962	373	112	3.33	1962	122	51	2.39
1963	472	104	4.54	1963	145	55	2.64
1964	599	72	8.32	1964	208	54	3.85
1965	676	118	5.73	1965	276	56	4.93
1966	731	103	7.10	1966	366	60	6.10
1967	834	108	7.72	1967	442	64	6.91
1968	1005	181	5.55	1968	527	65	8.11
1969	1226	176	6.97	1969	645	67	9.63
1970	1482	229	6.47	1970	768	70	10.97
1971	1913	-227	N.A.	1971	978	76	12.87
1972	2323	-154	N.A.	1972	1185	72	16.46
1973	2671	152	17.57	1973	1399	141	9.92
1974	3319	345	9.62	1974	1520	330	4.61
1975	3339	591	5.65	1975	1557	325	4.79
1976	3797	1178	3.22	1976	1691	304	5.56
1977	4593	1755	2.62	1977	1968	332	5.93
1978	4963	2749	1.81	1978	2317	474	4.89
1979	6208	3493	1.78	1979	2728	696	3.92
1980	6243	4723	1.32	1980	2971	1033	2.88
1981	6755	7697	0.88	1981	3236	1321	2.45
1982	6636	9677	0.69	1982	3232	1624	1.99
1983	7661	11336	0.68	1983	3915	1605	2.44
1984	7936	16044	0.49	1984	3942	2460	1.60
1985	9235	19313	0.48	1985	4584	2738	1.67
1986	11472	26824	0.43	1986	5439	3578	1.52
1987	15664	35151	0.45	1987	8107	5345	1.52
1988	18009	51126	0.35	1988	8929	11065	0.81
1989	18488	67319	0.27	1989	9721	13978	0.70
1990	20994	83498	0.25	1990	10623	15169	0.70

SOURCE: US Department of Commerce, Survey of Current Business, various editions

TABLE 5
RATIO BETWEEN ROYALTIES AND FEES RECEIVED FROM AND PAID TO AFFILIATED FIRMS IN JAPAN
AND US TO THOSE RECEIVED FROM NON-AFFILIATED FIRMS 1972-90

	RECEIPTS FROM JAPAN by US parents				PAYMENTS TO JAPAN by foreign firms			
	AFFILIATED	UNAFFILIATED	TOTAL	RATIO aff/unaff (1/2)	AFFILIATED	UNAFFILIATED	TOTAL	RATIO aff/unaff (3/4)
	1	2	1+2	(1/2)	3	4	(3+4)	(3/4)
1972	114	240	354	0.48	1	6	7	0.17
1977	300	289	589	1.04	-38	15	-23	NC
1980	413	354	767	1.17	156	-19	137	NC
1981	413	379	792	1.09	39	89	128	0.44
1982	302	494	796	0.61	-172	37	-135	NC
1983	387	500	887	0.77	-154	38	-116	NC
1984	394	524	918	0.75	9	53	62	0.17
1985	476	576	1052	0.83	111	24	135	4.63
1986	715	632	1347	1.13	168	114	282	1.47
1987	1080	723	1803	1.49	185	88	273	2.10
1988	1399	1022	2421	1.37	241	123	364	1.96
1989	1480	1044	2524	1.42	299	129	428	2.32
1990	1653	1205	2858	1.37	349	184	533	1.90

NC = Not Calculable

NOTE: Royalties and Fees given are net. Negative numbers indicate that receipts of Royalties and fees of US affiliates from their Japanese parents exceeded payments to Japanese parents in that year

SOURCE: US Department of Commerce, Survey of Current Business, various issues

TABLE 6

SALES OF JAPANESE MANUFACTURING AFFILIATES IN THE U.S. AND JAPANESE EXPORTS TO THE U.S.

	All industries		Total mfg		Food & Kindred		Chemicals		Metals		Machinery except Elect.		Electrical Machinery		Transportation eqpt	
	(A) SALES \$ bill	(B) A/B EXPORTS \$ bill	(A) SALES \$ bill	(B) A/B EXPORTS \$ bill	(A) SALES \$ bill	(B) A/B EXPORTS \$ bill	(A) SALES \$ bill	(B) A/B EXPORTS \$ bill	(A) SALES \$ bill	(B) A/B EXPORTS \$ bill	(A) SALES \$ bill	(B) A/B EXPORTS \$ bill	(A) SALES \$ bill	(B) A/B EXPORTS \$ bill	(A) SALES \$ bill	(B) A/B EXPORTS \$ bill
1977	50.80	18.90 2.69	2.26	18.66 0.12	0.28	0.24 1.17	0.12	0.49 0.24	0.65	3.44 0.19	0.32	2.00 0.16	0.18	3.15 0.06	NSA	5.55
1980	84.20	32.96 2.55	3.99	32.50 0.12	0.46	0.30 1.53	0.38	0.75 0.51	1.07	4.91 0.22	0.52	6.20 0.08	0.68	2.85 0.24	NSA	13.20
1982	106.70	39.92 2.67	5.20	39.26 0.13	0.57	0.32 1.78	0.44	0.92 0.48	1.16	5.64 0.21	1.00	3.55 0.28	0.92	9.27 0.10	NSA	16.20
1985	152.10	72.38 2.10	11.19	71.40 0.16	0.65	0.52 1.25	0.61	1.48 0.41	4.93	5.50 0.90	1.19	7.36 0.16	1.86	22.26 0.08	0.63	25.17 0.03
1986	116.60	85.45 1.36	11.95	84.36 0.14	NSA	0.52	NSA	1.87	3.08	4.64 0.66	1.81	8.87 0.20	1.68	26.06 0.06	NSA	32.52
1987	182.30	88.07 2.07	14.00	86.91 0.16	0.61	0.47 1.30	1.35	2.23 0.61	3.54	4.44 0.80	2.38	10.11 0.24	1.89	26.79 0.07	NSA	32.54
1988	225.30	93.16 2.42	24.75	91.78 0.27	1.00	0.39 2.55	2.73	2.26 1.21	5.20	5.09 1.02	3.22	11.84 0.27	3.09	19.46 0.16	2.96	30.26 0.10
1989	267.01	97.11 2.75	39.26	95.66 0.41	1.64	0.34 4.80	3.80	2.50 1.52	7.31	4.85 1.51	6.10	14.01 0.44	4.13	21.65 0.29	7.35	30.82 0.24

NSA = data not separately available or industry breakdown suppressed

SOURCE: US Department of Commerce, Survey of Current Business, various editions, and UN Commodity Trade Statistics, various editions