

Multinational Corporate Linkage Stability in the Canadian Urban System*

캐나다 도시체계에서의 다국적기업 연계패턴의 안정성

Kee-Bom Nahm **

Abstract

Multinational Corporate Linkage Stability in the Canadian Urban System

Over the past two decades, the process of globalization of multinational corporations has increased at a rapid rate. One manifestation of this process is the establishment of corporate head offices in a variety of international centers to administer and coordinate, the day-to-day operations in the host countries. In establishing a subsidiary overseas a firm creates a direct link between the operations of the domestic corporate center and the foreign host center. This paper investigates elements of stability and change in the international linkage patterns among domestic parent corporations and host subsidiaries over the past several decades. In particular, it seeks answers to a number of questions related to stability and change in linkages among foreign centers of control and those Canadian centers selected to administer the subsidiary operations from 1970 to 1991 over the four primary sectors, namely, resources, manufacturing, services, and finance. By confirming the core stability and dispersed linkages hypotheses, the paper offers some generalizations with respect to the location and stability of subsidiary headquarters centers in Canada and their respective subsector specialties. Finally, it addresses further research avenues for the quaternary place study.

Key words : urban system, quaternary places, multinational corporations, linkage stability dispersion

1. Introduction

Designed in Italy, German-engineered, moulded in France, manufactured in North Korea, and sold to Australia: a toilet made far American Standard is truly a global product. This is but one

example of the powerful trends toward global integration taking place in our world. It is a phenomenon linked to technology which is redefining the nature of international relationships and linkages. Computerization, telecommunications and innovative materials have

* The author wishes to acknowledge the financial support of the Korea Research Foundation made in the program year 1997.

** Professor, The University of Seoul

made transportation cheap, global and accessible. Traditional trade in finished goods is being replaced by trade in components and services, and production sharing agreements and joint-ventures are making traditional concepts of ownership and control obsolete. Increasing amounts of trade, investment and transfers of technology are controlled by multinational corporations that are larger, more powerful and linked to large number of international centers by subsidiaries associated with a variety of national states.

Over the past two decades the process of globalization of multinational corporations has increased at a rapid rate. One manifestation of this process is the establishment of corporate head offices in a variety of international centers to administer and coordinate, the day-to-day operations in the host countries. In establishing a subsidiary overseas a firm creates a direct link between the operations of the domestic corporate centers and the foreign host center. It is apparent that the choice of the host center is not a random process but one that is predictable and most likely to be limited by other multinationals. Just as the choice of host city is predictable, so also, is the

host country and the most likely sector of corporate activity. Moreover, this process appears relatively stable over time. Both changes to the number of corporations that are globalizing and the number of headquarters centers from which Foreign Direct Investment (FDI) is originating, however, is less predictable and not stable.

It is these latter two, well documented and rapidly changing aspects of the process of globalization, that provide the focus of the current research. In general, this paper investigates elements of stability and change in the international linkage patterns among domestic parent corporations and host subsidiaries over the past several decades. In particular, the paper seeks answers to a number of questions related to stability and change in linkages among foreign centers of control and those Canadian centers selected to administer the subsidiary operations from 1970 to 1991.

Since the concept of stability and change in space and time are important issues in quaternary place studies (Green and McNaughton, 1989; Green, 1990; Aksoy, 1992), this paper seeks answers to the following four questions. First, are domestic multinational corporations, that control subsidiaries in

host countries abroad, concentrated in the core centers of developed countries and if so is the concentration of head offices stable over time for both the core centers as well as the core country. Second, are the locations of the host subsidiaries of domestic corporations far developed market oriented industrial nations and their associated Quaternary places, that both contribute to and the recipient of the bulk of foreign direct investment and subsequently appear to be both home to the largest multinationals and host of their subsidiary operations.

2. Locational Dynamics and Foreign Direct Investment

This section deals with two major issues. First, over the past several decades, why have multinational firms headquartered in the largest business centers in the most advanced countries Invested more and more of their resources into overseas operations and second, why are the host centers that are receiving the bulk of the resources, for the most part, concentrated in the cores of the recipient countries. Put it more simply, why are corporations far an ever more dispersed set of developed

international headquarters centers investing ever increased amounts abroad and why are their subsidiaries that coordinate and administer the investments locating In the core centers of recipient countries.

1) Domestic Quaternary Places go Global

The reason that ever increasing numbers of multinational corporations are investing more and more of their funds abroad at the expense of the domestic market is that they are being forced to pursue profits abroad. More generally, they are setting up subsidiary operations in host centers abroad because they have outgrown their domestic markets and are being pressured to maximize revenues and market share while minimizing costs through global operations (Watts, 1980; Rugnan, 1988).

Dicken (1992) makes it clear that domestic firms that have outgrown their home market can increase profits by pursuing business on a transnational basis. The transition from domestic to multinational can occur through acquisition and merger. Long run growth requires either a steady geographical expansion of the market area or the continuous innovation of new products. A

firm can also increase profits by reducing costs by becoming more efficient through intensification, technical change or rationalization and/or changing location. Over the past several decades the geographical scale at which competition occurs is increasingly global and so is the scale at which cost reductions may be sought. Location, as Dickers points out is a key element in cost reduction simply because the availability and cost of factors vary substantially from place to place internationally.

Initially, a domestic company may penetrate a foreign market simply by exporting or engaging in licensing agreements with foreign producers. Soon, however, as Williamson (1985) argued firms will invest directly abroad to minimize transaction costs and to maintain control over the technical information associated with particular products. Most firms prefer to employ their own skilled professionals rather than rely on consultants in the host economy (Markusen, 1984). Shoenberger (1990) makes it clear that direct investment establishes a flexible labour force in the host center that engages in both production tasks and timely provision of services (Rugman, 1986).

Firms usually wish to establish production facilities abroad rather than to rely on international transfers of technology (Hennart, 1991) because they can't properly monitor the quality of a licensee's outputs (Hennart, 1982). Firms may also invest directly abroad to develop products for a specific foreign market. By integrating design, production, and marketing in a host economy, the company is better able to meet the demands of a narrow group of customers (Avishai, 1991, Easton, 1992). Thus Ohuallachain and Reid (1992) argue that a firm will directly invest abroad rather than run the risk of undergoing a depreciation of its reputation.

2) Host Quaternary Places and Interdependence

Foreign direct investment frequently occurs after initial penetration of the host economy by foreign trade (Cohen, 1979; Dunning, 1981, 1991, Bain and Norcliff 1986; Edgington, 1992a, Nahm and Semple, 1995). Selecting the appropriate center for the administration of the FDI and the associated subsidiary is not a random process. Locating in familiar places reduces the cost of searching for suppliers, distributors and

services. Finding market opportunities also easier in better places. Ohuallachain and Reid (1992) state that in familiar places, firms can more easily identify the changing needs of customers and test new products that require face-to-face communications between buyer and seller. This aspect of exchange favours cities with international airports and border locations.

Langdale (1986) speculated that increased use of transportation and communication hub and spoke systems make centralized foreign subsidiaries and investments in major population centers. Large entrepot cities are favoured in direct investment decisions because they contain an established network of transportation and informational services as well as production and parts suppliers. The establishment of large subsidiaries in the core centers in developed countries creates a comparative challenge for domestic corporations and the beginning of greater international interdependence of all centers and a more centralized and formalized corporate structure (Minzberg, 1983).

3) Space Adjusting Technologies and Global Interdependence

Both domestic and foreign quaternary places are becoming more interdependent as technology reduces the effects of distance and increase the ability of corporations to interact more cheaply and effectively in space. Janelle (1991) notes that global interdependence implies that parts of a worldwide system of centers rely on one another and the events occurring at particular times and places may have impacts elsewhere at the same time or in future times. Space adjusting technologies that reduce the significance of distance contribute to global interdependence. This is related to time space convergence or the notion that a shrinking world be measured by the rate at which places move closer together in travel or communication time and cost-space convergence which is simply the distance reduction in cost of interaction over space.

Abler and Falk (1981) and Abler (1991) insure us that one benefit of a flow society is that distant cities can interact as if they were close to each other. Shrinking distances give corporations more vocational options than had when movement technologies were less efficient. Business firms can disperse their operations over greater areas without sacrificing central control.

They can also take part in cooperative international jointventures and coordinate more complex subsidiary operations In a far-flung international quaternary system.

3. Urban Corporate Systems Stability and Direct Linkages

Global information highways linking quaternary centers prove for information flows that are vital for the effective operation of multinational corporations. New telecommunication technologies have had a very important positive impact in terms of facilitating exchange. They also facilitate the operation of international markets and reduce the cost of distance. Langdale (1991) also points out that MNCs are increasingly using telecommunications to link together head office centers to host subsidiary centers housing the plants and offices located in different countries. The demand for information transfer reflects the increasing complexity of corporations' international production. Information on production scheduling, inventory control and marketing strategies must be transferred.

The stability of organizations such as corporation or even a system of corporate

urban centers depends upon its ability to obtain resources. Green (1993) demonstrates that resources are not merely physical inputs but also include access to technology, information and markets. The firm can and does try to insure stability in its external linkages so as to avoid dependencies. If a domestic corporate center and host subsidiary center are interdependent than the network has a direct structure. The greater the interdependence between centers, the cleaner the structure. many firms today consist of tens or hundreds of units scattered throughout the world. The work at all units can be coordinated and controlled via interpersonal communication media, regardless of their locations (Abler, 1975).

It appears that economies of scale, oligopolistic competition and product differentiation linked to innovation, as well as, communications foster the multinationalization of corporate activities. Key elements in the international business strategy include merger and acquisitions, concentration on core activities and the cross-fertilization of cutting edge technologies of different product divisions. Access to international markets is a necessity for leading national firms

such as, Akzo, a chemical giant firm the Netherlands that had a limited home base or Daishowa, the Japanese forest products firm that could not procure domestic timber rights (De Smidt and Meijerink, 1990; Edgington, 1993a).

Wheeler (1990) and Sui and Wheeler (1993) explained the changing spatial pattern of primary office activities in the largest quaternary centers in the United States. They note that the metropolitan service economy is being driven by the interplay of large corporate headquarters and associated producer services which are the frequent residents of major office towers. As expected they found that primary activities in the largest metro urban centers. However, emerging spatial dispersion of decision-making activity is extremely strong at the upper end of the urban quaternary hierarchy. Wheeler and Mitchelson (1989) expect the economy of metropolitan centers to become more information oriented. It therefore appears that the smaller decision-making centers will occupy a more pivotal role in the urban system. The threshold for smaller quaternary places is increasing due to advances in communications and information technology permitting them to play a larger role in global activities. It also appears that the urban centers in

other advanced nations are expecting similar trends due to space adjusting tendencies. These findings suggest that following hypotheses should be investigated.

The Dispersed Linkage Hypothesis

Due to the increasingly competitive international market place and the advancements in space adjusting technologies over the past couple of decades, an increasing number of international corporations housed in an ever more dispersed set of domestic quaternary places is both capable of and willing to locate subsidiary operations in host Canadian quaternary centers.

The Core Stability Hypothesis

A large proportion of subsidiary activity in Canada is linked directly to a group of major international quaternary places each associated with a core of highly developed market oriented countries. The structure of this system is stable over time.

4. The Canadian Experience

The research identifies the largest foreign owned Canadian subsidiaries based on annual revenues and sales far

non-financial corporations and assets far those classified as financial for the years 1970, 1981 and 1991. The cut-off size for each subsidiary was set at \$26 million for all non-financial companies in 1970 and increased to \$64 million for 1981 and \$107 million for 1991 based upon the Canadian Consumer Price Index. The cut-off for financial firms is determined in a similar fashion except that the initial threshold size for 1971 assets is set at \$65 million, a figure well over twice the size of revenue based forms. The corresponding statistics for 1981 and 1991 are respectively 160 and 267 millions of dollars. The reason for the different thresholds is that in general financial institutions tend to be larger than their non-financial counterparts. The standardized Consumer Price Index(CPI) cut-off tends to insure that firms of the same size, adjusted for inflation, and importance become part of the study.

The study partitions all firms into resource, manufacturing, service and financial sectors and assigns each of the over five hundred corporations to its international headquarters centers and its Canadian subsidiary center. It then records total sales assets associated with each center or as a percent of the

domestic figure for Canadian centers. These figures provide an overview of the relative stability of the linkage pattern over time and space among the global quaternary centers and their Canadian subsidiary counterparts. The charts also demonstrate the large number of relatively dispersed global centers with the links to Canada and the concentration of recipient subsidiary centers.

1) The Resource Sector

Table 1 represents the top 10 foreign resource headquarters centers with Canadian subsidiaries larger than the yearly cut-off 3. Note that Dallas ranks first in 1991 due to the fact that Exxon moved its corporate offices from New York during the period. The Hague, Chicago and London rank second, third and fourth based on the size of Royal Dutch Shell, Amoco, and, RTZ and Ultramar, respectively. New York drops from fifth with the move of Exxon and Pittsburgh, Brussels and Bartville fall from the chart by 1991 as a result of takeovers by Petro Canada. It represents a relatively dispersed and partially stable set of global centers with linkages to the mining and petroleum centers of Canada.

Figure 1 shows Canadian cities by

percent of total revenues of foreign controlled subsidiaries. Calgary replaced Toronto as the headquarters center of foreign based petroleum centers. Toronto remains the core of foreign investment in

mining with some recent losses to Vancouver. This resource overview demonstrates that an ever more dispersed set of international headquarters' centers links consistently

Table 1. Percentage of Foreign Ownership for the Resource Sector by Year for the Top10 centers

Rank	City	Year		
		1991	1981	1970
1	Dallas	23.76	0	0
2	The Hague	13.66	11.49	12.47
3	Chicago	11.79	7.81	1.83
4	London	9.82	10.71	10.18
5	Paris	8.12	5.95	1.25
6	New York	6.51	33.51	41.71
7	Philadelphia	5.36	3.12	1.58
8	Trelleborg	4.98	0	0
9	San Francisco	4.67	5.94	4.58
10	Houston	2.98	0.85	0

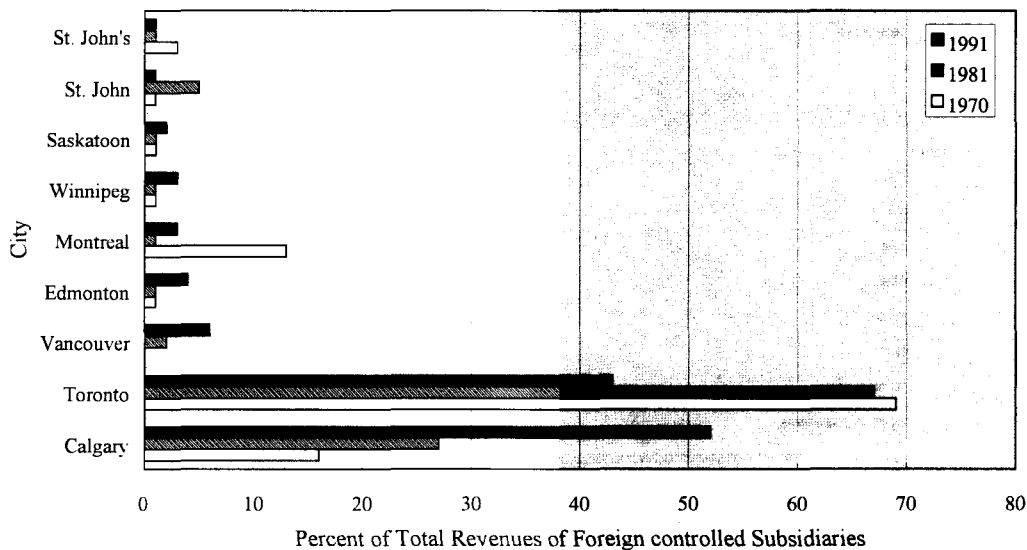


Figure 1. Foreign Resource Headquarters Centers in Canada

with two Canadian subsidiary centers. This linkage pattern services as a good model of what to expect from the remaining sectoral overviews.

2) The Manufacturing Sector

Table 2 shows that four major cities Detroit, New York, London and Chicago dominate the top rankings for each time period. The group as a whole declines,

Table 2. Percentage of Foreign Ownership for the Manufacturing Sector by Year for the Top10 Centers

Rank	City	Year		
		1991	1981	1970
1	Detroit	30.09	32.94	31.37
2	New York	12.26	17.37	18.31
3	London	11.94	10.68	13.64
4	Chicago	4.36	5.92	5.21
5	Buffalo	2.54	0	0
6	Tokyo	2.45	0.93	0.19
7	Philadelphia	1.87	2.41	1.91
8	Pittsburgh	1.79	3.01	3.54
9	Adelaide	1.69	0.61	2.91
10	Minneapolis	1.44	2.14	1.89

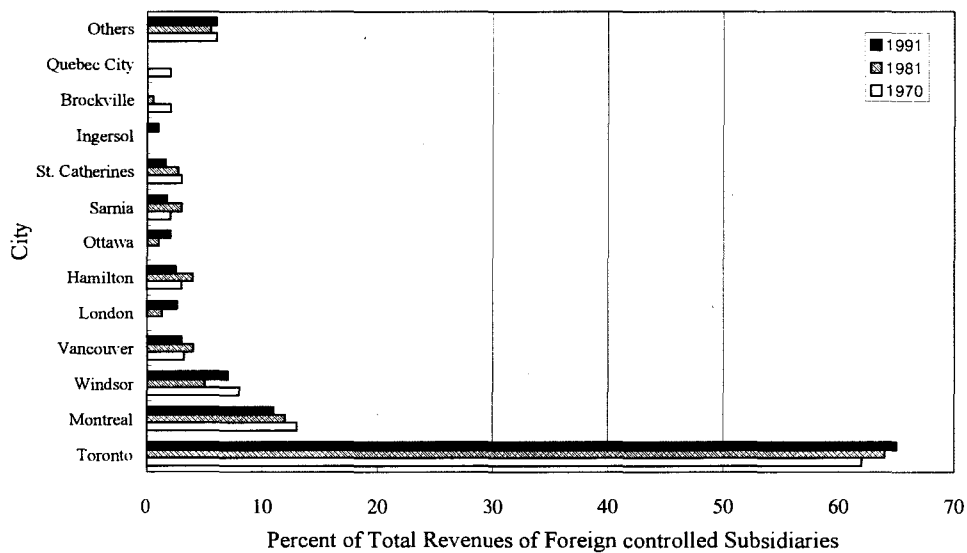


Figure 2. Foreign Manufacturing Headquarters Centers in Canada

however, primarily due to the rapid drop in the proportion associated with New York. Each city has important subsidiaries in Canada representing key subsectors of industrial production. The automotive firms, GM, Ford and Chrysler of Canada have corporate parents located in Detroit. IBM, General Electric, Kraft General Foods, Bristol Meyers Squibb and Merck Frosst are headquartered in New York. Maple Leaf Food, Hiram Walker, Imasco, ICI Canada, Glaxo and Indal are from London while Stone Consolidated and Quno Corp are from Chicago. Tokyo, with Honda Canada, is a new arrival to the top rankings. The growth in magnitude of the others further demonstrates the rapid dispersion of foreign corporate linkages.

Figure 2 displays the ranking of the

international manufacturing subsidiaries in Canada. Toronto is the headquarters center of choice for almost 65 per cent of the subsidiaries. Montreal is in relative decline.

3) The Service Sector

Table 3 demonstrates that five international cities play the most important role in Canada. Tokyo, San Francisco, New York, Chicago and Paris lead the list. As rapidly as Tokyo has risen to top the list, New York has fallen. The 1980s have been troubling times for America's largest city. Each of the listed cities has vital subsidiaries serving the Canadian market. Tokyo has its world class 'Sogo Susha', Mitsui, Nissho Iwai, Mitsubishi and Sumitomo Canada which trade in a vast array of manufactured

Table 3. Percentage of Foreign Ownership for the Service Sector by Year for the Top10 centers

Rank	City	Year		
		1991	1981	1970
1	Tokyo	17.71	11.66	2.71
2	San Francisco	12.43	11.01	12.12
3	New York	11.13	17.37	27.69
4	Chicago	10.03	11.43	12.11
5	Paris	5.93	6.67	4.78
6	Stamford	5.25	5.37	5.77
7	Minneapolis	3.94	4.38	6.93
8	London	3.64	5.75	4.77
9	Osaka	3.29	2.07	3.91
10	Detroit	3.01	3.61	2.88

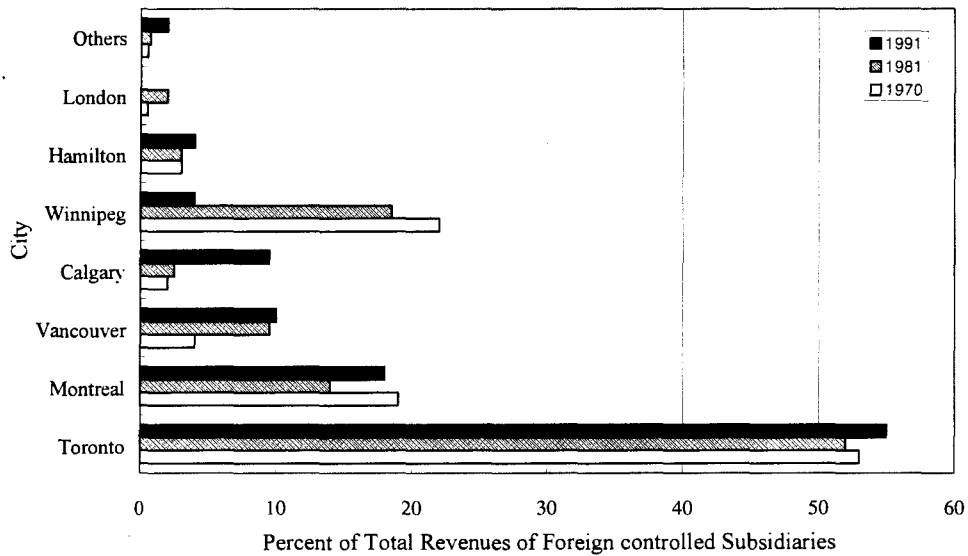


Figure 3. Foreign Service Headquarters Centers in Canada

components and resource materials. San Francisco has long been associated with Canada Safeway, Bechtel and Fluor Daniels. New York's well known firms are Woolworth, A and P, Merrill Lynch, Price Warehouse and Famous Players. Chicago has links to Canada with McDonalds, Sears Canada and American Hospital Suppliers. Paris controls LaFarge Canada and United Westburne. Again the others are getting greater for each period indicating that this sector continues to disperse. Figure 3 indicates that foreign service links are primarily to Toronto, but for the first time cities like Vancouver and Calgary are of growing

importance while Winnipeg is in rapid decline.

4) The Financial Sector

Table 4 illustrates that four major centers have been associated with the direct investment of subsidiary operations in Canada. London ranks first in all three periods. Firms like Royal, Lloyds and Prudential Assurance have been linked to Canada far a long time. New York ranks second in 1991 but troubled times in the 1980s have seen its Canadian asset base decline.4 number of important subsidiaries like Metropolitan and New York Life,

Table 4. Percentage of Foreign Ownership for the Financial Sector by Year for the Top10 centers

Rank	City	Year		
		1991	1981	1970
1	London	37.06	20.50	32.9
2	New York	12.79	29.50	28.79
3	Detroit	8.52	12.93	10.49
4	Hong Kong	6.41	1.90	0
5	Zurich	4.72	0.51	0.70
6	Tokyo	4.64	1.42	0
7	Chicago	4.49	6.47	8.43
8	Paris	4.23	5.10	1.01
9	Frankfurt	1.93	0	0
10	Boston	1.74	2.42	1.01

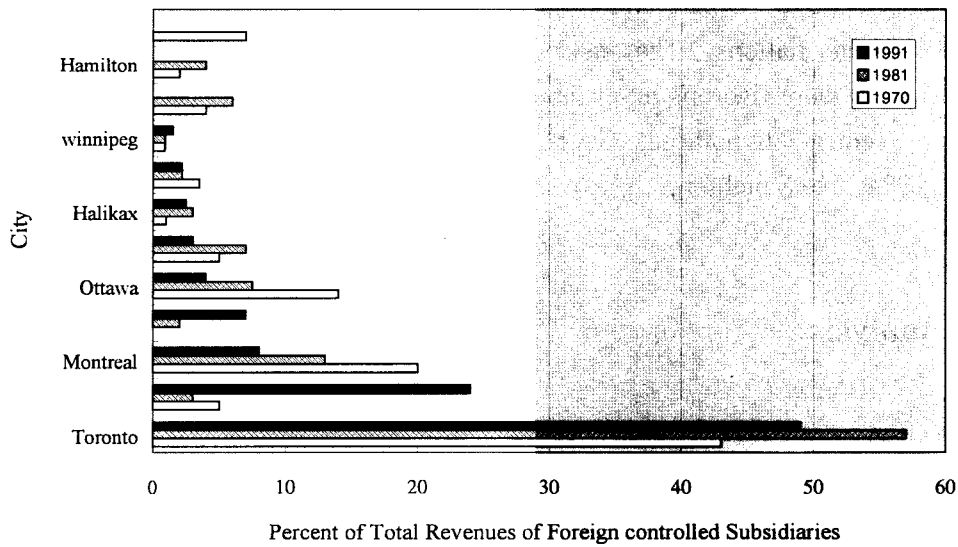


Figure 4. Foreign Financial Headquarters Centers in Canada

Prudential Insurance and Morgan, Chemical and Citibank call New York home. Detroit ranks third with GMAC and Ford and Chrysler Credit. Hong Kong ranks fourth due to its namesake subsidiary in Canada. Tokyo, Zurich and

Paris have important banking operations in Canada by 1991 as do a host of other international centers. Figure 4 demonstrates clearly that Toronto is Canada's money center far foreign financial subsidiaries but London,

Montreal and Vancouver are of some importance to foreigners.

The general findings of this overview of the sets of tables and figures tend to support two conclusions. First, Canadian subsidiary centers are linked to an ever more dispersed set of international parent centers for all sectors over time. The opposite is true for the parent head office centers. They tend to locate in Toronto, the Canadian core for subsidiary operations. Second, the links to Canada appear to be coming from a core of developed nations. The next section provides a more rigorous analysis of the two central hypotheses (see McDowell, 1984, McNaughton, 1992a, 1992b).

5. The Analysis

This section provides statistical evidence to support both the dispersed linkages and the core stability hypothesis. The dispersed linkage hypothesis states that an increasing number of international corporations housed in an ever more dispersed set of domestic quaternary places is both capable and willing to locate subsidiaries in Canada. The core stability hypothesis states that Canadian based foreign subsidiaries are linked directly to small group of major International places

associated with a core of highly developed market oriented economies and this linkage structure is stable over time.

Table 5 provides statistics that confirm the dispersed linkage hypothesis for each of the sectors. This table indicates detailed data on the number of corporations with Canadian subsidiaries that are from the United States or other foreign country and the total for each period. It provides an information dispersion statistic based on sales proportions associated with each city and the last row in the table provides a statistic that relates each statistic in the previous row as a percentage of the maximizing dispersion that could theoretically exist for the system.

The information statistic needs some explanation. Shannon and Weaver (1949) developed their well known information statistic to measure the dispersion of elements in a system. This statistic H is given by the following equation:

$$H = \sum_{i=1}^n P_i \cdot \log_2 P_i$$

where, p_i = the proportion of the system total accounted for by each element
 n = the number of element

H takes on a range from zero to $\log_2 n$.

Table 5. Dispersion Summary for Foreign Centers by Year, Sector, and Region

	Year								
	1970			1981			1991		
Resource Sector									
Region	USA	Other	Total	USA	Other	Total	USA	Other	Total
Sales cut			\$26m			\$64m			\$107m
Firms	19	8	27	21	11	32	14	13	27
Cities	11	5	16	11	6	17	8	8	16
Sales \$B	4.3	1.7	6.0	27.6	13.7	41.3	20.4	14.7	35.1
Sales%	71.5	28.5	100	66.8	33.2	100	58.1	41.9	100
Dispersion	1.88	0.69	2.57	1.92	1.21	3.13	1.83	1.5	3.33
% of Max	40.52	14.87	55.39	41.38	26.08	67.46	39.44	32.33	71.77
Mfg. Sector									
Region	USA	Other	Total	USA	Other	Total	USA	Other	Total
Sales cut			26m			\$64m			\$107m
Firms	107	32	139	134	41	175	173	59	232
Cities	29	15	44	37	22	59	46	26	72
Sales \$B	13.19	3.41	16.6	55.76	11.71	67.47	103.9	36.34	140.24
Sales %	79.5	20.5	100	82.7	17.4	100	74.1	25.9	100
Dispersion	2.84	0.85	3.69	2.93	0.90	3.83	2.94	1.43	4.37
% of Max	44.94	13.45	58.39	46.36	14.24	60.60	46.51	22.63	69.14
Service Sector									
Region	USA	Other	Total	USA	Other	Total	USA	Other	Total
Sales cut			\$26m			\$64m			\$107m
Firms	40	16	56	57	29	86	89	60	149
Cities	13	9	22	17	15	32	25	19	44
Sales \$B	5.39	2.41	7.36	22.80	12.30	35.12	42.49	27.51	69.24
Sales%	72.8	27.2	100	67.9	35.1	100	60.5	39.5	100
Dispersion	2.24	1.32	3.56	2.46	1.41	3.87	2.61	1.65	4.25
% of Max	39.34	23.16	62.46	43.15	24.74	67.89	45.61	28.95	74.56
Financial Sector									
Region	USA	Other	Total	USA	Other	Total	USA	Other	Total
Sales cut			\$65m			\$160m			\$267m
Firms	26	12	38	27	17	44	36	50	86
Cities	9	3	12	9	7	16	13	18	31
Sales \$B	6.79	3.51	10.21	22.96	11.21	34.17	61.42	114.3	175.7
Sales%	65.3	34.67	100	67.2	32.8	100	34.97	65.03	100
Dispersion	1.88	0.64	2.52	1.92	1.11	3.03	1.36	1.99	3.35
% of Max	37.62	12.81	50.43	38.34	22.22	60.65	27.17	39.75	66.92

That is, $H_{max} = \log_2 n$ and occurs when all elements of the system have the same proportion and H_{min} occurs when one element equals one and all the others take on a value of zero. The index is sensitive to system size and varies directly with n .

In the resource sector, the percent of maximum statistic increases overall from 55.39 in 1970 to 67.46 and 71.77 in 1981 and 1991, respectively. This 16.38 percent change indicates that the system of cities with linkages to Canada is much dispersed for 1991 than for 1970. The same is true for US cities and others taken as separate subsystems. Thus there is a larger number of American and foreign centers participating in subsidiary operations in Canada that are more equally represented by size in 1991. This confirms the dispersed linkage premise for international resource centers. For the manufacturing sector, the statistic increases to 69.14 percent indicating that the system is dispersing quite rapidly. This time the US component for 1991 at 46.51. Note that the dispersion comes basically from the other category which increased from 13.45 to 22.63.

The results for the service sector are almost identical to the two previous

sectors and confirm the dispersed linkages hypothesis. The system linkages in 1970 for the financial sector are the least dispersed with a relative percent of 50.43 but by 1991 reach 66.49 percent for both the US and others category this is the highest overall change and is due to primarily to the introduction of the Bank Act of 1981 which permitted some 50 foreign nations to charter banking subsidiaries.

Table 6 provides statistics that confirm the core stability premise for each sector. The study defines core countries as the seven members of the G-7 group or industrial nations. Collectively these countries provide approximately 82 percent of the subsidiary operations in Canada and fulfill the expectations of a stable core group. In the manufacturing sector, the American proportional contribution is in relative decline and falls from 79.48 to 74.09 percent. A similar observation can be made about the U.K.. Overall, the core stability hypothesis for the G-7 countries is confirmed which together account approximately 95 percent of the linkages for all period. For the service and financial sectors, a stable core of G-7 nations are showed. The core declines in overall importance in 1991.

Table 6. Core Analysis by G-7 Countries and City for Canada by Sector and Revenues

Resource Sector	Country	1970	1981	1991
	G-7	82.93	83.83	78.61
	Others	17.07	16.17	21.39
	USA	71.51	66.82	58.11
	Holland	12.47	11.49	13.66
	UK	10.18	10.71	9.82
	France	1.25	5.95	8.12
	Sweden	0	0	4.86
	Germany	0	0.37	2.56
	Hong Kong	0	3.65	2.01

Mfg. Sector	Country	1970	1981	1991
	G-7	95.09	97.08	94.33
	Others	4.91	2.92	5.67
	USA	79.48	82.65	74.09
	UK	13.85	10.82	12.09
	Japan	0.82	2.04	5.36
	Germany	0.39	0.88	1.92
	Switzerland	0.88	1.16	1.18

Service Sector	Country	1970	1981	1991
	G-7	90.81	94.23	94.28
	Others	9.19	5.67	5.62
	USA	72.84	64.91	60.49
	Japan	6.62	14.11	21.53
	France	4.78	6.67	5.93
	UK	5.46	6.42	3.83
	Germany	1.11	2.12	2.28
	Sweden	1.89	0.91	1.52
	Australia	0	0.19	1.16

Financial Sector	Country	1970	1981	1991
	G-7	99.99	94.19	87.49
	Others	0.67	5.81	12.51
	UK	32.91	20.49	37.44
	USA	65.33	67.22	34.97
	Hong Kong	0	1.92	6.41
	Japan	0	1.45	4.94
	Switzerland	0.77	3.12	4.86
	France	1.06	5.12	4.23
	Germany	0	0.85	1.41

6. Summary and Conclusion

The research findings support fully the dispersed linkage hypothesis and the core stability hypothesis and confirms that international firms are globalizing their operations at a rapid pace and expanding their subsidiaries in Canada at an exceptional rate. The result also demonstrate that a core of G-7 nations along with two other countries still account for over 95 percent of the linkages to Canada and the proportion as remained remarkably stable over the past twenty years despite the relative decline in the U.S.A. A third set of findings can be made with respect to Canada, in general, and Canadian centers in particular. Most foreign firms seek out Toronto as the core of operations for Canada. This finding has remained stable over the period of investigation. Canada, it appears, is linked, *even chained*, to advanced nations and their corporate centers more than any other developed nation.

The acceptance of the dispersed linkage and core stability hypothesis is important for those who find internationalization, globalization or multinationalization a threat It is a fact

that investment In Canada in all sectors of the economy is ongoing. The corporations and centers from which this investment is being directed is becoming ever more dispersed especially, from centers outside the U.S.A. However, there is still a core of investing nations that are developed and industrialized. These core investing nations tend to locate their subsidiaries in the heartland centers of their host countries and far Canada this means Toronto.

Caves (1971) and Jannelle (1991) assert that a firm locates its facilities in order to minimize costs in serving out demands. High transaction costs encourage direct investment and high search costs of finding local material and service suppliers, identifying market opportunities, managing dispersed facilities, and recruiting skilled labour induce risk aversion strategies that favor emulation of well established investment patters of the host country.

Canada has at one time or another been known as the largest branch plant economy in the world and dependent on a high proportion of employment from foreign direct investment in the form of resource development, production, service provision or financing. The source of the control remains almost exclusively

with the most advanced nations in the world. Within these nations the origins of ownership and control is rapidly diversifying by corporation, city and sector. In a mature country like Canada, the high proportion of FDI can be mitigated by the dispersion of centers of control rather than the concentration of past. Both Canadians and foreign corporations will continue to increase their direct investment at home and

abroad in order to cope with an ever more competitive and complex international market place.

At home as long as foreign investors can take advantage of a vibrant Canadian economy they will operate more and more as integrated patterns and permit their Canadian subsidiaries to carry on a global product mandate rather than operate simply as a branch plant This is global interdependence in the 1990s.

References

- Abler, R.F., 1975, "Effects of space-adjusting technologies on the human geography of the future," in *Human Geography in a Shrinking World*, R.F. Abler et al., Ch. 3, North Scituate, Mass. : Danbury.
- Abler, R.F. and T. Falk, 1981, "Public information services and the changing role of distance in human affairs" *Economic Geography*, 57: 10-22.
- Abler, R.F., 1991, "Hardware, software, and brainware," *Collapsing Space and Time*, S.D. Brunn and T.R. Leinbach, eds., 31-48, London: Harper-Collins.
- Aksoy, A. and Marshall, N., 1992, "The changing corporate head office and its spatial implications," *Regional Studies*, 26: 1498-62.
- Avishai, B., 1991, "A European platform for global competition," *Harvard Business Review*, 69: 103-13.
- Bain, R. and Norcliff, G., 1988, "Japanese investment in Canada and Canadian export to Japan, 1965-1984," *Canadian Geographer*, 32: 141-50.
- Caves, R.E., 1971, *International Corporations: The Industrial Economies of Foreign Investment*, *Econometrica* 38: 1-27.
- Cohen, R., 1979, "The changing transactions economy and its spatial implications," *Ekistics*, 46: 7-15.
- De Smidt, M. and Meijerink, G., 1990, "The internationalization of a Dutch corporation: the case of Akzo," *TESG*, 81: 225-32.
- Dicken, P. and Lloyd, P.E., 1976, "Geographical perspectives on United states investment in the United Kingdom," *Environment and Planning A*, 81: 685-705.
- Dicken, P., 1992. *Global Shift*, 2nd ed., New York: Guilford.
- Dunning, J.H., 1971, ed., *The Multinational Enterprise*, London: Allen and Unwin.
- Dunning, J.H., 1991, "The eclectic paradigm of international production," in *The Nature of the Transactional Firm*, ed., C.N. Pitelis and R. Sugden, 117-36.
- Easton, G., 1992, "Industrial networks," in *Industrial Networks: A New View of Reality*, ed., B. Axelson and G. Easton, 1-27, London: Routledge.
- Edgington, D.W., 1993a, "Globalization of Japanese manufacturing corporations," *Growth and Change*, 24: 87-106.
- Edgington, D.W., 1993b, "Japanese investment in Canadian real estate," *Horizons*, 1: 11-22.
- Green, M.B., 1990, *Mergers and Acquisitions: Geographical and Spatial Perspectives*, New York: Routledge.
- Green, M.B., 1993. "A geography of institutional stock ownership in the United states," *AAAG*, 83: 66-89.
- Green, M.B. and R. McNaughton, 1989, "Canadian interurban merger activity," *Canadian Geographer*, 33: 253-64.
- Hennant, J.F., 1982, *A Theory of Multinational Enterprise*, Ann Arbor: Univ. of Michigan Press.

- Hennant, J.F., 1991, "The transaction cost theory of the multinational enterprise," in *The Nature of the Transactional Firm*, ed. C.N. Pitelis and R. Sugden, 81-116, London: Routledge.
- Janelle, D., 1991, "Global interdependence and its consequences," in *Collapsing Space and Time*, S.D. Brunn and T.R. Leinbach, eds., 49-81, London: Harper-Collins.
- Langdale, J.V., 1989, "The geography of international business telecommunications," *AAAG*, 79: 501-22.
- Langdale, J.V., 1991, "Telecommunications and international transactions in information services," in *Collapsing Space and Time*, S.D. Brunn and T.R. Leinbach, eds., 193-204, London: Harper-Collins.
- Markusen, J.R., 1984, "Multinationals, multiplant in the United States," *AAAG*, 70: 205-70.
- McDowall, D., 1984, *The Foreign Direct Investment in Canada*, Ottawa: Conference Board of Canada.
- McNaughton, R., 1992a, "U.S. foreign investment in Canada, 1985-89," *Canadian Geographer*, 36: 181-90.
- McNaughton, R., 1992b, "Patterns of foreign direct investment in Canada, 1985-89," *Canadian Geographer*, 36: 50-56.
- Meyer, D.R., 1991, "The role of business intermediaries," *Urban Geography*, 12: 393-416.
- Mintzberg, H., 1983, *Structure in Fives: Designing Effective Organizations*, Englewood Cliffs. Prentice-Hall.
- Nahm, Kee-Bom and Semple, R.K., 1995, "Concentration and dispersion of global control links and changes in the multinational quaternary place system", in *The Location of Foreign Direct Investment: Geographic and Business Approaches*, eds. M. Green and R. McNaughton, 223-246, London: Avebury Pub.
- Ohuallachain, B. and Reid, N., 1992, "Source country differences in the spatial distribution of foreign direct investment in the US," *Professional Geographer*, 44: 272-285.
- Rugman, A., 1986, "New theories of multinational enterprise: an assessment of internalization theory," *Bulletin of Economic Research*, 38: 101-18.
- Rugman, A., 1988, "Multinationals and the free trade agreement," in *Trade-Offs on Free Trade*, ed. , M. Gold and D. Leyton-Brown, Toronto Carswell.
- Schoenberger, E., 1990, "U.S. manufacturing investments in Western Europe," *AAAG*, 80: 379-93.
- Semple, R.K., 1985, "Toward a quaternary place theory," *Urban Geography*, 6: 286-96.
- Shannon, C.E. and Weaver, W., 1949, *The Mathematical Theory of Communication*, Urbana: The Univ. of Illinois Press.
- Sui, D.Z. and Wheeler, J.O., 1993, "The location of office space in the metropolitan service economy of the US," *Professional Geographer*, 45 33-43.
- Warf, B., 1989, "Telecommunications and the globalization of large U.S law firms," *Growth and Change*, 22: 157-74.
- Watts, H.D., 1980, *The Large Industrial Enterprise*, London: Croom Helm.
- Wheeler, J.O., 1990, "Corporate role of New York city in the metropolitan hierarchy," *Geographical Review*, 80: 370-81.
- Wheeler, J.O. and Mitchelson, R.L., 1989. "Information flows among major metropolitan areas in the U.S." *AAAG*, 79: 523-43.
- Williamson, O.E., 1985, *The Economic Institutions of Capitalism*, New York: The Free Press.

캐나다 도시체계에서의 다국적기업 연계패턴의 안정성

남기범*

지난 20여년동안 다국적기업은 세계적 연계망을 급속하게 확대시켜왔다. 세계의 주요도시에 본사를 입지시킨 다국적기업은 수많은 투자대상국의 해외지사에서 관리, 조정, 통제, 조절 등 전략적 업무를 수행하고 있다. 해외지사를 설립하는 것은 다국적기업, 본사도시와 해외지사도시간의 기업운영상 직접적인 연계를 형성하는 것이다. 해외직접투자의 의사결정, 투자지역과 도시의 선정은 합리적인 과정이며, 예측가능하고 또한 타 기업들이 모방하기도 한다. 이러한 과정은 경제와 경영의 논리에 의해 결정되며, 예측이 가능하고, 또한 상당히 안정적이다. 이 연구의 주제는 바로 이러한 세계화과정의 급변하는 측면을 고찰하는 것이다. 즉, 지난 수십년동안의 다국적기업 본사와 해외지사의 국제적 연계패턴의 안정성과 변화상을 탐구하는 것이다. 특히 1970-1991 기간동안 해외투자를 수용한 캐나다의 도시와 해외의 본사 도시와의 국제적 연계의 안정성과 변화상을 사례로 연구한다. 본 연구의 가설, 주요 투자국의 안정성과 국제연계의 확산성을 검증하기 위해, 제4차 산업활동, 즉 자원, 제조, 서비스, 금융 분야에서 시공적 변화상을 분석했다. 지난 20년 동안 G-7국가를 포함한 상위 9개국의 대캐나다 투자가 전체의 95%를 변함없이 차지했으며, 정보통계기법을 이용한 분석에서 해외지사의 분산도도 지속적으로 증가했음이 드러났다. 이 연구에서는 다국적기업 입지도시의 안정성 해외지사입지의 분산성에 대해 일반화를 시도했으며, 부문별 변이에 대한 해석을 가하였다. 마지막으로 국제적 규모의 제4차산업 입지연구에 대한 앞으로의 연구방향에 대해 지적하였다.

주요어 : 도시체계, 4차 산업 입지, 다국적 기업, 연계안정성, 분산

* 서울시립대학교 도시과학대학 도시사회학과 교수