The growing importance of United States affiliates of transnational corporations based in the United Kingdom *

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This article explores the activities of United Kingdom-based transnational corporations (TNCs) and their affiliates in the United States. It extends UNCTAD's transnationality index to derive a "relative importance index" of the United States-based activities of United Kingdom TNCs. The results indicate that for some highly internationalized United Kingdom TNCs, activities in the United States account for a predominant proportion in their overall activities. In some cases, the United States affiliates contribute over 60% of the TNC's revenues, profits and net assets. The policy implications of such concentration of TNCs activities in a single foreign country are discussed.

Key words: foreign direct investment (FDI), transnationality index, relative importance index, internationalization, transnational corporations (TNCs), United Kingdom, United States

1. Introduction

Affiliates of transnational corporation (TNC) are traditionally viewed as mere instruments of their parents (Birkinshaw, 2001). More recent contributions have noted, however, that TNCs' affiliates evolve in both scale and scope over time (Lu *et al.*, 2007; Phene and Almeida, 2003), and that an interplay of affiliate level entrepreneurship and the affiliate's competitive environment could substantially impact on the overall performance of TNCs

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(Birkinshaw *et al.*, 2005). Foreign affiliates learn from the host country environment and contribute substantially to their parent's stock of resources, which, in turn, strengthens the TNC as a whole (Mu *et al.*, 2007).

United Kingdom-based TNCs are among the leading foreign direct investors in the world (UNCTAD, 2005). While their overseas activities have been extensively studied, the relative importance of their foreign affiliates in their corporate networks has not been fully analyzed. This is especially so with regard to United Kingdom TNCs' affiliates in the United States, which constitute the largest networks of foreign affiliates in the host country. Although the wave of investment in the United States by United Kingdom TNCs in the 1980s attracted much scholarly interest, the affiliates' activities in the recent past have not been given due attention even though the scale and scope of their activities have expanded over time.

This exploratory study therefore examines the activities of United Kingdom TNCs' affiliates in the United States in recent years and attempts to gauge the relative importance of these affiliates in the overall activities of their parent TNCs.[1] The article will attempt to answer two main questions: what is the relative importance of United States affiliates in the corporate networks of the United Kingdom TNCs; and what are the main characteristics of these TNCs? This study focuses mostly on the period 1990–2000.

The remainder of this article is divided into four main sections. The following section outlines the activities of United Kingdom TNCs in the United States and some relevant international business literature. The methodologies used to collect and analyse the data are then discussed. This is followed by analysis and discussion of the findings. The final section discusses the policy implications.

2. United Kingdom TNCs and their activity in the United States

United Kingdom TNCs account for the largest proportion of foreign direct investment (FDI) stock in the United States (Anderson and Zeile, 2006; UNCTAD, 2005). The United States has, however, not

[1] This paper reports on a part of findings in a bigger research effort aimed at understanding the activities of United Kingdom TNCs in the United States.

been the most important FDI location for United Kingdom TNCs until very recently. The main geographical focus of United Kingdom FDI up to the late 1960s was its former colonial countries, before they (United Kingdom firms) shifted their attention to Europe in the 1970s. It was not until the late 1980s that the United States emerged as the principal destination of United Kingdom overseas investment.

For the purpose of this study, therefore, three investment "epochs" are identified within the period from the late 1950s to the present. The first period is from the late 1950s up to 1969 when the Commonwealth nations were the preferred FDI destinations for United Kingdom firms. The second epoch is from 1970 to the mid-1980s when Europe took over as the most important FDI location. The third epoch is the period from around 1990 to the present when the United States emerged as the favourite FDI location for United Kingdom TNCs. These three investment epochs will be used in the analysis of the data in section four.

Since this study focuses on the third investment epoch, it is important to understand the characteristics of United Kingdom firms that undertake FDI in the United States. While United Kingdom affiliates in the United States engaged mostly in low-technology, low value-added industries for a long time (Shepherd *et al.*, 1985; Graham and Krugman, 1991), their activities since the 1990s have been shifting increasingly towards high-technology, high-value-adding industries (Lowe, 2000). For example, United Kingdom-based firms accounted for over 50% of European FDI in the computer and electronics industry in 1999 and over 89% of European FDI in the information technology industry in the United States (Lowe, 2000; Howestine, 2001). They have been the most important acquirers of United States firms, and now operate the largest networks of foreign affiliates in the United States. In 2004, for instance, they accounted for 21% of the value-added by foreign affiliates in the United States (Anderson and Zeile, 2006). A study by the United States Bureau of Economic Analysis (Shannon *et al.*, 1999) found that the United Kingdom is the only country whose TNCs have established affiliates in all 52 states of the country. Zeile (1998) observed that foreign affiliates of United Kingdom TNCs are closest in their characteristics to domestic firms. They are also the most United States-oriented in terms of sales and production, thus seemingly more embedded in the host country than their peers from other key investor countries.

A question arises as to why United Kingdom firms came to concentrate their investment in the United States when they had previously focused on the Commonwealth nations in the 1950s and1960s and then on Europe in the 1970s and early 1980s. The importance of the Commonwealth nations could be attributed to the United Kingdom's strategic commitment to its former colonies and the fact that they were politically more stable and safer than alternative investment locations at the time (Stopford and Turner, 1985). In the case of Europe, United Kingdom's entry into the then Common Market opened the doorway to investment opportunities in continental Europe. Interest in Europe, however, waned rapidly because, despite the move toward a common market, considerable non-tariff barriers remained (Shepherd *et al.*, 1985). The fragmented nature of European markets and economic nationalism have been cited as further reasons why Europe fell out of favour, paving the way for increased investment in the United States (Stopford and Turner, 1985).

With regard to the United States, several reasons have been identified in literature as to why it became the most attractive location. These include the unfavourable economic and political climate (including labour unrests) in the United Kingdom compared with the United States at the time (Stopford and Turner, 1985); the size and growth potential of the United States market (Young and Hood, 1980; Shepherd *et al.*, 1985); and the lower cost of capital in the United States (Graham and Krugman, 1991). Furthermore, a desire to narrow the technology gap on part of the TNCs, the potential to achieve higher returns from the United States compared to the United Kingdom and Europe, global strategy motives, and the relative ease of acquisition in the United States played a role (Brown, 2000).

Graham (1978), however, argued that these were not sufficient explanations for the patterns of transatlantic FDI. He asserted that "rivalrous behaviour" induced competition between TNCs based in Europe and those in the United States. An increase in United States FDI in Europe was followed by a response in the form of European FDI in the United States. Indeed, prior to the shift of United Kingdom TNC activities towards the United States, the United Kingdom was often used as the "beachhead" for United States investment in Europe. Since 1962, United States firms have been the leading investors in the United Kingdom (Stopford and Turner, 1985). Graham's "rivalrous behaviour" perspective therefore adds to our understanding of investment by United Kingdom TNCs. It also, to some extent, laid some foundation for a broader understanding of the bi-directional flows of FDI between

similar developed economies, such as the United Kingdom and the United States (Markusen and Venables, 1998).

Studies on the evolving roles of foreign affiliates form another stream of literature that sheds light on recent bilateral flows of FDI between the United Kingdom and the United States. Early literature on cross-border activities of firms views corporate headquarters and foreign affiliates from a centre-periphery perspective. The traditional headquarters serves not only as the "centre of gravity" of the TNC, but also as its most important market and source of revenues. Affiliates, on the other hand, are regarded as the appendages of the parent performing certain roles assigned to them (Birkinshaw, 2001). In essence, therefore, resources and decisions flow in a uni-directional fashion from the parent to foreign affiliates.

More recently, however, a number of studies have argued that foreign affiliates evolve over time and, in the process, contribute to the stock of resources of their parents (Mu *et al.*, 2007; Lu *et al.*, 2007; Birkinshaw *et al.*, 2005). This stream of literature distinguishes foreign affiliates by the role they perform in their corporate networks. Others see the TNC as a differentiated network in which various nodes become specialized over time for the overall benefit of the corporate network (Bartlett and Ghoshal, 1989). From this perspective, resources are expected to flow in a bi-directional fashion. This perspective is important for analysing United Kingdom TNCs since affiliates in the United States account for a large part of corporate activities of some of those TNCs, as shown later in this article.

3. Data and methodology

3.1. Data

In order to pursue the dual objectives of measuring the relative importance of United Kingdom TNCs' affiliates in the United States to their parents and understanding the characteristics of these TNCs, the authors screened data on the largest publicly owned United Kingdom firms to identify TNCs that had affiliates in the United States. The data collection exercise was based on the population of United Kingdom's leading 500 firms (*Financial Times 500*). To take out firms that are not relevant to this study (e.g. purely domestic firms) from the sample, the following screening process was applied. Firms which operate only in the United Kingdom market, those which operate in the financial

industry (even if international), and those owned by foreign firms were removed from the list. Furthermore, those TNCs without geographical breakdowns of relevant data on sales, net assets, and profits are removed from the sample. At the end of the screening process, 163 TNCs (in the 1998 base year) were identified as the sample for this study. Data on sales, net assets and profits of the 163 TNCs were drawn from the Sequencer/Extel database for the period 1990–2000. Data on the date of establishment (for age), and market capitalization (for size) were obtained from the same source. Dates on the initial entry into the United States (for host market experience) and the mode of entry were obtained from annual reports of the TNCs and other published documents.

Since some firms dropped out of the sample for a number of reasons (e.g. acquisition, closure, withdrawal from overseas markets) during the period under study, the total number of firms in the sample varies over the 11-year period. The outcome of the screening exercise is presented in table A1 in the appendix.

3.2. Measuring the degree of internationalization and the relative importance of affiliates

Researchers have measured the degree of firm internationalization using different variables (including sales, assets and profits). Some studies have used data on sales (Rugman, 2005; Rugman and Verbeke, 2004; Dunning and Pearce, 1981). Sullivan (1994) introduced a composite measure comprising five variables – sales, profit, assets, international experience of top managers, and dispersion of operations (see also Curwen and Whalley, 2006).[2]

Ietto-Gilles (1998), building on past contributions, applied two frameworks of internationalization. One is based on the measurement of home versus foreign activities. This is done by finding the average of three ratios as used by UNCTAD (2005) – total assets, sales and employment. The second framework is a measure of the spread of countries in which TNCs operate.

A shortcoming of these approaches is that they treat all foreign affiliates equally without taking into account the economic importance of individual host countries.[3] Putting, for example, affiliates in the

[2] For a criticism of this approach, see Ramaswamy *et al.* (1996).

[3] Exceptions include Curwen and Whalley (2006), Rugman and Verbeke (2004), and the analysis of affiliate spread in Ietto-Gilles (1998).

United States and those in a small developing country in the same basket is likely to result in understating the contribution of affiliates in the larger and strategically important United States. This study therefore builds on the extant literature by going a step further and examining the individual host country contribution in terms of sales, net assets and profit.

For measuring the relative importance of corporate units, Harrigan (1983), for example, suggested that cash flows could be used as an indicator of a business unit's relative importance. Forsgren *et al.* (1999) used accounting profits (based on exports) and employment growth as proxy measures. They argue that even without the possession of tangible resources, the generation of significant revenues will give the affiliate significant "organizational strength" within its corporate network.

The approach adopted in this exercise is based on the *transnationality index*, first introduced in the *World Investment Report* (UNCTAD, 1995), which attempts to measure the share of the TNC's activities located overseas compared with those in the home country. The *transnationality index* is a composite of three ratios – foreign assets to total assets of the TNC, foreign sales to total sales of the TNC and foreign employment to total employment of the TNC. The *transnationality index* is based on the demarcation between home activities on the one hand and all overseas activities on the other (Dunning and McKaig-Berliner, 2002; Rugman and Verbeke, 2004; Rugman, 2005).

For the purpose of this study, the UNCTAD method was extended in three ways. First, instead of bundling together all foreign activities, affiliates' locations were broken down into four key countries and regions – the United Kingdom, the United States, Europe and the rest of the world. Second, while the *transnationality index* uses employment figures, this study, following Ietto-Gilles (1998), used profit before tax. This was done because TNCs do not always report geographical breakdowns of their employment figures. One advantage of using profit instead of employment is that the resulting ratios could proxy for performance measures in some circumstances (see Forsgren *et al.*, 1999). Finally, net assets instead of total assets were used because most of the firms do not report total assets by geographical location. It is important to note, however, that although net assets were used here, total assets would have been a preferred variable, because the use of net assets could underestimate the extent of internationalization.

The extended method was used to calculate the *relative importance index* for each geographical location. A higher *relative importance index* for location A compared with location B in the TNC's network indicates a higher level of importance of location A

4. Findings and discussion

The first issue addressed was the entry mode that the TNCs utilized when they entered the United States market. Data for the entry mode were available for 108 firms in the sample. It was found that 71 TNCs (66%) entered the United States through acquisition while 24 TNCs (22%) used the greenfield entry approach. Joint ventures were used by 11 TNCs (10%) while only two firms relied on licensing as the mode of entry. This finding is consistent with recent studies by the United States Bureau of Economic Analysis (Lowe, 2000; Howestine, 2001), which showed a similar pattern of entry mode choices by United Kingdom TNCs.

The next step in the study was to determine the relative importance of the operating units of the TNCs by geographical location. The 163 TNCs were ranked by the United States affiliate's *relative importance index*. A selected list of firms with over 50% of their activities in the United States in the base year (1998) is presented in table 1.

As can be seen from table 1, for some TNCs, affiliates in the United States dominate their overseas activities. Indeed, some firms such as Hanson and Signet could more appropriately be described as bi-nationals because of the concentration of their activities only in the United States and the United Kingdom, similar to the concept of bi-regional firms in Rugman (2005).

It was noted in section two that in the 1990s, some of the TNCs started to move out of the traditional low value-added, low-technology industries associated with United Kingdom TNCs and into high value-added, high-technology industries through acquisition of United States firms. A selected group of such TNCs are presented in table 2.

Shepherd *et al.* (1985) pointed out that in 1981, only 39% of FDI from the United Kingdom was in technology-intensive industries compared with 65% by United States TNCs. More recently, however, some United Kingdom TNCs acquired strategic assets which transformed them into knowledge-intensive, high-technology TNCs, as in the examples of firms in table 2. From Graham's perspective, it could be argued that some United Kingdom TNCs, after gaining footholds in the

United States market, are now trying to catch up with their transatlantic competitors that dominate high technology industries.

Table 1. Sample of United Kingdom TNCs with over 50% of their activities located in the United States

Sample TNCs	Relative Importance – 1998				
	United States/ North America	United Kingdom	Europe	ROW	Total
BBA	54.3	12.9	30.3	1.9	100
Bunzl	57.6	30.4	5.4	6.7	100
Cookson Group	62.0	14.9	13.4	9.7	100
EMI Group	55.5	-1.3	21.6	24.2	100
Hanson	53.2	46.3	0.0	0.5	100
Invensys	54.1	12.0	20.6	13.3	100
Pearson	52.1	16.1	28.1	4.0	100
PIC International*	77.4	N.A.	10.3	13.3	100
Premier Farnell	61.2	28.9	0.0	9.9	100
Senior	61.9	18.3	17.8	2.0	100
Signet Group	73.5	26.5	0.0	0.0	100
Smith (W.H.) Group	60.4	30.3	12.4	-3.1	100
Tomkins	50.4	35.1	6.2	8.3	100
WPP Group	94.6	4.2	3.8	-2.6	100

Source: The authors' analysis
*PIC combined its United Kingdom and European activities in their reports.

Table 2. A sample of United Kingdom firms that have made acquisition of higher value, higher technology assets in the United States

Company	Previous activity	Activity in 2000
BBA	Transmission belt manufacturer. Basic engineering conglomerate	Aviation services; Advanced textile material technology (medical).
Invensys (formerly Siebe)	Safety and garage equipment manufacturer	Automation and control systems; power systems,
PIC (now acquired)	Stock (pig) breeding	Biotechnology
Tomkins	Buckle and fasteners	Power transmissions, fluid power and systems; building materials
WPP Group	Shopping baskets and domestic wire products	Advertising/Communication

Source: Various company annual reports and company listing particulars.

Turning to the proportion of activities located in the United States, the summary statistics regarding the relative importance of all the 163 firms over the 11-year period are presented in table 3. This shows that the proportion of activities located in the United States by the United Kingdom TNCs generally increased during the 11-year period. Apart from 1991 and 1999 when it dipped a little, the period witnessed a consistent rise in the share of activities in the United States. While affiliates in the United States accounted for only about a fifth of the activities of the firms in the sample at the beginning of the decade, by 2000, this has increased to a third (mean of 32.9). The rapid increase in United States activities could be attributed to the increased levels of United Kingdom acquisition noted by many researchers (UNCTAD, 2005).

Table 3. Summary statistics of the overall relative importance of the United States affiliates to their United Kingdom parents 1990-2000

YEAR	No of firms	Mean	Median	Standard Deviation	Minimum	Maximum
1990	89	19.7	16.7	16.35	-7.1	70.9
1991	110	19.1	18.8	19.16	-96.7	76.7
1992	124	23.2	19.2	20.36	-47.5	109.4
1993	126	24.4	22.1	20.19	-27.2	96.6
1994	139	24.7	22.2	20.00	-18.2	93.1
1995	152	25.6	24.1	20.04	-24.5	81.1
1996	156	27.7	25.0	26.35	-70.2	199.5
1997	162	27.4	28.2	22.34	-69.0	80.2
1998	163	30.0	28.9	27.53	-46.5	265.0
1999	153	27.7	26.6	25.90	-165.2	75.5
2000	135	32.9	29.4	24.24	-15.7	138.8

Source: The authors' analysis.

4.1. The relative importance of activities in the United States

In order to gain a deeper understanding of the pattern of activities, two further exercises were undertaken. The first was the analysis of the relative contributions of the three variables (sales, assets and profits) to the result. This was followed by a "finer mesh" analysis of the *relative importance index*. The relative contributions of the key variables are presented in table A.2 in the appendix. The results show that, overall,

the *relative importance index* is not particularly driven by any one of the three variables. On average, the relative contribution of each the three variables over the period is about a third.

For the "finer mesh" analysis, the TNCs were divided into three groups based on the relative importance of affiliates in the United States. The result for each year was re-categorized into three groups – (1) HIGH (the top 30%), (2) MID (the middle 40%), (3) LOW (the bottom 30%). The summary statistics of this "finer mesh" exercise are presented in table 4.

Table 4. Summary statistics of the relative importance of the United States to the TNCs by group

Year	RI	N	Mean	Median	StDev	Minimum	Maximum
1990	HIGH	27	40.4	40.1	11.04	25.0	70.9
	MID	35	16.6	16.7	3.60	10.4	23.6
	LOW	27	3.0	3.3	4.21	-7.1	8.7
1992	HIGH	37	46.8	44.3	16.34	30.6	109.4
	MID	50	21.1	19.3	5.79	11.7	30.5
	LOW	37	2.5	2.0	9.27	-47.5	11.4
1994	HIGH	42	49.3	46.0	13.99	31.9	93.1
	MID	55	21.9	22.2	5.86	12.1	31.5
	LOW	42	3.8	3.7	5.43	-18.2	11.9
1996	HIGH	47	56.1	49.7	25.41	37.6	199.5
	MID	62	25.1	25.1	8.01	12.6	37.2
	LOW	47	2.8	3.5	11.89	-70.2	12.6
1998	HIGH	49	57.0	51.2	31.94	41.7	265.0
	MID	65	28.2	28.9	7.72	15.9	41.5
	LOW	49	5.4	5.9	9.53	-46.5	15.7
2000	HIGH	41	61.7	57.9	18.72	42.3	138.8
	MID	53	30.1	29.4	6.56	20.3	42.1
	LOW	41	7.9	7.3	7.57	-15.7	20.0

Source: The authors' analysis.

The breakdown in table 4 shows that although there was a general increase in activities in the United States during the decade, it was accounted for mostly by the HIGH group. The 27 United States affiliates in this group contributed 40% of their parent's activities in 1990. This compares with 17% for the MID group and 3% for the LOW

group. By 2000, the proportion of business activities in the United States had increased tremendously. The affiliates in the HIGH group were the dominant contributors to their parents. The 41 United Kingdom TNCs' affiliates in this group (in 2000) contributed about 62% of the overall sales, net assets and profits of their parents, while for the MID group, they contributed almost a third. The LOW group doubled their contribution in 1990 to about 8%.

Of particular interest is the dominant position of the United States affiliates of the TNCs in the HIGH category. From 1995, these United States affiliates alone accounted for more than half of their parent's activities. Although the home country is traditionally viewed by many as the "centre of gravity" of the TNC's activities (Mataloni and Yorgason, 2006), the findings here suggest that a group of highly internationalized United Kingdom TNCs have "defied" this conventional model of business and, instead, concentrated the largest proportion of their activities in the United States.

4.2. Relative importance and firm characteristics

Moving to the *relative importance index* in relation to firm-specific characteristics of age, host-market experience and size, the aim is to determine whether the *relative importance index* is influenced by particular organizational characteristics. To undertake this exercise, the Kruskal-Wallis (Kruskal-Wallis one-way analysis of variance-ANOVA) test was used to assess the hypothesis that the firm-specific characteristics do not affect the *relative importance index*. The Kruskal-Wallis test is very useful when three or more groups are compared on a variable that is measured at an ordinal level, as is the case in this study. The other alternative – the Mann-Whitney test – compares only two groups. The objective here is to look for differences in the population median and to test the significance of such differences. The null hypothesis is that the TNCs are homogenous with regard to the *relative importance index*. The results of the Kruskal-Wallis test are presented in table 5.

Panel A of table 5 presents results for the test of the hypothesis that the *relative importance index* is equal for all years in the sample. The results indicate that the null hypothesis is rejected. Later years (1996–2000) have positive z-values while the earlier years (1990–1995) show negative z-values, indicating that the median values for the later years are higher than the overall median. This suggests that the relative importance of the United States to United Kingdom TNCs has increased significantly during the 1990s. This finding is not surprising.

As noted in section two, this period (1996–2000) falls within the third investment epoch in which the United States emerged as the most preferred destination for United Kingdom FDI.

Table 5. Results of Kruskal-Wallis Test (by age, size, year of operation, and host market experience)

	No. of Companies	Median	Average Rank	Z	H	Significance (p)
Panel A: By Year of Operation (Relative Importance Over Time)						
1990	89	16.7	623.4	-3.12	43.11	0.000
1991	110	18.8	635.1	-3.20		
1992	124	19.2	700.9	-1.67		
1993	126	22.1	726.0	-1.01		
1994	139	22.2	725.4	-1.09		
1995	152	24.1	750.3	-0.40		
1996	156	25.0	775.0	0.33		
1997	162	28.2	811.3	1.45		
1998	163	28.9	832.6	2.12		
1999	153	26.6	822.6	1.75		
2000	135	29.4	888.4	3.48		
Panel B: By Age of TNC (Measured by Date of Incorporation)						
1990 – 2000	62	29.0	797.4	0.71	8.69	0.013
1970 – 1989	263	17.8	687.0	-2.91		
Before 1970	1191	24.1	772.3	2.34		

Table 5 (continued). Results of Kruskal-Wallis Test (by age, size, year of operation and host market experience)

	No. of Companies	Median	Average Rank	Z	H	Significance (p)
Panel C: By United States Experience (Date of United States Entry)						
1990 – 2000	339	21.5	683.2	-3.01	29.20	0.000
1970 – 1989	765	22.2	722.8	-2.05		
Before 1970	385	29.9	843.4	5.22		
Panel D: By Size of TNC (Measured by Market Capitalization)						
LARGE	479	29.0	817.5	4.10	28.28	0.000
MIDIUM	627	22.8	755.5	0.38		
SMALL	394	17.8	661.2	-4.77		

Source: The authors.

Relative importance and age of the TNC

Panel B of table 5 shows the Kruskal-Wallis results for relative importance and the age of the TNC. The null hypothesis is that the *relative importance index* is the same for all firms irrespective of the age of the TNC. To examine the possible effect of the age of the TNC on the *relative importance index*, the TNCs were classified into three groups – firms incorporated after 1990, between 1970 and 1989, and before 1970. As can be seen in the table, most of the TNCs were established before 1970, when the FDI of many United Kingdom TNCs was focused on the Commonwealth countries.

The sample medians for the three groups are 29.0, 17.8 and 24.1. The results indicate that there are significant differences in the *relative importance index* depending on the age of the TNC, though weaker than the other factors tested. The older TNCs (pre-1970 firms) have a high positive z-value, indicating that the median *relative importance index* for that group is higher. On the other hand, the 1970–1989 group of firms has a significantly lower median. Thus, there seems to be a nonlinear relationship between the age of the TNC and the *relative importance index*.

It appears that older TNCs are enjoying the positive "influence" of age. They are likely to control more resources than firms in the younger category because the accumulation of resources and capabilities may take place over time (Birkinshaw and Hood, 1998). Structurally, they are also expected to have fully adjusted to the demands of the United States market through experimentation, exploration and reinforcement of subsequent actions (Nelson and Winter, 1982).

Relative importance and United States market experience

Panel C of table 5 shows the Kruskal-Wallis test results for the *relative importance index* and United States market experience of the TNCs. Here, the null hypothesis is that the *relative importance index* is the same for all firms irrespective of their United States market experience. The sample, as in the case of age, was classified into three groups according to the date of entry in the United States – firms arriving in the United States after 1990, between 1970 and 1989, and before 1970. As can be seen from the table, the majority of TNCs in the sample arrived in the United States between 1979 and 1989.

The medians for the three groups are 21.5, 22.2 and 29.9. The results indicate that there are significant differences in the *relative*

importance index according to the length of operation in the United States. Firms with greater United States experience (entered the United States before 1970) show a high positive z-value. This means that the longer the company has operated in the United States, the larger is the proportion of business activities located in the host country.

This is not surprising because it is well established in the literature that TNCs that have long experience in a particular market are more familiar with the institutional and structural/relational barriers of the market, which enables them to minimize the costs associated with their foreignness (Zaheer, 2002). It is also known that prior experience in the host market influences the firm's decision to further commit resources to the market (Johanson and Vahlne, 1977).

Relative importance and the size of the TNCs

Panel D of table 5 shows the Kruskal-Wallis results for the test of significant differences in the *relative importance index* according to the size of the company as measured by the market capitalization. The sample of firms in each year was classified into three groups: the top 30%, labelled as LARGE; the next 40%, MEDIUM; and the last 30%, SMALL. The sample medians for the three different are 29.0, 22.8 and 17.8. The results imply that the null hypothesis can be rejected. Hence, the *relative importance index* is different for the various groups based on size. The results indicate that as a key organizational resource (Wernerfelt, 1984), size becomes a virtuous cycle for the United Kingdom TNCs operating in the United States. Large size means they have more resources to deepen their roots in the geographically larger United States market. It is also likely that the comparatively larger size of the United States host market may have helped the TNCs to grow faster. The economies of scale and scope they enjoy in the United States could not have been possible in the then fragmented European markets of the 1980s. The larger host market therefore provided the platform for the larger United Kingdom TNCs to deepen their involvement in the United States market.[4]

5. Conclusions and policy implications

The findings from this exploratory study indicate that in many respects, one country – the United States – has emerged as the location

[4] This double effect of firm size and host market size was gratefully pointed out by one of the reviewers.

of choice for the largest United Kingdom TNCs. While activities in previous investment phases were more dispersed across many countries, in recent years United Kingdom TNCs have concentrated much of their investment activities in the United States. After several years of increased investment, activities in the United States have grown and now account for a preponderant proportion of their overall activities.

In terms of the entry mode, acquisition has continued to be the preferred mode for United Kingdom TNCs. While some TNCs acquired assets to complement the traditional low value-added, low-technology activities associated with United Kingdom TNCs, others purchased assets which transformed them into high value-added, high-technology firms.

By bringing together the effect of age, market experience and the size of the TNCs (and of the host market), it can be argued that these factors have synergistically influenced United Kingdom TNCs to increase their involvement in the United States host market. Older TNCs and those with longer United States market experience appear to have become *Americanized* to a considerable degree. There is some evidence that the United States is effectively a "second home market" for many United Kingdom TNCs. This may be because profits were reinvested in such a way to create a virtuous cycle of increased involvement in the United States market.

The predominance of activities in the United States in the corporate network of these United Kingdom TNCs is, however, contrary to the conventional conceptualization of TNCs in the literature, which regards the home country as the "centre of gravity" of the firm. The findings in this study suggest that in terms of the location of activities, the "centre of gravity" of these United Kingdom TNCs has shifted to the United States.

This emerging phenomenon could lead to calls on policy-makers in the United Kingdom, and to some extent in the United States, to intervene for nationalistic reasons. For some in the United Kingdom, the location of a higher proportion of activities in the United States might suggest that the tail (United States affiliates) is now wagging the dog (United Kingdom-based parents). From the United States perspective, there might be calls for policy measures to limit the acquisition of high technology United States TNCs by foreign investors.

Among similar developed economies, however, FDI is very often a two-way affair. Indeed, United States TNCs are the leading

investors in the United Kingdom. In 2004, for instance, the United Kingdom accounted for the largest proportion (16%) of United States value-adding activities overseas (Mataloni and Yorgason, 2006). Fears of job or technology losses and hollowing-out are therefore premature in view of the bi-directional flows of FDI between the two countries. Hence, policy prescriptions that undermine healthy "rivalrous behaviour" between the United Kingdom and United States TNCs, as discussed earlier in this article, might backfire and eventually hurt the competitiveness of both economies.

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