

# Transnational Economic Synergy and Business Networks: The Case of Two-way Investment Between Malaysia and Singapore

HENRY WAI-CHUNG YEUNG

*Department of Geography, National University of Singapore, 10 Kent Ridge Crescent, Singapore 119260*

(Received February 1997; in revised form August 1997)

YEUNG H. W.-C. (1998) Transnational economic synergy and business networks: the case of two-way investment between Malaysia and Singapore, *Reg. Studies* 32, 687–706. This paper examines the argument that two-way investment flows, embedded in transnational business networks, constitute an important source of economic synergy between regional economies. Whereas these macro-economic flows of investment can be explained by Dunning's investment development cycle model and Porter's competitive advantage perspective, they are less useful in explaining the role of transnational business networks in constituting economic synergy between countries and regions. Based on secondary data published by respective authorities in Malaysia and Singapore, it is found that two-way investment between Malaysia and Singapore has long historical roots. When both economies develop over time, the structure of investment flows across the Straits begins to change in response to different levels of economic development and competitive advantage. Malaysia has been the most important geographical destination for Singapore's outward foreign direct investment (FDI). Similarly, Singapore has been an important geographical destination for outward FDI from Malaysia. In assessing the role of two-way investment in promoting economic synergy, this paper discusses how investment flows between Malaysia and Singapore can be embedded in business networks. Several case studies of business networks by leading transnational corporations from Malaysia and Singapore are provided.

Foreign direct investment    Business networks    Economic synergy    Malaysia    Singapore

YEUNG H. W.-C. (1998) La synergie économique et les réseaux commerciaux: étude de cas de l'investissement bilatéral entre la Malaisie et la Singapour, *Reg. Studies* 32, 687–706. Cet article cherche à aborder la thèse selon laquelle les flux d'investissement bilatéral, enchâssés dans des réseaux commerciaux transnationaux, représentent une source importante de synergie économique interrégionale. Alors que ces flux d'investissement macroéconomiques peuvent s'expliquer par le modèle de Dunning quant au cycle d'investissement et par le point de vue de Porter en ce qui concerne l'avantage compétitif, ils sont moins utiles pour expliquer le rôle des réseaux commerciaux transnationaux dans le développement d'une synergie économique internationale ou interrégionale. A partir des données secondaires publiées par les administrations respectives en Malaisie et en Singapour, il s'avère que l'investissement bilatéral entre la Malaisie et la Singapour est bien enraciné. Au fur et à mesure que les économies se développent, la structure des flux d'investissement à travers le détroit évolue en fonction des niveaux du développement économique et de l'avantage comparatif différents. La Malaisie a été la destination géographique la plus importante pour l'investissement direct étranger en provenance de la Malaisie. Tout en évaluant le rôle de l'investissement bilatéral dans la promotion de la synergie économique, cet article discute la manière dont les flux d'investissement entre la Malaisie et la Singapour peuvent être enchâssés dans des réseaux commerciaux. On fournit plusieurs études de cas des réseaux commerciaux faites par

YEUNG H. W.-C. (1998) Übernationale wirtschaftliche Synergie und Geschäftsnetzwerke: der Fall gegenseitiger Investitionen von Malaysia und Singapur, *Reg. Studies* 32, 687–706. Dieser Aufsatz untersucht das Argument, daß gegenseitige, in übernationale Geschäftsnetzwerke eingebettete Investitionsströme, eine wichtige Quelle wirtschaftlicher Synergie von regionalen Wirtschaften darstellen. Während diese makro-ökonomischen Investitionsströme durch Dunning's Modell des Investitionsentwicklungskreislaufs und Porters Perspektive des Wettbewerbsvorteils erklärt werden können, erweisen sie sich als weniger brauchbar für die Erläuterung der Rolle übernationaler Geschäftsnetzwerke bei der Konstituierung wirtschaftlicher Synergie von Ländern und Regionen. Auf der Grundlage untergeordneter, von den entsprechenden Behörden in Malaysia und Singapur veröffentlichten Daten, wird festgestellt, daß gegenseitige Investitionen in Malaysia und Singapur tief in der Geschichte verwurzelt sind. Wenn beide Wirtschaften sich im Laufe der Zeit entwickeln, beginnt die Struktur der Investitionsströme über die Straße von Malakka hinweg sich in Erwiderung der verschiedenen Ebenen der wirtschaftlichen Entwicklung und des Wettbewerbsvorteils zu wandeln. Malaysia ist der geographisch wichtigste Bestimmungsort der direkten Auslandsinvestitionen (Foreign Direct Investment – FDI) Singapurs gewesen. In ähnlicher Weise ist auch Singapur ein bedeutender geographischer Bestimmungsort für auswärtige FDI von Malaysia gewesen. Bei der Beurteilung der Rolle gegenseitiger Investitionen bei der Förderung wirtschaftlicher

les sociétés transnationales les plus importantes en Malaisie et en Singapour.

Investissement direct étranger Réseaux commerciaux  
Synergie économique Malaisie Singapour

Synergie erörtert dieser Aufsatz, wie Investitionsströme zwischen Malaysia und Singapur in Geschäftsnetzwerke eingebettet werden können. Es liegen eine Anzahl Fallstudien von Geschäftsnetzwerken führender übernationaler Korporationen von Malaysia und Singapur bei.

Ausländische Direktinvestitionen Geschäftsnetzwerke  
Wirtschaftliche Synergie Malaysia Singapur

## INTRODUCTION

In recent years, several Southeast Asian countries have achieved remarkable success in their industrialization programmes and economic development strategies. One of the most significant drivers behind this success is the role of foreign direct investment (FDI) and transnational corporations (TNCs). Amidst this dramatic transformation in Southeast Asia, it is now fashionable among economic policy makers to call for more attention and economic incentives to attract high-tech and high value-added FDI from such advanced industrialized countries as the US, Germany, Japan and the UK. The missing link in this credible policy reorientation, however, is the intraregional cross-border investment flows among Southeast Asian countries (BLOMQUIST, 1995). The origin of some of these FDI flows can be traced to the pre-independence colonial era. They have since constituted an important component in the intense economic interaction between, for example, Malaysia and Singapore (see Fig. 1).

This paper aims to offer a preliminary analysis of the economic interaction between Malaysia and Singapore in relation to the extent and nature of two-way cross-border investment flows and business networks. My main argument is that two-way investment flows embedded in transnational business networks constitute an important source of economic synergy between regional economies (see also GRABHER, 1993; AMIN and THRIFT, 1994; SAXENIAN, 1994; GRABHER and STARK, 1997). Transnational investments by corporate firms, through their embeddedness in complex business networks, serve as the institutional foundation of linking economies and promoting mutual well-being. They contribute to the formation of new windows of opportunities for regional development in the developing world. In doing so, the paper challenges the conventional wisdom in received theories of FDI and the competitive advantage of regional economies. It provides an alternative view of the source and dynamics of economic synergy through ongoing business networks between countries and regions. By stressing the historical and geographical specificities of business networks and their role in transnational economic synergy, the paper calls for more longitudinal studies of economic relations between countries and regional development. It also raises significant policy implications that may



Fig. 1. Malaysia and Singapore in Southeast Asia

differ from existing policy frameworks in many developing countries.

In the context of Malaysia and Singapore, their economic interaction has drastically intensified in the post-independence and post-separation period. Both Malaysia and Singapore have undergone major structural shifts in their domestic economies. They are also important partners in their respective industrialization processes. While Singapore is one of the most important sources of foreign investment in Malaysia, the latter also serves as the most important geographical destination for outward investment from Singapore. Malaysia has therefore become an economic hinterland to fuel and sustain rapid economic development in Singapore. Malaysia has also performed an important supporting role in Singapore's industrial restructuring processes. On the other hand, Malaysia has been a significant source of foreign investment in Singapore, particularly

in the early phase of Singapore's economic development. Malaysian investment in Singapore tends to concentrate on services rather than manufacturing industries. Singapore serves effectively as an export platform and a location for capital sourcing for companies based in Malaysia. The post-separation experience of cross-border investment between Malaysia and Singapore demonstrates the existence of immense economic synergy between the two countries. This economic synergy is increasingly embedded in the formation and spatial extension of business networks among firms based in Malaysia and Singapore. Because of the inter-penetration of these Malaysian and Singaporean companies in each other's territory, Malaysia and Singapore have become increasingly interdependent. To a certain extent, their economic fortunes are also intertwined through these powerful business networks between firms.

The paper is divided into four major sections. First, I start with received theories of regional economies and the competitive advantage of nations. In particular, I focus on Dunning's investment development cycle model and Porter's 'diamond model' of competitive advantage. The second section of the paper examines Singapore's investment in Malaysia, based on data published by the Department of Statistics (DoS) in Singapore and the Malaysian Industrial Development Authority (MIDA) in Malaysia.<sup>1</sup>

In the third section of the paper, Malaysia's investment in Singapore is analysed. The data presented are collated from data published by the DoS and the Economic Development Board (EDB) of Singapore as well as Bank Negara Malaysia. The penultimate section of the paper challenges the received wisdom of FDI and regional economies by examining the nature of complex business networks formed by ethnic Chinese firms based in Malaysia and Singapore and offering case studies to illustrate the workings of these complex networks.

### MACRO-ECONOMIC EXPLANATIONS OF REGIONAL ECONOMIES, INVESTMENT DEVELOPMENT AND COMPETITIVE ADVANTAGE

Although there are many theories explaining FDI and competitive advantage of firms and countries (see PITELIS and SUGDEN, 1991; DICKEN, 1998; DUNNING, 1993a), only a few of them are macro-economic in focus. These macro-economic explanations are DUNNING's, 1988, 1993a, investment development cycle model and PORTER's, 1990, competitive advantage approach.

#### *Dunning's developmental model of international investment*

The idea of a macro-economic developmental model of international investment is very simple. The funda-

mental hypothesis is that there is a systematic relationship between the determinants of outward/inward FDI flows and the stage and structure of a country's economic development so that 'as countries pass from one stage to another not only does the role of inward and outward direct investment change, but so does the character and composition of such investment' (DUNNING, 1988, p. 140). As a country develops, its international investment position changes from an importer to an exporter (and eventually net exporter) of FDI, depending upon: (1) the amount, quality and composition of its factor endowments; (2) its political and economic system; and (3) the extent and form of its economic, political and cultural interfaces with other countries.

Dunning's model is useful in the analysis of two-way investment flows between Malaysia and Singapore because it informs us about the dynamic relationships in the level of economic development and investment flows between two developing countries (YEUNG, 1994b). As shall be evident below, cross-border investment flows between Malaysia and Singapore are largely linked to their developmental strategies and policy orientations. At any specific point in time, the locational advantages of Malaysia and Singapore also constitute an important source of competitive advantage for firms from both countries to compete globally. It is to explain this dimension of competitive advantage that Porter's framework has been developed.

#### *Porter's competitive advantage perspective*

The focus of PORTER's, 1980, 1990, global competition approach is exclusively on *inter-firm* competition. This theoretical focus is an environment-strategy-structure approach. Three building blocks of the approach are global competitive environment, competitive strategy and organizational structure. The approach starts with the global competitive environment. Firms, in view of growing competition in the global economy, are forced to respond by deriving and pursuing their competitive strategy. Transnationalization is seen as a competitive strategy by the firm to gain competitive advantage over its rivals in global competition. Subsequent organizational changes, after transnationalization has taken place, are the consequences of firm-specific strategies. The corporate strategy and organizational structure of a firm can be inferred from the competitive environment, in this case the industry, in which the firm is operating. PORTER, 1990, further proposes that, other than competitive strategy, there are country-specific advantages in creating and sustaining firm- and industry-specific competitive advantages. Nations have a strong influence on competitiveness at the industry level.

Since country-specific advantages are highly localized, a firm may not be able to gain competitive advantage even if it has the right strategy and organizational structure. The idea of global platforms and home

base as the seedbeds of the most productive firms within a particular industry or a range of industries is fostered. A global platform is the country which 'provides an environment yielding firms domiciled in that country an advantage in competing globally in that particular industry. The firm need not necessarily be owned by investors in the country, but the country is its home base for competing in a particular industry' (PORTER, 1986, p. 39). Home base is 'the nation in which the essential competitive advantages of the enterprise are created and sustained. It is where a firm's strategy is set and the core product and process technology (broadly defined) are created and maintained' (PORTER, 1990, p. 19). The competitive advantage of the firm and industry cannot be gained and sustained if it is not located in an appropriate global platform or home base. To sum up, Porter's competitive advantage framework helps explain the sources of competitive advantage of firms from both Malaysia and Singapore. It provides some analytical bases for us to understand not only the origin and destination of FDI, but also the role of country-specific advantages in influencing the directions of these investment flows.

#### SINGAPORE'S INVESTMENT IN MALAYSIA

Existing economic studies of Singapore's development tend to focus almost exclusively on the role of inward FDI in the industrialization process (e.g. HUGHES and SING, 1969; YOSHIHARA, 1976; MIRZA, 1986; LIM and PANG, 1991; HUFF, 1994). There has been relatively little attention to the geographical expansion of Singaporean firms and the regionalization of Singapore's economy through FDI until recently (see LIM and TEO, 1986; KANAI, 1993; RÉGNIER, 1993; LEE, 1994; LU and ZHU, 1995; PANG, 1995; TAN, 1995; LOW *et al.*, 1996; YEUNG, 1998, forthcoming). As predicted by Dunning's investment development cycle model, Singapore's outward FDI tends to increase hand-in-hand with its economic development. When the city-state gains more competitive advantage in certain industries through an appropriate combination of the determinants of competitive advantage and a strong developmental state, its firms begin to operate across borders in search for new markets and production sites. The state, in particular, has played an important role in the economic development of Singapore and, lately, the regionalization of Singaporean firms (YEUNG, 1998, forthcoming). Singapore's outward FDI grew very substantially over the past two decades from S\$1.0 billion in 1976 to S\$3.0 billion in 1986 and S\$21.2 billion in 1993, representing an average annual growth rate at slightly over 100% (DEPARTMENT OF STATISTICS, 1996a, Table 4).<sup>2</sup> By 1993, Singapore had become one of the major sources of FDI among the Asian NIEs (YEUNG, 1994a; ECONOMIC AND SOCIAL COMMISSION ON THE ASIA-PACIFIC (ESCAP), 1995). Singapore's out-

ward FDI accounts for some 53–72% in terms of fixed assets and 67–82% in terms of paid-up capital (*ibid.*, p. 123). It should be noted, however, that much of this outward FDI flow from Singapore originates from Singapore-based affiliates of non-Singaporean TNCs (see LOW *et al.*, 1996).

Singapore's outward FDI has always been concentrated in the Asian region (see Table 1). During the period 1981–93, more than 50% of Singapore's outward FDI went to Asian countries. Of this Asian focus by Singapore investors, Malaysia has always been the most important destination country. Although its lion share in Singapore's total outward FDI has been declining over time from 60% in 1981 to 22% in 1993, Malaysia clearly stood out as the single largest recipient country. This relative decline can be readily explained by the recent regionalization drive promoted by the Singapore Government in which more investment opportunities from China and Southeast Asia are being opened to Singaporean firms. Singapore's investment in Hong Kong and China has grown significantly over the past four years.<sup>3</sup> This growth is in line with the Singapore state's heavy involvement in developing large industrial estates and infrastructural projects in China (YEUNG, 1998, forthcoming).

#### General trends in Singapore's FDI in Malaysia

Singapore's investment in Malaysia has very long historical roots.<sup>4</sup> Prior to its independence in 1959, Singapore was part of the British Administration in Malaya. There was already a significant presence of British capital in Singapore that extended into the Malayan territory (e.g. plantations, trading and financial institutions). As the overseas Chinese had settled down in Malaya, an embryonic network of Chinese business began to emerge among these overseas Chinese entrepreneurs. In 1962, firms from Singapore invested up to RM\$19.6 million in pioneer companies, compared to a total of RM\$69 million by all firms (JESUDASON, 1989, Table 3.2). By 1969, Singaporean firms contributed some RM\$86.5 million to a total of RM\$413.4 million investment in Malaysia's pioneer companies. In the immediate post-independence period, Singapore was the largest *de facto* investor in pioneer companies in Malaysia's manufacturing sector. Singapore's investment in Malaysia has become an important component of and contributor to the latter's industrialization process.

As shown in Table 2, Singapore's investment in Malaysia's manufacturing sector has been historically significant. To a certain extent, the Singapore experience sheds some light on Dunning's and Porter's perspectives. When Singapore developed economically and its industries became more sophisticated, outward manufacturing FDI from Singapore to Malaysia grew rapidly. This spatial movement of capital flows represents the relocation of labour-intensive industries from Singapore to Malaysia in order to regain competitive

Table 1. Outward direct investment from Singapore by destination country, 1981–93 (\$million)

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
<i>Asian countries</i>	1,289.9	1,586.7	1,662.4	1,805.2	1,721.4	1,836.5	1,908.5	1,963.6	1,968.4	7,013.3	7,401.5	9,209.3	11,480.0
ASEAN:	1,078.5	1,233.7	1,241.7	1,341.4	1,133.3	1,155.8	1,180.5	1,216.0	1,138.4	3,567.1	3,995.6	4,896.7	5,933.8
Brunei	3.7	6.0	9.0	49.1	52.9	50.0	54.2	57.4	56.6	66.2	69.4	88.5	91.2
Indonesia	39.5	39.7	44.4	56.3	65.0	67.7	58.6	59.8	53.3	224.8	267.3	328.1	517.3
Malaysia	1,006.9	1,162.3	1,162.6	1,209.1	971.8	985.6	1,008.4	1,030.8	971.6	2,790.1	3,121.1	3,916.5	4,656.7
Philippines	18.4	16.1	17.6	17.6	22.4	22.5	14.3	22.5	22.8	97.7	89.7	106.3	230.6
Thailand	10.0	9.6	8.1	9.3	21.2	30.0	45.0	45.5	34.1	388.4	448.1	457.4	438.1
Hong Kong	181.8	316.7	357.4	391.3	460.7	497.9	539.9	545.2	581.4	2,266.2	2,368.6	3,051.1	4,025.6
Japan	0.3	0.4	0.6	0.7	5.0	6.0	16.1	16.7	33.9	51.8	73.5	75.8	109.4
China	–	–	–	–	57.6	93.8	101.4	79.1	47.4	239.7	220.0	282.6	444.1
South Korea	–	–	–	–	–	–	–	14.8	15.9	–	–	–	–
Taiwan	12.9	14.8	24.9	27.1	32.9	37.8	26.0	54.3	86.0	494.8	287.0	349.5	354.5
Others	16.2	21.1	37.8	44.7	31.9	45.2	44.6	37.5	65.4	393.7	456.7	553.6	612.7
<i>European countries</i>	50.7	58.0	57.7	71.5	89.3	167.2	358.2	303.4	203.4	1,095.4	1,397.6	1,480.2	1,549.7
United States	31.8	44.3	47.5	54.4	66.1	65.4	69.3	107.7	160.0	689.7	1,303.9	1,589.5	1,755.1
Other countries													
n.e.c.	305.5	397.9	465.5	468.2	380.4	528.6	625.5	619.2	611.9	4,823.3	5,080.9	5,462.2	6,455.3
Total	1,677.7	2,086.9	2,233.1	2,399.3	2,257.2	2,597.7	2,961.5	2,993.9	2,943.7	13,621.7	15,183.8	17,741.3	21,240.2

Notes: Data from 1990–93 refer to direct equity investment. Direct investment abroad refers to the amount of paid-up shares of overseas subsidiaries and associates held by companies in Singapore. Direct equity investment refers to direct investment plus the reserves of the overseas subsidiaries and associates attributable to these companies. For overseas branches, the net amount due to the local parent companies is taken as an approximation of the magnitude of direct investment.

Sources: DEPARTMENT OF STATISTICS (1991), *Singapore's Investment Abroad, 1976–1989*, DOS, Singapore; DEPARTMENT OF STATISTICS (1996a), *Singapore's Investment Abroad, 1990–1993*, DOS, Singapore.

advantage in low-cost production for exports to the global markets. In terms of paid-up capital in manufacturing companies in production, Singapore's leading role has been surpassed by Japan only very recently since 1991. From 1975 to 1990, Singapore was the single largest investor in Malaysia's manufacturing sector. In 1975, Singapore accounted for some 25.3% of foreign manufacturing investment in Malaysia. In 1988, the ratio reached a record high of 30.5%. By 1992, the share of Singapore FDI in total paid-up capital had been reduced to 22%. This is attributed to a major surge of Japanese FDI in Malaysia which experienced an increase in the share of total paid-up capital from 25.9% in 1990 to 35.5% in 1992.

Interesting patterns also emerge when fixed assets of different manufacturing investors in Malaysia are examined (see Table 2). Singaporean firms tend to invest in industries that require less fixed assets. Since 1985, Singapore's role as the leading manufacturing investor in Malaysia measured by fixed assets has been overtaken by Japan. Singapore thereafter continues to experience a relative decline in its ownership share in the total foreign manufacturing fixed assets in Malaysia.

#### *Industrial structure in Singapore's FDI in Malaysia*

The DOS data are helpful in illuminating the role of Malaysia for Singaporean investment in service indus-

tries. In the latter part of this section, the MIDA data on Singapore's investment in various manufacturing industries are analysed. Measured by the number of companies set up in Malaysia by the industrial origin of Singaporean investors (see Fig. 2), firms from three industrial sectors clearly emerge as the leading Singaporean investors in Malaysia. These sectors include financial services, commerce and manufacturing. While commerce tops the number of subsidiaries set up by Singaporean investors in Malaysia, it ranks last among the three industries in terms of direct equity investment. Rather, the manufacturing sector is consistently the largest sector for Singaporean investment in Malaysia over the period. Singaporean investment in these three industries in Malaysia also makes up a large share of the total number of companies set up in all countries. For example, about half of the manufacturing subsidiaries set up abroad by Singaporean investors were located in Malaysia during the 1990–93 period. The commerce industry exhibits even higher shares taken up by Malaysia as the leading destination, up to 60% in 1991. In the financial industry, Malaysia accounts for up to 30% of all subsidiaries set up abroad.

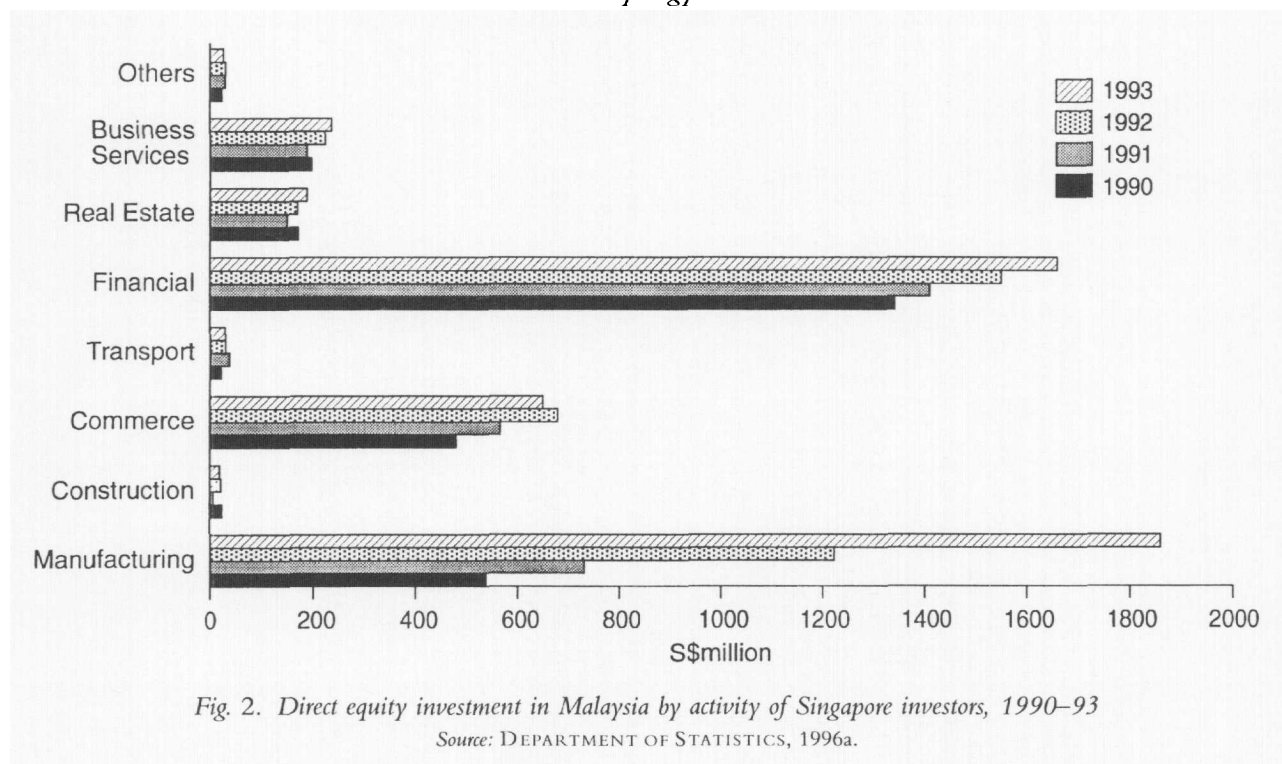
The promotion of the 'Growth Triangle' concept by the Singapore Government since the late 1980s has given a strong impetus to this spatial relocation of Singapore manufacturers to Malaysia. The idea of the 'Growth Triangle' was first mooted by Goh Chok

Table 2. Foreign manufacturing investment in companies in production by country of origin in Malaysia, 1975-92 (RM\$000s)

Country of Origin	1975	1976	1977	1980	1981	1985	1986	1987	1988	1989	1990	1991	1992
<i>Paid-up capital</i>													
Japan	185,774	245,520	311,185	422,233	480,501	762,671	921,040	982,037	1,181,784	1,645,074	1,897,873	3,028,259	3,816,843
(% of total)	20.3%	21.8%	20.7%	17.8%	19.0%	18.8%	20.1%	19.8%	21.1%	25.7%	25.9%	32.3%	35.5%
Singapore	231,489	248,443	351,162	616,263	751,596	1,214,531	1,339,268	1,433,152	1,703,615	1,941,535	2,105,006	2,265,812	2,368,306
(% of total)	25.3%	22.0%	23.4%	26.0%	29.6%	30.0%	29.2%	28.9%	30.5%	30.3%	28.7%	24.1%	22.0%
United Kingdom	128,257	161,855	266,011	467,953	506,363	720,318	712,503	806,525	744,333	744,280	733,450	868,963	960,967
(% of total)	14.0%	14.3%	17.7%	19.8%	20.0%	17.8%	15.5%	16.3%	13.3%	11.6%	10.0%	9.3%	8.9%
Other countries	369,968	472,526	573,926	859,250	797,139	1,354,180	1,617,124	1,739,003	1,961,547	2,067,162	2,585,709	3,221,660	3,619,385
Total	915,488	1,128,344	1,502,284	2,365,699	2,535,599	4,051,700	4,589,935	4,960,717	5,591,279	6,398,051	7,322,038	9,384,694	10,765,501
<i>Fixed assets</i>													
Japan	NA	NA	NA	534,647	656,520	1,382,316	1,759,088	1,746,231	2,042,114	2,573,884	3,127,783	5,478,073	7,056,014
(% of total)	NA	19.8%	21.1%	23.3%	25.7%	23.8%	24.8%	26.7%	28.3%	34.6%	37.1%	49.2%	64.6%
Singapore	NA	NA	NA	619,265	732,205	1,059,424	1,169,760	1,269,769	1,506,866	1,736,830	1,939,640	2,492,074	2,890,265
(% of total)	NA	23.0%	23.5%	17.9%	17.1%	17.3%	18.3%	18.0%	17.5%	15.7%	15.2%	26.6%	33.5%
United Kingdom	NA	NA	NA	500,279	579,638	874,334	893,284	996,910	905,674	1,007,319	1,043,182	1,218,543	1,607,643
(% of total)	NA	18.5%	18.6%	14.8%	13.0%	13.6%	11.0%	10.4%	9.4%	7.7%	8.4%	13.0%	18.3%
Other countries	NA	NA	NA	1,043,294	1,142,349	2,606,623	3,023,249	3,323,748	3,791,034	4,323,026	4,961,054	6,641,768	7,487,846
Total	NA	NA	NA	2,697,485	3,110,712	5,922,697	6,845,381	7,336,658	8,245,688	9,641,059	11,071,659	15,830,458	19,041,768

Note: Without hotel and tourist projects.

Source: Malaysian Industrial Development Authority.



Tong, the then Deputy Prime Minister, to bring together Singapore, Indonesia and Malaysia on the basis of a technical, sectoral and regional division of labour (PERRY, 1991; HO, 1994; HO and SO, 1997). In technical areas, labour and land constraints in Singapore require the relocation of low value-added and labour-intensive production processes to Johor, Malaysia, or Riau, Indonesia. Only high value-added manufacturing activities remain in Singapore. In terms of the division of labour by sector, Singapore plays a more important role in services as the regional headquarters (RHQs) for TNCs operating simultaneously in all three locations (DICKEN and KIRKPATRICK, 1991; PERRY, 1992; 1995). The emergence of a regional division of labour is clear here when all three countries contain different comparative advantages and, therefore, play different economic roles in this regional interdependence. Increasingly, Singapore plays the role as a conduit for FDI into the Southeast Asian region (YEUNG, 1997b).

What, then, are the manufacturing industries in which Malaysia enjoys the highest comparative advantages *vis-à-vis* Singapore? Some preliminary answers can be provided in Table 3 which shows Singapore's manufacturing investment in companies in production by industry in Malaysia between 1975 and 1992. In 1975, three manufacturing industries attracted the largest shares of Singapore's manufacturing investment in Malaysia: food manufacturing (RM\$53.2 million); fabricated metal products (RM\$31.1 million); and non-metallic mineral products (RM\$28.9 million). Together, these three industries accounted for some 49% of Singapore's manufacturing investment in

Malaysia. Whereas food manufacturing in Malaysia was primarily oriented towards the local market, the other two industries were attracted by accessibility to raw materials and savings in transport costs.

In the next 10 years between the two major recessions (in 1975 and 1985), Singapore underwent very significant industrial restructuring because of changing global competition and domestic pressures (RODAN, 1989; HO, 1993; 1994). The emergence of the Asian NIEs has effectively made Singapore subject to intense competitive pressure in the choice of manufacturing locations by global TNCs. Internally, the 1975 recession resulted in a call for the Second Industrial Revolution in Singapore to transform the low-cost and low value-added economy to a high-tech and high value-added global business city. Both constraints together created necessary and sufficient pressures to force a large number of manufacturing operations in Singapore to relocate elsewhere in the region in search of new sources of competitive advantage. In this pursuit, Malaysia has been serving Singapore's manufacturing interest very well. By 1986 (after the second recession), Singapore's manufacturing investment had increased almost five-fold from RM\$231.5 million in 1975 to RM\$1,339.3 million in 1986. The industrial structure of Singapore's manufacturing investment in Malaysia had become much more diversified. Since the mid-1980s, more traditional manufacturing operations have moved out of Singapore to Malaysia and elsewhere in the region. Singapore has effectively become the coordinating centre of its regional divisions of labour or networks of manufacturing operations (PERRY, 1991; HO, 1994).

Table 3. Singapore's manufacturing investment in companies in production by industry in Malaysia, 1975-92 (paid-up capital in RM\$000s)

Industry	1975	1976	1977	1980	1981	1985	1986	1987	1988	1989	1990	1991	1992	1992 all countries
Food manufacturing	53,200	64,198	94,427	178,756	237,170	183,743	245,882	241,511	421,474	444,481	512,920	496,388	505,674	1,057,519
Beverages and tobacco	17,616	17,649	23,494	55,262	55,746	155,342	146,125	148,948	192,626	291,733	269,753	253,483	254,688	406,684
Textile and textile products	18,677	19,028	17,912	27,234	31,573	120,347	123,355	140,876	159,338	174,689	193,005	187,821	192,046	784,984
Leather and leather products	964	1,054	1,705	1,430	2,089	2,289	2,214	2,036	1,897	1,923	1,923	7,303	3,895	35,569
Wood and wood products	12,742	12,479	18,509	29,262	38,636	15,982	21,819	27,416	25,789	28,112	32,734	39,749	55,289	309,202
Furniture and fixtures	0	0	0	1,033	998	13,794	9,605	11,290	11,370	11,554	12,217	17,121	16,910	84,284
Paper, printing and publishing	3,357	4,212	12,664	18,668	18,232	29,978	17,527	23,315	21,520	39,440	56,159	49,134	46,549	108,259
Chemical and chemical products	17,649	18,036	24,558	40,786	41,053	77,745	77,837	47,425	48,856	58,531	63,816	62,107	59,189	577,599
Petroleum and coal	11,940	11,314	14,382	6,419	5,758	10,663	10,379	25,363	23,953	24,452	25,025	44,556	37,606	663,770
Rubber products	8,713	8,174	16,214	21,751	25,440	43,595	76,857	99,158	106,027	108,156	92,339	97,469	85,831	372,379
Plastic products	6,240	4,500	7,801	5,929	5,756	6,759	10,732	12,263	14,340	16,312	20,946	44,969	44,745	275,495
Non-metallic mineral products	28,889	30,472	33,537	91,470	81,542	197,506	206,761	199,600	206,785	216,664	231,514	209,595	224,944	652,572
Basic metal products	3,808	9,950	41,435	44,112	93,455	96,437	101,345	119,782	116,084	130,800	140,686	189,002	207,273	604,255
Fabricated metal products	31,101	28,099	21,078	34,063	38,177	82,801	104,408	121,118	150,371	158,587	154,639	151,432	142,919	439,009
Machinery manufacturing	742	821	1,229	3,023	3,864	25,614	34,836	38,039	40,921	49,976	54,715	53,358	29,811	218,037
Electrical and electronic products	13,222	16,005	18,937	20,213	28,761	101,914	102,675	110,118	94,673	115,030	150,545	241,136	314,475	3,435,236
Transport equipment	2,172	2,121	2,773	36,642	42,860	46,265	43,508	58,830	60,590	60,839	81,119	98,156	99,962	409,568
Scientific and measuring equipment	32	20	395	25	45	2,695	2,695	2,695	2,695	2,695	3,082	11,582	31,495	250,977
Miscellaneous	425	311	112	185	441	1,062	708	3,369	4,306	7,561	7,869	11,451	15,005	83,103
Total	231,489	248,443	351,162	616,263	751,596	1,214,531	1,339,268	1,433,152	1,703,615	1,941,535	2,105,006	2,265,812	2,368,306	10,765,501

Note: Without hotel and tourist projects.

Source: Malaysian Industrial Development Authority.



## MALAYSIA'S INVESTMENT IN SINGAPORE

There are very few economic studies of outward investment from Malaysia (e.g. CHIA, 1996; ZIN, 1997; ESCAP/UNCTAD, 1997). Instead, most of them concentrate on the role of foreign capital in Malaysia's industrialization (e.g. HOFFMAN and TAN, 1980; JESUDASON, 1989; ARIFF, 1991; LIM and PANG, 1991; ARIFF and YOKOYAMA, 1992; BROOKFIELD, 1994; RASIAH, 1995; ALAVI, 1996). The following section provides a partial analysis of this interesting development in outward FDI from Malaysia to Singapore. This is a particularly difficult task because of severe data limitations.<sup>5</sup>

### *General trends in Malaysia's FDI in Singapore*

Table 4 presents data on foreign equity investment in Singapore by country of origin from 1980 to 1992. The total foreign equity investment in Singapore grew from S\$1.4 billion in 1970 to S\$11.2 billion in 1980 and S\$56.7 billion in 1992. During the entire period, the US, the UK, the Netherlands, Japan and Hong Kong were the leading investors in Singapore. Malaysia used to be one of the largest investors in Singapore, particularly during its early phase of post-independence development (CHIA, 1993). In 1970, Malaysia accounted for S\$251.7 million (18% of total) foreign equity investment in Singapore. Only the UK (S\$423.5 million) and the US (S\$256.9 million) were comparable to Malaysia in terms of its contribution to Singapore's economic development. By 1975, this relative position remained unchanged. It can be argued that during the late 1960s and the early 1970s, the role of Malaysian investment in Singapore was very predominant. At that time, Malaysia was still in the early stage of Dunning's investment development cycle model, i.e. limited inward and outward FDI (see earlier discussions).

Over time, however, the vigorous promotion of FDI from developed countries by the Singapore Government, particularly through the activities of the Economic Development Board (LOW *et al.*, 1993), has resulted in a dilution of the overall share of foreign equity investment held by Malaysian firms. This relentless pursuit of investment by global corporations from advanced industrialized countries underscores Singapore's determination to become a top location for world-class manufacturing and technological development. As shown later in this paper, manufacturing investment from Malaysia was disadvantaged because of its relative low-tech and low value-added nature (see Porter's competitive advantage perspective above). In fact, the majority of Malaysian investment in Singapore concentrated in the service and trading sectors. In 1980, Malaysia accounted for only 6% of total foreign equity investment in Singapore. During the 1980-85 period, Malaysia's share in total equity investment in

Singapore increased to about 8%. But in the post-1985 period, the ratio declined further to about 4%. Today, Malaysian equity investment in Singapore is much less significant than in the 1970s.

It seems that there was much economic synergy between Malaysia and Singapore, at least up to the late 1970s. Malaysia was important to Singapore both as its investment destination and as its foreign investor. The UNCTC, 1992, data show that Singapore has been an important host country for Malaysian investment abroad. In 1988, the total outward FDI stock from Malaysia was estimated to be RM\$4,044 million (*ibid.*, p. 158). If this figure is compared with Malaysia's equity investment in Singapore at S\$1,519 million or RM\$1,973 million as reported by DOS (Table 4), it is reasonable to note that almost 50% of Malaysia's outward FDI went to Singapore in 1988. Table 5 presents Bank Negara Malaysia data on Malaysian investment abroad from 1990 to 1994. More than half of outward FDI flows from Malaysia were intraregional in nature, reflecting the early position of Malaysia in Dunning's investment development cycle model. Within these intraregional outflows, a large portion went to Singapore. In 1990, 1991 and 1993, Singapore was the largest recipient of outward FDI flows from Malaysia, constituting respectively 33.2%, 33.7% and 32.1% of total FDI outflows.

### *Industrial structure of Malaysia's FDI in Singapore*

Data on the industrial structure of Malaysia's FDI in Singapore are extremely scarce. UNCTC, 1992, p. 160, p. 163, reports some data from the financial survey of limited companies in Malaysia conducted by the DOS, Malaysia. In 1980, outward FDI from Malaysia came predominantly from the tertiary sector, particularly the finance and insurance industry. This industry alone accounted for 92% of total FDI stock from Malaysia in 1980. In 1988, this figure increased further to 94%. In terms of outward FDI flows between 1985-88, the finance and insurance industry continued to drive Malaysia's outward FDI. There was also a relatively significant outflow of FDI in distributive trade in 1987 and 1988. The manufacturing sector did not attract much outward FDI from Malaysia. This can be explained by the relatively favourable cost environment in Malaysia and its early stage of industrialization. Most indigenous manufacturers were still specialized in low cost and value-added production mainly for the local market. They were much less competitive in the regional and global marketplace.

What is the industrial structure of Malaysia's FDI in Singapore? Although data published by the DOS in Singapore do not show figures for Malaysia, it is observed that at least 90% of net foreign investment commitments in Singapore's manufacturing sector in 1993 originated from the US, Japan and European countries. In fact, of the remaining 10% or less, only a

Table 4. Foreign direct equity investment in Singapore by country of origin, 1980-92 (\$million)

Country	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
USA	256.9	851.8	2,515.7	3,190.5	4,225.7	4,978.8	5,156.5	5,959.5	6,863.8	7,954.6	7,672.5	8,335.3	8,590.2	9,530.4	9,646.6
Australia	44.3	137.1	269.3	293.2	293.3	375.6	502.4	524.2	1,007.1	1,541.1	3,321.6	3,076.3	2,953.1	2,886.6	2,943.9
Europe	482.1	1,812.1	4,286.3	5,365.3	5,965.4	6,312.9	6,649.4	6,799.9	7,691.6	8,519.2	9,662.1	10,927.9	13,465.2	15,834.2	16,385.1
United Kingdom	423.5	1,307.5	2,947.7	3,799.4	3,974.8	3,886.4	3,810.9	3,600.0	3,612.5	3,651.1	3,920.6	3,851.9	4,639.0	6,150.0	6,020.5
Germany	2.8	84.6	416.5	407.1	450.3	461.4	505.5	559.6	711.6	760.7	843.3	901.3	884.1	985.9	1,032.5
Netherlands	11.0	111.4	217.4	310.2	392.3	546.7	632.4	789.0	1,116.5	1,483.2	1,968.1	2,747.4	4,072.3	4,344.9	4,078.5
Switzerland	NA	NA	506.1	571.8	776.4	964.3	1,182.5	1,395.8	1,589.5	1,780.4	2,021.9	2,203.5	2,262.4	2,434.5	2,634.2
Asia	571.1	1,619.4	3,659.1	4,930.8	6,216.7	6,607.1	7,505.7	7,284.5	7,074.9	8,434.9	10,859.5	13,684.6	17,301.6	18,422.8	20,176.3
Japan	115.3	463.5	1,311.8	1,623.2	1,994.1	2,110.5	2,788.5	3,163.2	3,654.0	4,578.2	6,489.8	8,426.6	10,662.7	11,717.9	13,186.3
Hong Kong	148.3	514.6	1,357.4	1,750.6	2,104.0	2,093.7	2,171.0	1,810.9	1,501.9	1,941.0	2,245.3	2,766.8	3,267.1	3,245.0	3,461.8
Taiwan	NA	NA	49.5	43.7	41.4	51.1	62.8	65.3	68.8	103.5	138.4	179.7	225.2	253.1	360.3
ASEAN	261.9	578.5	827.2	1,360.0	1,865.8	2,237.5	2,373.0	2,061.9	1,669.6	1,614.1	1,774.7	2,059.4	3,002.7	2,889.8	3,041.9
Malaysia	251.7	543.2	684.3	1,154.4	1,627.4	1,919.9	2,062.4	1,784.8	1,379.9	1,295.8	1,519.7	1,746.2	2,109.7	2,106.4	2,220.7
Other countries	43.9	366.2	471.2	607.5	819.7	992.8	1,831.4	1,786.7	2,065.5	3,497.2	4,283.5	5,038.9	7,20.5	7,889.2	7,509.0
Total	1,398.3	4,649.5	11,201.6	14,387.3	17,520.8	19,267.2	21,645.4	22,354.8	24,702.9	29,947.0	35,799.2	41,063.0	49,830.6	54,563.2	56,660.9

Sources: Data for 1970 and 1975 from CHIA, 1993, Table 8.5; DEPARTMENT OF STATISTICS (1990-1992, D.O.S, Singapore).  
 (1996b) Foreign Equity Investment in Singapore, 1980-1989, D.O.S, Singapore; DEPARTMENT OF STATISTICS

Table 5. Malaysian investment overseas, 1990–94  
(RM\$million)

Country	1990	1991	1992	1993	1994 (Jan–Sept)
<i>Asian countries</i>	1,099.2	768.8	781.7	2,089.3	1,415.8
ASEAN:	538.8	397.9	306.1	1,194.2	508.3
Brunei	—	—	—	—	—
Indonesia	2.7	3.2	10.1	7.7	19.6
Singapore	478.6	379.2	266.3	1,110.7	451.4
Philippines	1.9	5.4	5.8	53.9	18.5
Thailand	55.6	10.1	23.9	21.9	18.8
Hong Kong	273.5	247.4	337.3	737.8	729.0
Japan	269.4	103.5	120.5	109.3	56.6
China	0.6	1.4	4.8	33.5	101.5
South Korea	0.6	1.0	1.3	2.3	1.5
Taiwan	16.3	17.6	11.7	12.2	18.9
Australasia	109.8	56.3	99.1	128.5	291.0
European countries	136.3	109.8	77.5	235.6	184.1
United States	34.2	56.5	96.5	664.5	291.5
Other countries n.e.c.	62.0	134.0	209.6	338.3	324.7
Total	1,441.5	1,125.4	1,264.4	3,456.2	2,507.1

Source: Bank Negara Malaysia (in ZIN, 1997, Table 5).

very small proportion could possibly come from Malaysia because this group of investors included other Asian NIEs. In particular, Hong Kong has been a major investor in Singapore's manufacturing sector among the Asian NIEs (YEUNG, 1994c, 1995). Data from the census of industrial production in Singapore further illustrate the relative insignificance of Malaysian investment in Singapore's manufacturing sector in recent years (see Table 6). In 1977, there were only 59 manufacturing establishments in Singapore majority-owned by Malaysian firms, compared to a total of 2,638 manufacturing establishments in all industries. Some 4,376 workers were employed by these 59 Malaysian-owned establishments, accounting for merely 2% of total employment in all industries. In terms of output, value-added and total sales, Malaysian-owned manufacturing establishments contributed not more than 2% of the total by all industries. This pattern persisted throughout the 1980s and, in fact, deteriorated further because, while the figures for Malaysian-owned establishments had gone down, the total figures for all industries had modestly increased. This tentative analysis shows that Malaysian investment is insignificant in Singapore's manufacturing sector. Insufficient data have prohibited a broader analysis of the industrial structure of Malaysian investment in Singapore.

### ECONOMIC SYNERGY AND BUSINESS NETWORKS BETWEEN MALAYSIA AND SINGAPORE

In the first two sections of this paper, the economic relations between Malaysia and Singapore were exam-

ined in the context of Dunning's investment development cycle model and Porter's competitive advantage perspective. Arguably, these economic relations are embedded in cross-border two-way investment flows which, in turn, are dependent on the level of economic development, the competitive advantage of firms and the locational advantages of countries. During their respective developmental processes, both Malaysia and Singapore are important investment partners in that both serve as home and host country for investment by business firms from either country. A preliminary conclusion is that there is much economic synergy between Malaysia and Singapore, albeit both countries exhibit different competitive advantages and varying degrees of economic development. Whereas Malaysia serves as a manufacturing base for TNCs emerging from Singapore, the latter becomes a platform for Malaysian firms to engage in their internationalization processes.

Although both Dunning's and Porter's perspectives are useful to analyse broad macro-economic relations between Malaysia and Singapore, they are less useful to illuminate the sources and dynamics of economic synergy through ongoing business networks between countries and regions. These sources and dynamics are best understood through the historical and geographical specificities of business networks at the firm level. In this respect, the following discussion is pitched at the *firm* level. Business firms are important agents of economic change and transformation (see CHANDLER, 1990). Their cross-border operations not only bring employment and benefits to host countries, but also draw different economies closer together. The role of TNCs in integrating the global economy has been extensively documented elsewhere (DICKEN, 1998; DUNNING, 1993a; UNCTAD, 1996). The basic idea is that through their extensive networks of operations, TNCs are capable of integrating diverse economies throughout the world. Their global scanning and co-ordinating capabilities have enabled them to engage in different economic activities in different geographical locations.

Because of their historical ties, common colonial heritage and geographical proximity, many Malaysian and Singaporean firms have long been operating in either country. Before the separation of Singapore from Malaysia in 1965, business firms incorporated in Peninsular Malaysia and Singapore had the same nationality. Their operations throughout the peninsular and Singapore were regarded as domestic operations. The separation in 1965, however, made these cross-Straits operations by Malaysian/Singaporean firms *international* by default. Many Malaysian firms, and similarly Singaporean firms, became TNCs almost overnight. In effect, this transnational status did not work against these Malaysian or Singaporean TNCs. Rather, their extensive business networks continued to support their geographic expansion in business activities. These very

Table 6. Principal statistics of manufacturing establishments in Singapore by Malaysia, 1977-90 (\$million unless specified)

Variable	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<i>Malaysian-owned</i>														
Number of establishments	59	65	64	68	77	79	69	75	60	57	67	58	59	55
Number of workers	4,376	4,257	4,146	4,477	5,362	5,241	3,597	3,085	2,387	1,734	2,386	2,461	2,323	2,568
Total inputs	209.2	168.7	190.9	207.5	343.2	401.2	313.4	179.3	144.6	137.0	150.9	287.1	385.2	457.2
Material inputs	202.1	161.8	180.2	191.6	320.2	382.0	300.6	169.1	136.1	131.2	145.1	278.7	376.6	447.3
Other inputs	7.1	6.9	10.6	15.8	23.0	19.1	12.9	10.2	8.5	5.8	5.8	8.3	8.6	9.5
Work given out	8.6	6.9	3.6	3.2	13.3	10.9	26.6	9.8	11.5	5.3	10.6	10.9	14.3	20.4
Other costs of production	31.3	30.0	28.0	47.0	74.2	79.0	63.5	59.0	48.8	32.7	33.6	37.1	42.9	50.8
Output	321.3	255.5	285.6	306.0	607.9	593.0	515.2	287.5	228.0	201.3	244.3	386.6	519.3	601.2
Value added	103.5	79.9	91.2	95.4	251.4	180.9	175.2	98.4	71.9	59.0	82.7	88.7	119.8	123.7
Total sales	323.0	260.2	279.4	308.8	568.8	559.1	686.9	297.8	225.3	204.3	250.1	391.2	514.7	600.6
Direct export sales	97.8	75.4	66.0	63.7	261.1	290.3	456.4	86.4	60.0	57.7	51.1	133.7	218.8	246.3
Employees' remuneration	31.9	30.1	33.2	38.6	64.3	63.5	51.7	47.0	37.8	25.9	33.9	37.7	41.9	52.4
Capital expenditure	7.8	8.0	11.7	24.5	44.1	30.6	34.0	14.3	13.2	3.1	12.0	13.9	15.5	22.3
<i>All industries<sup>1</sup></i>														
Number of establishments	2,638	2,946	3,122	3,355	3,439	3,586	3,616	3,648	3,504	3,449	3,513	3,624	3,660	3,703
Number of workers	219,112	243,724	269,334	285,250	281,675	275,450	271,106	274,391	253,510	246,682	276,232	324,713	337,575	351,674
Total inputs	12,721.9	14,104.6	18,101.7	22,424.5	26,089.7	26,096.3	26,402.5	28,821.7	26,739.6	24,199.3	30,039.2	36,446.2	41,496.4	46,836.6
Material inputs	12,224.6	13,562.0	17,385.9	21,415.2	24,891.5	24,854.4	25,116.3	27,474.4	25,541.9	23,233.9	28,954.2	35,288.8	40,201.5	45,396.4
Other inputs	497.3	542.7	715.8	1,009.4	1,198.1	1,241.8	1,286.2	1,347.4	1,197.7	965.4	1,085.0	1,157.4	1,294.9	1,440.2
Work given out	320.9	399.2	491.5	711.5	976.9	1,015.2	996.9	1,149.8	1,078.6	1,159.5	1,470.3	2,105.6	2,454.3	2,889.8
Other costs of production	1,493.5	1,675.2	2,074.7	2,529.3	3,022.8	3,459.6	4,061.6	4,752.6	4,797.7	3,830.7	4,398.4	5,379.3	5,922.0	6,580.9
Output	17,518.2	19,666.7	25,296.6	31,657.9	36,787.1	36,467.4	37,221.5	41,077.9	38,505.5	37,258.7	45,942.5	56,470.0	63,626.3	71,333.2
Value added	4,475.5	5,162.9	6,703.4	8,521.9	9,720.5	9,355.9	9,822.1	11,106.3	10,687.3	11,900.0	14,433.0	17,918.2	19,675.7	21,606.8
Total sales	17,390.5	19,555.5	25,172.9	30,946.7	36,543.5	36,437.0	37,411.1	40,910.7	38,384.6	37,577.9	45,888.8	56,285.6	63,306.5	71,647.8
Direct export sales	10,969.4	12,632.7	16,203.0	19,172.9	22,375.3	21,858.7	22,640.8	25,057.8	24,276.3	24,387.2	30,305.1	37,806.1	42,387.6	46,999.5
Employees' remuneration	1,471.7	1,724.2	2,085.9	2,526.9	2,938.1	3,270.6	3,623.7	4,045.0	4,035.3	3,769.1	4,172.9	5,056.5	5,961.6	6,852.2
Capital expenditure	751.6	821.8	1,424.5	1,861.9	1,966.8	2,222.7	2,113.4	2,168.1	1,977.2	1,746.4	2,716.8	3,547.0	4,513.2	4,184.4

Note: 1. Less granite quarrying and rubber processing.

Sources: DEPARTMENT OF STATISTICS (various years) Report on the Census of Industrial Production, D.O.S, Singapore; Economic Development Board (various years) Report on the Census of Industrial Production, EDB, Singapore. Data kindly supplied by Eric D. Ramstetter.

intricate business networks, based on formal and informal mechanisms explained below, have effectively drawn both economies together through interpenetrating two-way investments. This paper argues that these cross-border business networks between Malaysia and Singapore are the key mechanisms through which economic synergy is realized. I shall first start with a brief discussion of TNCs from Malaysia and Singapore, followed by an examination of the nature and operations of their business networks and cross-border economic synergy.

#### *Transnational corporations from Malaysia and Singapore*

Tables 7 and 8 present some of the largest TNCs from Malaysia and Singapore in 1988. Several general observations can be made. First, several of these major Malaysian or Singaporean TNCs had long existed before the separation between Malaysia and Singapore in 1965. For example, Guthrie and Sime Darby, both Malaysian TNCs now, were British merchant houses based in Singapore and played a leading role in expanding and strengthening their position as intermediaries between the rubber producers of Malaysia and the capital markets of Western Europe (ESCAP/UNCTC, 1988; JESUDASON, 1989, p. 35). For

example, one of Sime Darby's directors in the mid-twentieth century, Tan Cheng Lock, played a prominent role in Malaysian politics. His family's early business was in regional shipping. As such, multinationalism is certainly not very new to either country. This early stage of cross-border activities applies particularly to the financial and insurance industries. Many banks from Malaysia and Singapore have been engaged in transnational banking activities almost since their inception. They could do so mainly through establishing new branches and representative offices abroad. Tan Cheng Lock, for example, was also associated with the Ho Hong Bank (founded 1917) which served as a useful platform to get more funds and widen existing businesses.

Second, there is much interaction between Malaysia and Singapore insofar as their largest TNCs are concerned. Most of the TNCs listed in Tables 7 and 8 have cross-Straits operations. These operations are outcomes of either historical legacy (e.g. in the case of Sime Darby which was controlled by the British and subsequently taken over by Pernas in 1976) and ethnic family ties (e.g. the two Quek/Kwek brothers of the Hong Leong Group; see case study below). To many Malaysian and Singaporean firms in the 1960s and early 1970s, there was no clear distinction in their country

Table 7. Largest transnational corporations from Malaysia, 1988 (RM\$million)

Company	Industry	Sales/assets	Operations in Singapore
<i>A. Industrial</i>			
Sime Darby Bhd.	Agriculture	3,388	Yes
Perlis Plantation Bhd.	Food	1,599	—
Federal Flour Mills Bhd.	Food	975	Yes
Malaysia Mining Corporation Bhd.	Mining	648	—
UMW Corporation Sdn. Bhd.	Mechanical equipment	621	Yes
Amalgamated Steel Mills Bhd.	Metals	589	—
Multi-purpose Holdings Bhd.	Agriculture	542	Yes
Kuala Lumpur Kepong Bhd.	Agriculture	398	—
Palmaco Holdings Bhd.	Agriculture	353	—
Malayan Sugar Manufacturing Co. Bhd.	Food	302	Yes
<i>B. Tertiary</i>			
Malaysian International Shipping Corporation Bhd.	Transport	1,544	—
Tan Chong Motor Holdings Co. Ltd	Distributive trade	915	Yes
Tractors Malaysia Holdings Bhd.	Distributive trade	676	Yes
Johan Holdings Bhd.	Real estate	502	Yes
Genting Bhd.	Other services	484	Yes
Boustead Holdings Bhd.	Transport	333	Yes
Malayan United Industries Bhd.	Other services	286	Yes
IGB Corporation Bhd.	Other services	179	—
<i>C. Finance and Insurance</i>			
Malayan Banking Bhd.	Finance	23,354	Yes
Bank Bumiputra Malaysia Bhd.	Finance	21,576	Yes
United Malaya Banking Corporation Bhd.	Finance	6,946	Yes
Malayan United Bank Bhd.	Finance	1,776	Yes
Ganda Holdings Bhd.	Finance	292	—
General Corporation Bhd.	Finance	—	—
Hong Leong Credit	Finance	—	Yes

Source: UNCTC, 1992, p. 169; Singapore Phone Book Business Listings, July 1996.

Table 8. Largest transnational corporations from Singapore, 1988 (S\$million)

Company	Industry	Sales/assets	Operations in Malaysia
<i>A. Industrial</i>			
Fraser and Neave Ltd	Beverages	1,002	Yes
Singapore Press Holdings Ltd	Paper	917	Yes
Keppel Corporation Ltd	Mechanical equipment	776	Yes
Gold Coin Ltd	Food	537	Yes
Haw Par Brothers International Ltd	Chemicals	455	Yes
National Iron and Steel Mills Ltd	Metals	450	—
United Industrial Corporation Ltd	Chemicals	422	Yes
Cycle and Carriage Ltd	Motor vehicles	367	Yes
Amocol Electrical Industries Ltd	Electrical equipment	300	—
<i>B. Tertiary</i>			
Neptune Orient Lines Ltd	Transport	1,227	Yes
Wearne Brothers Ltd	Distributive trade	373	Yes
Lum Chang Holdings Ltd	Diversified	327	—
Straits Trading Ltd	Distributive trade	210	Yes
Parkway Holding Ltd	Diversified	140	—
Straits Steamship Co. Ltd	Transport	136	Yes
Shangri-La Hotel Ltd	Other services	116	Yes
Overseas Union Enterprises	Other services	103	Yes
Tuan Sing Holdings Ltd	Other services	80	—
United Overseas Land Ltd	Real estate	63	Yes
<i>C. Finance and insurance</i>			
Development Bank of Singapore Ltd	Finance	29,501	—
Overseas-Chinese Banking Corporation Ltd	Finance	19,196	Yes
United Overseas Bank Ltd	Finance	15,399	Yes
Overseas Union Bank Ltd	Finance	10,268	Yes
Tat Lee Business Bank Ltd	Finance	3,593	—
Chung Khiaw Bank Ltd	Finance	2,762	—
Great Eastern Life Insurance Ltd	Insurance	2,243	Yes
International Bank of Singapore Ltd	Finance	1,022	—
Lee Wah Bank Ltd	Finance	901	—
Four Seas Bank Ltd	Finance	568	—

Source: UNCTC, 1992, p. 270.

of ownership and origin. In fact, they tended to consider cross-Straits investment and operations as the same as their other business entities within the same country, reflecting intimate ties between firms from both countries.

Two examples of Malaysian and Singaporean TNCs are useful here to understand their historical origins and geographical activities. Perhaps the largest and most well-known TNC from Malaysia is the Sime Darby Group which is also a leading TNC from Southeast Asia (ZIN, 1997, pp. 7–8). Before being taken over by Pernas in 1976, the company was peculiar in that it was incorporated in London, owned substantially by Singaporeans and Malaysians, and managed in Singapore by mostly British executives (JESUDASON, 1989, p. 89). Singaporeans held 46% of shares, including 11% by Sime Darby's single largest shareholder, the Overseas Chinese Banking Corporation (OCBC) in Singapore. After the take-over, the Malaysian-owned and controlled Sime Darby Group began to expand aggressively and acquired many new subsidiaries in the region. By 1994, the conglomerate operated more than 200

companies in 22 countries across the globe, employing more than 32,000 people worldwide. As of 30 June 1994, its sales exceeded RM\$8.2 billion whereas its total assets and paid-up capital were RM\$4 billion and RM\$783.7 million, respectively. These figures represent a spectacular achievement from its humble beginning in 1910 based on 500 acres of rubber plantation in Malacca. Today, its main businesses include plantations, manufacturing, heavy equipment and motor vehicle distribution, property development, insurance services and oil and gas. Of its 120 reported subsidiaries and affiliates as of June 1994, some 34 are located in Singapore (28.3%). Singapore serves not only as an important market for Sime Darby, but also as a major springboard for Sime Darby to internationalize its operations worldwide.

Singapore's Yeo Hiap Seng is a major local industrial TNC with operations in Singapore, Malaysia, Hong Kong, the US and Canada (LOW *et al.*, 1993, pp. 457–59). The group employed some 4,200 people worldwide and generated sales of S\$341 million in 1991. The company was first established in China

around 1900. In 1935, the Yeo family moved to Singapore and established a soya sauce factory. By the 1950s, the company had diversified into canned food products and the beverage industry. The latter production has remained the most important business of Yeo Hiap Seng today. The company has now become a major producer of Asian soft (non-carbonated) drinks and a pioneer in the development of bottling of Asian soft drinks. As early as 1959, the company established a plant in Malaya to manufacture canned food. This certainly represents an early attempt by a Singaporean firm to operate across the border. Other than its public listing in Singapore, the company has also been listed in the Kuala Lumpur Stock Exchange since 1974. Today, Yeo Hiap Seng has many more manufacturing and distribution operations in Malaysia, contributing to the intense economic relations between the two countries.

#### *Business networks and economic synergy between Malaysia and Singapore*

Business networks, often based on ethnic ties and family relationships, are important mechanisms through which economic synergy can be realised.<sup>6</sup> The role and functions of these network relationships are not captured in Dunning's and Porter's macro-economic perspectives. It becomes crucial for us to probe into these business networks between Malaysia and Singapore in order to explain cross-border investments and economic synergy. In general, there are several types of business networks between Malaysia and Singapore through which economic synergy and investment flows are realized: (1) firm-specific networks controlled by foreign firms based in Singapore; (2) state-related firms and capital; and (3) private Chinese business networks. First, FDI statistics discussed above show a tendency for foreign firms based in Singapore to contribute to a significant proportion of Singapore FDI in Malaysia. Very often, these foreign firms use Singapore as a 'beach-head' to organize their intra-firm and inter-firm networks within the region. Some of them are manufacturing TNCs (e.g. Hewlett Packard and Sony) having their regional headquarters located in Singapore to co-ordinate and manage intra-firm networks of manufacturing operations in Malaysia and elsewhere in the region. As such, there is a strong spatial division of management and production functions within the overall corporate hierarchy. Whereas Singapore serves as their management and co-ordination centres, Malaysia plays a complementary role as a production base for exporting to the global market. In addition, some foreign firms use their Singapore bases as a springboard to further their co-operative inter-firm relationships in Malaysia and elsewhere. In many Malaysian industries open to FDI, local *bumiputra* equity participation is required, particularly if they are oriented towards the local market (see YEUNG, 1997a, 1997b, 1998c). As a

result, some Hong Kong TNCs, for example, activate their inter-firm relationships with Chinese Malaysians in Singapore and circumvent these mandatory restrictions in Malaysia. In this case, Singapore plays a stepping role for these foreign firms which are unfamiliar with the host country operating environment. They can always seek local Malaysian partners who have operations in Singapore. Inter-firm networks are thus based on co-operative relationships between foreign firms based in Singapore and local firms in Malaysia.

Second, state-related firms from both Malaysia and Singapore find it favourable to operate across the border because of the historical legacy and geographical proximity between the two countries. Many Malaysian state or political party-related companies have substantial stakes in Singapore's economy. Examples are Sime Darby (state-owned TNC) in manufacturing and vehicle distribution in Singapore and Multi-purpose Holdings (MPH), owned by Malaysian Chinese Association, in Singapore's retail and manufacturing and finance industries (see Table 7). These politically-connected *bumiputra* (e.g. Sime Darby) and non-*bumiputra* (e.g. MPH) TNCs from Malaysia see Singapore as a neighbouring country for diversification of risks and an international business hub to access global corporations. Singapore becomes an important centre in the internationalization process of these politically-connected Malaysian TNCs. On the other hand, many government-linked corporations (GLCs) from Singapore have long been operating in Malaysia. Table 8 shows that Singapore Press Holdings Ltd and Keppel Corporation Ltd have operations in related businesses in Malaysia. Although I have elsewhere argued that Singaporean investment in Malaysia is largely driven by private capital, GLCs still play an important role in promoting economic synergy and relations between the two countries (YEUNG, 1998, forthcoming).

Third, private Chinese business firms from Malaysia and Singapore are perhaps the largest channel through which economic synergy between the two countries is realized. Few studies, however, have documented the extensive inter-penetration of Chinese business networks between Malaysia and Singapore. There indeed exist complex networks among several leading Chinese-controlled TNCs from Malaysia (e.g. Genting, Hong Leong Malaysia, Kuok's Group and Paramount) and large listed TNCs from Singapore (e.g. Cycle & Carriage, Singapore Land, OCBC, Hong Leong Singapore). The leading Chinese businessmen in these complex, and often intractable, networks are Robert Kuok, Quek Leng Chan, Lim Goh Tong, Vincent Tan from Malaysia and Kwek Leng Beng, Khoo Teck Puat, the Lee family and the Shaw Brothers from Singapore (see Table 9). These Chinese business firms have established extensive cross-Straits operations over the past 50 years, particularly in the service sector. They are less involved in the manufacturing sector in which the prime competitive advantage rests more on

Table 9. Major overseas-Chinese companies from Malaysia and Singapore

Corporate leader	Company	Main business
<i>Malaysia</i>		
Robert Kuok	Perlis Plantations, Federal Flour Mills, South China Morning Post, TVB Ltd	Plantations, sugar and wood processing, media, hotels
Quek Leng Chan	Hong Leong Co., Guoco Group, Dao Heng Bank	Finance, diversified
Lim Goh Tong	Genting	Casinos, real estate
Vincent Tan	Berjaya Group	Leisure, manufacturing, investment
<i>Singapore</i>		
Kwek Leng Beng	Hong Leong Group, CDL Hotels	Real estate, hotels, finance
Khoo Teck Puat	Standard Chartered Bank	Banking, hotels
Lee family	Overseas-Chinese Banking Corporation	Banking, plantations
Ng Teng Fong and Robert Ng	Sino Land, Far East Organization	Property

Source: ASIA, INC., 1996.

technology than on information and knowledge. In these manufacturing industries, cross-Straits operations tend to be smaller in scale and scope and niche-oriented in order to compete effectively with global manufacturing giants. It must be noted, however, that in traditional manufacturing industries (e.g. textiles and garments), ethnic-based business networks are as important in constituting their competitive advantage.

I have shown elsewhere, in the case of Chinese business networks, that significant 'hidden' competitive advantage can be achieved by co-operative relationships between business firms from different countries (YEUNG, 1998c). These advantages can be summarized as the following:

- long term mutual commitments based on obligations of reciprocity in network relationships reduce uncertainties in business transactions (KUO, 1991; BRAADBAART, 1995)
- through personal and business networks, better information resources can be shared and business opportunities can be maximised, both mechanisms tend to offer 'first mover' advantage.
- *Guanxi*- or relationship-based credit-worthiness enhances the ease of capital formation (LIN, 1991; MITCHELL, 1995).
- Once established, this ethnic-based particularistic exchange network has a tendency to preserve itself as a closed system and to protect and perpetuate an existing monopoly.

The case of Hong Leong Group is presented here to

illustrate how family business networks can enhance economic synergy between countries.<sup>7</sup> The founder of the Hong Leong Group is the late Kwek Hong Png who came to Singapore from Fujian, China, in 1928. Over a period of half a decade, he managed to build up a vast business empire starting with trading, then expanding into property, finance and hotels. The Group's Malaysian branch started in 1963 when the late Kwek Hong Png sent his brother Kwek Hong Lye to Malaya (from which Singapore was soon to separate) to extend the family's operations there (EAST ASIA ANALYTICAL UNIT, 1995, p. 332). When Kwek Hong Lye died in 1973, his son, Quek Leng Chan took over the Malaysian business. Over time, the Malaysian family branch has grown substantially into one of the biggest conglomerates in Malaysia. Its 10 companies listed on the Kuala Lumpur Stock Exchange, the most by any group, have an annual turnover of US\$1.3 billion and are involved in many businesses from the manufacture of roofing tiles and semi-conductors (Hong Leong Industries Malaysia) to property (Guoco Group in Hong Kong) and the largest circulation of Chinese daily newspaper (Hume Industries Malaysia). It has a strong foothold in Hong Kong's financial industry where its subsidiary, the Guoco Group, controls the fifth largest local bank in Hong Kong: Dao Heng Bank.

The Kwek family in Singapore specializes in property development, finance and hotels. Kwek Leng Beng (son of the late Kwek Hong Png) took charge of the Hong Leong Group in Singapore after his father's death. He initiated the take-over of a loss-making listed company, City Developments, in the late 1960s and early 1970s and successfully turned it around to become a leading property developer in Singapore. The Hong Leong Group is now one of the largest Chinese business groups in Singapore with a market capitalization value of US\$16 billion and an employment strength of 30,000 worldwide (*The Sunday Times*, 2 February 1997). It has recently globalized into the hotel business through its property development arm: City Development Ltd (CDL). CDL Hotels International, listed in the Hong Kong Stock Exchange, manages the group's hotel interest. Since the late 1980s, CDL Hotels International has grown tremendously from owning only six hotels in 1989 to 62 in 1997. CDL Hotels International now has a hotel empire spanning 13 countries in Europe, the US, Australia, New Zealand, East and Southeast Asia.

In terms of economic synergy, the Hong Leong Group is a pertinent example of how a former national firm based in Malaya has been split into two related TNCs, one each from Malaysia and Singapore. This is a result of historical legacy and family networks. Today, both groups of the family maintain very close relationships and cross-border business networks which are useful to realize economic synergy between Malaysia and Singapore. The ownership of the Malaysian holding company, Hong Leong Company (Malaysia), is evenly spread between both sides of the family (Kweks



in Singapore and Queks in Malaysia). Family members exclusively control the Group through a series of family-owned holding companies and interlocking directorates.

### CONCLUSION

Preliminary analyses in this paper have demonstrated that significant economic synergy can be realized through cross-Straits two-way investment flows between Malaysia and Singapore. It concludes tentatively that this economic synergy is embedded in complex business networks among TNCs from both countries. Although Dunning's investment development cycle model and Porter's competitive advantage perspective explain the macro-economic trends of FDI between Malaysia and Singapore, they fail to specify the nature and characteristics of these economic relations which are embedded in historically and geographically specific forms of economic governance. Business networks, in this case, are important mechanisms to achieve economic synergy. This synergistic dimension is 'hidden' in that the participation in these complex business networks enables firms to achieve competitive advantage *vis-à-vis* other firms. A strong case can be made, therefore, to draw theoretical relationships between cross-border investment and business networks. Still, we need much more concerted research effort to unravel the complex working of these business networks and to discover the ways in which they can promote economic interaction and synergy between the countries concerned.

What are the policy implications of this paper? First, FDI can be an important agent of economic synergy that contributes increasingly to gaining national competitive advantage (see DUNNING, 1993b; cf. PORTER, 1990). Today's global economy is less driven by the notion 'comparative advantage' as preached in neoclassical economics. Rather, national economies are compelled to gain and sustain their *competitive* advantage in an era of global competition. As such, it is likely that national economies will succeed in global competition if they are able to provide added values to international business firms (DUNNING, 1993a, 1995). In this regard, Singapore is moving towards becoming an international business hub, specializing in high value-added manufacturing and service activities. Malaysia, on the other hand, is also transforming itself into a high-tech manufacturing hub for world-class manufacturers. Both countries are moving swiftly towards a developed country status. In this pursuit, it is important for policy makers to remember the importance of not only attracting FDI *per se*, but also attracting FDI that creates sustainable economic synergy. It is, therefore, a rather futile exercise for ASEAN countries to rely on investment incentives to attract foreign capital (see YEUNG, 1996). The net effect of these incentives on inflows of FDI is minimal. Instead of searching for

geographical locations that offer the lowest production costs and/or highest investment incentives, TNCs today are looking more for production sites that complement their global strategy and networks of operations. Since there is so much economic complementarity between Malaysia and Singapore, it could be extremely interesting if policy makers from both countries can come together and engage in joint promotion of cross-Straits investment by domestic firms and affiliates of foreign firms. In this way, global TNCs can exploit the synergistic dimension of both economies which, in turn, benefit from the presence of their networks of operations.

Second, the study shows that policy makers should not focus exclusively on outward FDI from developed countries. In fact, capital flows from developing countries, particularly in their historical context, can also be an important source of foreign investment. The recent surge in outward investment from the Asian NIEs (e.g. Hong Kong, Taiwan, South Korea and Singapore) is perhaps a very clear example. In 1994, Taiwan emerged as Malaysia's top foreign investor (*Malaysia Industrial Digest*, January–March 1995). Approved investments from Taiwan, Singapore and Hong Kong constituted some 45% of total approved FDI in the same year. In 1996, Singapore emerged as Malaysia's top foreign investor again, with total approved investments in the manufacturing sector rising sharply to RM\$4.8 billion from a mere RM\$1 billion in 1995 (*The Straits Times*, 24 January 1997). TNCs from these Asian NIEs are often capable of competing with global corporations in the local and regional marketplace (YEUNG, 1994a). They are becoming an increasingly important economic force in the global economy. While global TNCs continue to bring in high-tech and high value-added activities, these Asian TNCs contribute to local economic development through their intimate knowledge of the local and regional marketplace. They are also more likely to be embedded in specific localities through their relationships with the local business community and so on. For example, studies of FDI in Malaysia have found that firms from the Asian NIEs are more willing to localize their operations than global TNCs from advanced industrialized countries (ESCAP/UNCTC, 1988; FONG, 1990). This issue of local embeddedness has important implications for technology transfer, industrial linkages and management control in various manufacturing and service industries (see ALI, 1993; O'BRIEN, 1993).<sup>8</sup>

Following from the above point, it can finally be argued that the presence of business networks, frequently based on ethnic ties and family relationships, is not necessarily always counter-productive (see KOTKIN, 1992). Very often, these business networks are important mechanisms through which firms, industries and economies interact with each other. The role of Chinese business networks in integrating the Malaysian and Singaporean economy cannot be downplayed.

Instead of calling for more attention and/or incentives to this culturally-specific group of business networks, however, it is important to realize that other types of business networks should also be explicitly encouraged. The *bumiputra* policy, in this spirit, is applauded for its effectiveness in bringing about a major localization of the Malaysian corporate sector (see JESUDASON, 1989; SIEH, 1992). We begin to observe the emergence of a group of *bumiputra*-controlled Malaysian TNCs which are spreading their wings worldwide (e.g. Sime Darby Group). There is also much more fluidity in the spatial movement of business people between Malaysia and Singapore. In conclusion, economic synergy can be realized through cross-border investment. But this synergy and its associated benefits are only sustainable if the investors themselves are firmly embedded in interpenetrating business networks at the local level.

**Acknowledgements** – The materials in this paper are based on ongoing research into the regionalization of Singaporean firms funded by National University of Singapore Academic Research Grants (RP960045). An earlier version of this paper was presented at the Sixth Malaysia–Singapore Forum, 6–8 December 1996, University of Malaya, Kuala Lumpur. I am grateful to the participants of the Forum for their comments. The paper has since been revised substantially. Constructive comments from two anonymous referees and Adrian Smith are most useful. Thanks also to Lee Li Kheng for drawing Fig. 1. All errors and mistakes in this paper are my own responsibility.

### NOTES

1. A note on the nature and constraints of the data is necessary here. Data published by DOS and MIDA are strictly *not* comparable. First, while the DOS data refer to direct equity investment in all sectors (e.g. service and manufacturing industries), the MIDA data are limited to paid-up capital and fixed assets in the manufacturing sector only. Second, both sets of data are denominated in different currencies. This makes direct comparison extremely difficult because of different currency deflators. See ALI and WONG, 1993, pp. 115–6, for further discussion on FDI data sources in Malaysia.

2. It must be noted, however, that there was a major break in 1990 when the amount of FDI more than quadrupled from S\$2.9 billion in 1989 to S\$13.6 billion in 1990. This drastic increase in total FDI from Singapore can be explained by expanded data coverage in the survey conducted by the DEPARTMENT OF STATISTICS, 1996a, p. 15, to include the stock of reserves of overseas subsidiaries and associates attributable to Singapore investors. This implies that a large proportion of net earnings by Singapore investors has been reinvested in their existing subsidiaries/branches abroad, as captured in the new data collection methodology by DOS.
3. A large amount of Singapore's investment in China is channelled through Hong Kong, explaining why Hong Kong's figures look rather impressive.
4. It is surprising to note that there are very few specific studies of Singapore's investment in Malaysia (e.g. LEE, 1989).
5. The Malaysian Government does not publish any data on outward FDI from Malaysia. ZIN's, 1997, study, however, has included some data from Bank Negara Malaysia on outward FDI from Malaysia which used to be classified information. I am grateful to her for allowing me to present some of the relevant data from her study. In addition, aggregate data on Malaysia's FDI in Singapore published by the DEPARTMENT OF STATISTICS 1992, 1996b, do not include detailed breakdown of the industrial structure of Malaysian investment in Singapore. The census of industrial production data collated by the EDB contain only breakdown by variables (e.g. employment size, number of establishment and so on), not by industries.
6. There are certainly other mechanisms through which cross-border economic synergy can be realized (e.g. inter-governmental co-operation). But since this paper focuses on two-way *private* direct investments between business firms in Malaysia and Singapore, it has chosen to examine business networks, particularly ethnic-based networks, as one of the key agents of economic synergy.
7. See also other interesting case studies of economic synergy between Malaysia and Singapore (e.g. Cycle & Carriage, the Kuok Group, Multi-purpose Holdings, OCBC Banking, Tan Chong Motor Holdings).
8. See TUROK (1993) and TÖDTLING, 1994, for some recent evidence of the role of embeddedness in benefiting local economies through the presence of TNCs.

### REFERENCES

- ALAVI R. (1996) *Industrialization in Malaysia: Import Substitution and Infant Industry Performance*. Routledge, London.
- ALI A. (1993) Technology transfer in the Malaysian manufacturing sector: basic issues and future directions, in JOMO K. S. (Ed) *Industrialising Malaysia: Policy, Performance, Prospects*, pp. 190–209. Routledge, London.
- ALI A. and WONG P. K. (1993) Direct foreign investment in the Malaysian industrial sector, in JOMO K. S. (Ed) *Industrialising Malaysia: Policy, Performance, Prospects*, pp. 77–117. Routledge, London.
- AMIN A. and THRIFF N. (Eds) (1994) *Globalization, Institutions and Regional Development in Europe*. Oxford University Press, Oxford.
- ARIEF M. (1991) *The Malaysian Economy: Pacific Connections*. Oxford University Press, Singapore.
- ARIEF M. and YOKOYAMA H. (Eds) (1992) *Foreign Direct Investment in Malaysia*. Institute of Developing Economies, Tokyo.
- ASIA, INC. (1996) *The Merchant Mandarins*. Asia Inc., Hong Kong.
- BLOMQUIST H. C. (1995) Intraregional foreign investment in East Asia, *ASEAN Economic Bulletin* 11, 280–97.
- BRAADBAART O. (1995) Sources of ethnic advantages: a comparison of Chinese and *pribumi*-managed engineering firms in Indonesia, in RAJESWARY AMPALAVANA BROWN (Ed) *Chinese Business Enterprise in Asia*, pp. 177–96. Routledge, London.
- BROOKFIELD H. (Ed) (1994) *Transformation with Industrialization in Peninsular Malaysia*. Oxford University Press, Kuala Lumpur.
- CHANDLER A. D. (1990) *Scale and Scope: The Dynamics of Industrial Capitalism*. Harvard University Press, Cambridge, MA.

- CHIA S. Y. (1993) Foreign direct investment in the Singapore economy, in YAMAZAWA I. and LO F. C. (Eds) *Evolution of Asia-Pacific Economies: International Trade and Direct Investment*, pp. 183–232. Asian and Pacific Development Centre, Kuala Lumpur.
- CHIA O. P. (1996) *Malaysian Investment in China*, Report No. 3. Institute of Developing Economies, Tokyo.
- DEPARTMENT OF STATISTICS (DOS) (1991) *Singapore's Investment Abroad, 1976–1989*. DOS, Singapore.
- DEPARTMENT OF STATISTICS (DOS) (1992) *Foreign Equity Investment in Singapore, 1980–1989*. DOS, Singapore.
- DEPARTMENT OF STATISTICS (DOS) (1996a) *Singapore's Investment Abroad, 1990–1993*. DOS, Singapore.
- DEPARTMENT OF STATISTICS (DOS) (1996b) *Foreign Equity Investment in Singapore, 1990–1992*. DOS, Singapore.
- DEPARTMENT OF STATISTICS (DOS) (various years) *Yearbook of Statistics, Singapore*. DOS, Singapore.
- DEPARTMENT OF STATISTICS (DOS) (various years) *Report on the Census of Industrial Production*. DOS, Singapore.
- DICKEN P. (1998) *Global Shift: Transforming the World Economy*, 3rd edition. Paul Chapman, London.
- DICKEN P. and KIRKPATRICK C. (1991) Services-led development in ASEAN: transnational regional headquarters in Singapore, *Pacific Rev.* **4**, 174–84.
- DUNNING J. H. (1988) *Explaining International Production*. Unwin Hyman, London.
- DUNNING J. H. (1993a) *Multinational Enterprises and the Global Economy*. Addison Wesley, Reading, MA.
- DUNNING J. H. (1993b) Internationalizing Porter's diamond, *Mgt. Int. Rev.* **33**, 7–15.
- DUNNING J. H. (1995) The global economy and regimes of national and supranational governance, *Bus. & Contemp. World* **7**, 124–36.
- EAST ASIA ANALYTICAL UNIT (1995) *Overseas Chinese Business Networks in Asia*. Department of Foreign Affairs and Trade, Parkes, Australia.
- ECONOMIC DEVELOPMENT BOARD (EDB) (various years) *Report on the Census of Industrial Production*. EDB, Singapore.
- ESCAP (1995) *Sectoral Flows of Foreign Direct Investment in Asia and the Pacific*. United Nations, New York.
- ESCAP/UNCTC (1988) *Transnational Corporations from Developing Asian Economies: Host Country Perspectives*. ESCAP/UNCTC, Bangkok.
- FONG C. O. (1990) Direct foreign investment in Malaysia, in CHEN E. K. Y. (Ed) *Foreign Direct Investment in Asia*, pp. 191–229. Asian Productivity Organization, Tokyo.
- GRABHER G. (Ed) (1993) *The Embedded Firm: The Socio-Economics of Industrial Networks*. Routledge, London.
- GRABHER G. and STARK D. (Eds) (1997) *Restructuring Networks in Post-Socialist Societies: Legacies, Linkages and Localities*. Oxford University Press, Oxford.
- HO K. C. (1993) Industrial restructuring and the dynamics of city-state adjustments, *Environ. Plann. A* **25**, 47–62.
- HO K. C. (1994) Industrial restructuring, the Singapore city-state, and the regional division of labour, *Environ. Plann. A* **26**, 33–51.
- HO K. C. and SO A. (1997) Semi-periphery and borderland integration: Singapore and Hong Kong experiences, *Pol. Geogr.* **16**, 241–59.
- HOFFMANN L. and TAN S. E. (1980) *Industrial Growth, Employment, and Foreign Investment in Peninsular Malaysia*. Oxford University Press, Singapore.
- HUFF W. G. (1994) *The Economic Growth of Singapore: Trade and Development in the Twentieth Century*. Cambridge University Press, Cambridge.
- HUGHES H. and SING Y. P. (Eds) (1969) *Foreign Investment and Industrialization in Singapore*. University of Wisconsin, Madison, WI.
- JESUDASON J. V. (1989) *Ethnicity and the Economy: The State, Chinese Business and Multinationals in Malaysia*. Oxford University Press, Singapore.
- KANAI T. (1993) Singapore's new focus on regional business expansion, *NRI Quarterly* **2**, 18–41.
- KOTKIN J. (1992) *Tribes: How Race, Religion and Identity Determine Success in the New Global Economy*. Random House, New York.
- KUO E. C. Y. (1991) Ethnicity, polity and economy: a case study of the Mandarin trade and the Chinese connection, in HAMILTON G. G. (Ed) *Business Networks and Economic Development in East and South East Asia*, pp. 155–75. Centre of Asian Studies, University of Hong Kong.
- LEE S. Y. (1989) The development of Chinese banking in Singapore and Malaysia and its future trend, in NG L. and CHANG C. Y. (Eds) *Overseas Chinese in Asia Between the Two World Wars*, pp. 155–67. Chinese University of Hong Kong Press, Hong Kong.
- LEE T. Y. (1994) *Overseas Investment: Experience of Singapore Manufacturing Companies*. McGraw-Hill, Singapore.
- LIM L. Y. C. and PANG E. F. (1991) *Foreign Direct Investment and Industrialization in Malaysia, Singapore, Taiwan and Thailand*. OECD, Paris.
- LIM M. H. and TEO K. F. (1986) Singapore corporations go transnational, *J. SE Asian Studies* **17**, 336–65.
- LIN P. A. (1991) The social sources of capital investment in Taiwan's industrialization, in HAMILTON G. G. (Ed) *Business Networks and Economic Development in East and South East Asia*, pp. 94–113. Centre of Asian Studies, University of Hong Kong.
- LOW L., RAMSTETTER E. D. and YEUNG H. W. C. (1996), Accounting for Outward Direct Investment from Hong Kong and Singapore: who controls what? Working Paper No. 5858, National Bureau of Economic Research, Washington, DC.
- LOW L., TOH M. H., SOON T. W., TAN K. Y. and HUGHES H. (1993) *Challenge and Response: Thirty Years of the Economic Development Board*. Times Academic Press, Singapore.
- LU D. and ZHU G. (1995) Singapore direct investment in China: features and implications, *ASEAN Economic Bulletin* **12**, 53–63.
- Malaysia Industrial Digest* (various issues) Malaysia Industrial Development Authority.

- MIRZA H. (1986) *Multinationals and the Growth of the Singapore Economy*. Croom Helm, London.
- MITCHELL K. (1995) Flexible circulation in the Pacific Rim: capitalism in cultural context, *Econ. Geogr.* **71**, 364–82.
- O'BRIEN L. (1993) Malaysian manufacturing sector linkages, in JOMO K. S. (Ed) *Industrialising Malaysia: Policy, Performance, Prospects*, pp. 147–62. Routledge, London.
- PANG E. F. (1995) Staying global and going regional: Singapore's inward and outward direct investments, in *The New Wave of Foreign Direct Investment in Asia*, pp. 111–29. Nomura Research Institute and Institute of Southeast Asian Studies, Singapore.
- PERRY M. (1991) The Singapore growth triangle: state, capital and labour at a new frontier in the world economy. *Singapore J. Trop. Geogr.* **12**, 138–51.
- PERRY M. (1992) Promoting corporate control in Singapore, *Reg. Studies* **26**, 289–94.
- PERRY M. (1995) New corporate structures, regional offices and Singapore's new economic directions, *Singapore J. Trop. Geogr.* **16**, 181–96.
- PITELIS N. and SUGDEN R. (1991) *The Nature of the Transnational Firm*. Routledge, London.
- PORTER M. E. (1980) *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. The Free Press, New York.
- PORTER M. E. (1986) Competition in global industries: a conceptual framework, in PORTER M. E. (Ed) *Competition in Global Industries*, pp. 15–60. Harvard Business School Press, Boston.
- PORTER M. E. (1990) *The Competitive Advantage of Nations*. Macmillan, London.
- RAMSTETTER E. D. (1996) Characteristics of Singapore's manufacturing establishments by nationality of ownership, in TODDA M. and HIRATSUKA D. (Eds) *Projects for Asian Industrializing Region (V)*, Institute of Developing Economies, Tokyo. 179–225.
- RASIAH R. (1995) *Foreign Capital and Industrialization in Malaysia*. St. Martin's Press, New York.
- RÉGNIER P. (1993) Spreading Singapore's wings worldwide: a review of traditional and new investment strategies, *Pacific Rev.* **6**, 305–12.
- RODAN G. (1989) *The Political Economy of Singapore's Industrialization: National State and International Capital*. Macmillan, London.
- SAXENIAN A. (1994) *Regional Advantage: Culture and Competition in Silicon Valley and Route 128*. Harvard University Press, Cambridge, MA.
- SIEH L. M. L. (1992) The transformation of Malaysian business groups, in MCVHEY R. (Ed) *Southeast Asian Capitalists*, pp. 103–26. Cornell University Southeast Asia Program, Ithaca.
- TAN C. H. (1995) *Venturing Overseas: Singapore's External Wing*. McGraw-Hill, Singapore.
- The Straits Times* (various issues) Singapore.
- TÖDTLING F. (1994) The uneven landscape of innovation poles: local embeddedness and global networks, in AMIN A. and THRIFF N. (Eds) *Globalization, Institutions, and Regional Development in Europe*, pp. 68–90. Oxford University Press, Oxford.
- TUROK I. (1993) Inward investment and local linkages: how deeply embedded is 'Silicon Glen'?, *Reg. Studies* **27**, 401–17.
- UNCTAD (1996) *Transnational Corporations and World Development*. International Thomson Business Press, London.
- UNCTC (1992) *World Investment Directory 1992: Foreign Direct Investment, Legal Framework and Corporate Data, vol 1, Asia and the Pacific*. United Nations, New York.
- YEUNG H. W. C. (1994a) Transnational corporations from Asian developing countries: their characteristics and competitive edge, *J. Asian Bus.* **10**, 17–58.
- YEUNG H. W. C. (1994b) Third World multinationals revisited: a research critique and future agenda, *Third World Quart.* **15**, 297–317.
- YEUNG H. W. C. (1994c) Hong Kong firms in the ASEAN region: transnational corporations and foreign direct investment, *Environ. Plann. A* **26**, 1931–56.
- YEUNG H. W. C. (1995) The geography of Hong Kong transnational corporations in the ASEAN region, *Area* **27**, 318–34.
- YEUNG H. W. C. (1996) Attracting foreign investment? The role of investment incentives in the ASEAN operations of transnational corporations, *Pacific Rev.* **9**, 505–29.
- YEUNG H. W. C. (1997a) Business networks and transnational corporations: a study of Hong Kong firms in the ASEAN region, *Econ. Geogr.* **73**, 1–25.
- YEUNG H. W. C. (1997b) Cooperative strategies and Chinese business networks: a study of Hong Kong transnational corporations in the ASEAN region, in BEAMISH P. W. and KILLING J. P. (Eds) *Cooperative Strategies: Asia-Pacific Perspectives*, pp. 22–56. New Lexington Press, San Francisco, CA.
- YEUNG H. W. C. (1998a) The political economy of transnational corporations: a study of the regionalisation of Singaporean firms, *Pol. Geogr.* **17**, 389–416.
- YEUNG H. W. C. (1998b) Competing for transnational corporations? The regional operations of foreign firms in Hong Kong and Singapore, in COOK I., DOEL M. and LI R. (Eds) *Business, Trade and Economic Development in Pacific Asia*. Avebury, Aldershot.
- YEUNG H. W. C. (1998c) *Transnational Corporations and Business Networks: Hong Kong Firms in the ASEAN Region*. Routledge, London.
- YEUNG H. W. C. (1998, forthcoming) Regulating investment abroad? The political economy of the regionalization of Singaporean firms, *Antipode* **31**.
- YOSHIMURA K. (1976) *Foreign Investment and Domestic Response: A Study of Singapore's Industrialization*. Eastern University Press, Singapore.
- ZIN R. H. M. (1997) Malaysian reverse investments: trends and strategies. Paper Presented at the Asian Pacific Journal of Management Conference on The Asian Multinational Corporation and Government Business Relations in Asia, National University of Singapore, February.