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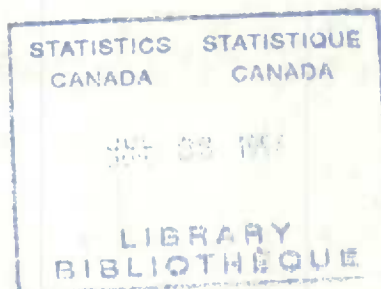
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PATTERNS OF CANADIAN FOREIGN DIRECT INVESTMENT ABROAD

by

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ABSTRACT

Canada has experienced a large increase in foreign direct investment (FDI) abroad, particularly in the late 1970s and early 1980s. This paper assesses the magnitude and pattern of this growth. Broad trends are presented, together with a more in depth examination of selected aspects of FDI using firm microdata for 1986.

The paper finds that there is a high degree of concentration of Canadian FDI. In 1986, for example, the four largest parent firms accounted for 23 per cent of all FDI, the leading eight, 33 per cent. Nevertheless, overtime the degree of concentration has been falling, as more Canadian firms invest abroad. For example, the leading eleven parents accounted for 65 per cent of all FDI in 1970, but only 38 per cent in 1986. Parent firms are largely domestically controlled and this dominance has increased overtime. FDI is typically in the form of majority or wholly owned affiliates, rather than joint-ventures. However, the importance of majority and wholly owned affiliates has declined somewhat. Most direct investment abroad is located in the manufacturing sector, followed by the resource and financial sectors. Parents usually invest abroad in the same industry to which the bulk of their economic activity in Canada is allocated. In other words, FDI is horizontal in nature. Finally, Canadian FDI is heavily concentrated in the U.S., which accounted for 53 per cent of all FDI in 1970, 71 per cent in 1986.

2

ACKNOWLEDGEMENTS

INTRODUCTION

Interest in Canada concerning foreign direct investment (FDI) and the role of multinationals (MNEs) has traditionally been confined to inward or inbound FDI -- that is to say, investment in Canada by firms located in other countries. This interest goes back to at least the National Policy of 1879, which, by raising tariffs, led to an influx of such investment, particularly from the U.S. This foreshadowed continued FDI by U.S.-based MNEs in Canada. Concerns were raised that such investment might limit Canada's ability to follow policies that were not congruent with the aims of either these firms or the U.S. government.

The interest in inbound FDI has manifested itself in a number of ways. A large literature developed describing and analysing the impact of such investment on Canada's social and economic fabric.(e.g. Marshall et. al., 1936; Levitt,1970; Safarian,1966,1985; Globerman,1979; and Shapiro,1980). Several reports on the influence and appropriate policy toward such investment were commissioned by the federal government. (Canada,1972; Task Force on the Structure of Canadian Industry,1968). The Corporations and Labour Unions Returns Act,1962, was passed to provide a better picture of foreign ownership and control. Policies toward FDI have included the creation of the Foreign Investment Review Agency in 1974 to screen all new FDI as well as the expansion into new lines of business by existing foreign-owned MNEs located in Canada, to ascertain whether these investments were of significant benefit to Canada. In some sectors, such as those in the cultural area, inward FDI was and is prohibited.(Canada,Royal Commission of Corporate Concentration,1978, Chapter 5,pp.181-209).

In the 1970s and, increasingly, in the 1980s and 1990s more attention is being paid to outward FDI in Canada.[1] This shift in the focus of interest is a function of a number of factors. The most obvious is the increase in the relative importance of outward investment as compared

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[1]See, for example, Litvak and Maule(1975;1978; and,1981), Niosi(1985), Richards(1985) and Rugman(1987).

to inward investment. In much of the period prior to the 1970s the stock of outward investment was approximately 19-25 per cent of inward investment.(Table 1). However, begining in the early 1970s outward investment increased steadily relative to inward, peaking at 61 per cent in 1985, before declining somewhat in more recent years.

In the larger global perspective, the changing importance of Canadian outward compared to inward FDI was even more dramatic. To measure this, reference is made to Canada's position as a host and home country for OECD FDI flows. (Table 2). In the 1960s Canada was one of the main recipients of inward FDI, accounting for 16.7 per cent of the flow of all inward OECD FDI investment, and only 2.3 per cent of the flow of outward OECD FDI investment. This changed dramatically in the 1970s and 1980s. Between 1980 and 1983 Canada had a net reduction in the flow of inward FDI,[2] while it accounted for 13.4 per cent of the flow of all OECD outward bound investment.

There were, of course, other reasons for the shift in interest to outward FDI. There was a change in the policy stance of many foreign governments -- in both developed and developing countries -- towards FDI: they were now eager to attract such investment. (Globerman,1988;OECD,1990).[3] A second factor was the Canada-U.S. Free Trade Agreement, which came into force on January 1 1989, and eased market access to the U.S. market for Canadian firms. Other things equal, such access will result in increased sales by Canadian firms to the U.S. market. To the extent that once a certain threshold level of foreign sales is reached, servicing the foreign market by FDI becomes a viable strategy, then the Canada-U.S. FTA may lead to more outward FDI. Another reason may have been a desire of firms to diversify their operations.

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[2]In other words, there was a negative flow of inward direct investment. This was due to "Canadian purchases of foreign enterprises in Canada, particularly in 1981, but also in 1982, which more than offset new investment flows." (OECD,1987,p.13). This was particularly the case for the oil and gas sector. The 1980 National Energy Policy had as one of its declared objectives Canadian ownership of a significant number of larger oil and gas firms, most of which were foreign owned. This led, for example, to the $1.5 billion purchase in May 1981 of Petrofina Canada Inc.-- a Belgian owned firm -- by Petro-Canada -- a Crown corporation. For details, see Economic Council of Canada(1985,pp.22-3,131-32). In 1983 BP Refining and Marketing Canada Limited was also acquired by Petro-Canada.

[3]Indeed, Canada was part this trend with the establishment of Investment Canada in 1985 as a replacement for FIRA. This new agency actively assisted inward FDI. This applied, for example, to the creation of joint ventures between Canadians and foreign firms. For details see Investment Canada(1989).

Finally, it could be argued, with the reduction in importance of the U.S., both as a world economic power and as a source of outward investment, Canadian concerns about continued U.S. domination are less warranted. This, in part, may be reflected in the generally more open inward investment policy Canada has followed in recent years, as well as the specific provisions in the Canada-U.S. Free Trade Agreement, which removed certain regulatory barriers for U.S. direct investment in Canada that still apply to other countries. Indeed, it is somewhat ironic that with the dramatic reversal in the relative importance of inward and outward investment in the U.S. -- illustrated in Table 2 -- many of the fears and concerns over FDI that Canada had in the 1970s have arisen in the U.S. Indeed, since 1988 the U.S. has had legislation, Exon-Florio, which allows the President to block foreign takeovers on the grounds of national security.[4]

The interest in Canada in outward FDI has appeared in a number of ways. Some are worried, for example, about the sectoral or industrial composition of such investment. In the view of the Ontario Premier's Council(1988, Volume 1), chief among the weaknesses in the structure and competitiveness of the province's economy is the "lack of a healthy base of indigenous Ontario multinational companies in non-resource industries."(ibid.,p.12). The Council thought that the lack of such firms is "major reason for [Ontario's]...poor performance in most high growth sectors."(ibid.,p.12).[5] Others are worried that the increase in offshore FDI is leading to a reallocation of jobs abroad, thus generating adjustment costs for workers in Canada. This was raised, for example, during the debate over the merits of the Canada-U.S. FTA and, earlier, over Inco's decision to open nickel mines in Indonesia and Guatemala.[6] These are important issues. They could, if regarded seriously enough, result in policies to promote Canadian-based MNEs, via various subsidy and procurement programmes, as well as the screening of outward FDI,

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[4]For contrasting U.S. views of inward FDI see Graham and Krugman(1989) and Tolchin and Tolchin(1989).

[5]This is reminiscent of Servan-Schrieber's(1967) analysis of the challenge of U.S. MNEs in Europe.

[6]On Inco see Litvak and Maule(1981,pp.80-81).

respectively.[7]

The object of this paper is not to resolve policy issues such as those outlined above. Its purpose is more modest. More specifically it is to begin the process of describing and analysing Canada's outward FDI, extracting as much out of the present Statistics Canada data sources with the aid of a newly-developed database created from the linkage of the agency's administrative and survey data sources pertaining to Canadian MNEs. In this process the broad trends in outward FDI are first painted and then using data for 1986, a more in depth examination of selected aspects of FDI is presented. The topics covered in this paper include: the size distribution Canadian MNE's; the nature of parent-affiliate relationships; and the motivation for outward FDI.

THE THEORY AND PRACTICE OF FDI

Much of the economic analysis of FDI stems from the post-World War II rise of U.S. MNE's, whose outbound investment dominated OECD direct investment flows. In other words, as shown in Table 2, direct investment flowed from the U.S. to other countries such as Canada and West Germany. However, in the recent past this pattern has changed dramatically, with the U.S. becoming the major recipient, as oppposed to source, of FDI among OECD countries.(Table 2). As we shall see, most Canadian FDI has been targetted at the U.S. It is therefore of some interest that a recent study concluded that the traditional theory of the MNE, developed on the basis of U.S. outbound FDI, was the most appropriate explanation of the boom in inward U.S. FDI.(Graham and Krugman,1989). Nevertheless, there have been some developments in the theory of FDI, reflecting its changing patterns and forms. In this section both the traditional theory and some of the recent developments are presented.

Internalization, Intangible Assets and Transaction Costs

The traditional theory of FDI is based upon the notion that a firm owns an intangible

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[7]If outward FDI is motivated by economic efficiency then policies designed to screen or even promote such activities -- albeit indirectly through R&D subsidies -- should be adopted and implemented with care, so as to avoid significant economic costs.

asset, which gives it a competitive advantage.[8] This asset might be, for example, an innovation, a reputation for reliable, quality products, or a particular skill, such as the ability to put together large tracts of land for development. These assets have two characteristics that frequently favour their exploitation by FDI. First, they are a public good within the firm. As such, the asset itself can be used at zero marginal cost to the firm.[9] This reflects the fact that the costs of creating the asset have already been incurred by the firm. Second, there are sufficiently high transaction costs that the favoured method of maximizing the value of the asset is through FDI, rather than an arm's length transaction, such as a license agreement or sale. The asset may reside in an individual or team with the result that it might not be easily communicated or disembodied independent of the team. Appropriability problems may exist if the asset cannot be easily protected from imitation, through, for example, a patent or trademark. Even if the asset can be protected from imitation, the method itself -- secrecy -- may preclude its sale or license in an arm's length transaction. Alternatively the asset may be on the leading edge of technology such that not only do appropriability problems arise but also there may be great variance in the perceived value of the asset, thus making any agreement on price and other terms and conditions for sale or license difficult to reach.

The traditional theory of FDI usually applies to situations in which the firm is involved in the same activity at home and abroad. However, not all FDI is of a horizontal nature. Frequently, the investment abroad is used to supply an intermediate input, such as a raw material, to the parent's home operations. A different explanation is required for such instances of vertical FDI. The usual explanation for such investment is in terms of transaction costs.[10] The parent requires access to an input. In obtaining access it would like predictability with respect to price, delivery and quality of product. The parent can then plan and schedule production with confidence that output targets will be reached. Such a situation is likely to occur where there are

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[8]This discussion is based upon Caves(1982,pp.3-15).

[9]There are clearly limits, however. If a firm has a reputation for good quality products then using this to sell low quality products at a price premium will eventually reduce the value of the asset.

[10]This discussion is based upon Caves(1982,pp.15-24).

large numbers of buyers and sellers, the input is homogeneous product, there is easy access to price and cost data, and the costs of switching the source of supply are trivial. When these conditions are not met, this provides incentives toward movement away from spot markets toward long-term contracts and/or FDI. However, while contracts can be negotiated, if the costs of specifying all of the terms and conditions are high and the expense of monitoring and ensuring compliance are also substantial, then FDI is likely to become the favoured alternative -- to the extent that it does not incur these or offsetting costs.

The transaction cost approach to horizontal FDI sees the firm as a replacement for the market with respect to intangible assets; in the case of vertical FDI, the firm replaces the market for the intermediate goods. The economising on transaction costs motivation for this internalization within the firm is likely to lead to the parent having complete or majority control of any FDI. The same factors that explain the difficulty of buying and selling intangible assets and intermediate goods on the open market also apply to the parent drawing up some arrangement in which it has to exercise joint control, particularly for the intangible asset.

Dynamics of FDI

The discussion of FDI so far explains why a firm invests abroad, but says little about the dynamics of the process of investment and disinvestment. The traditional view is that firms frequently first export to a market and, if successful, FDI follows. This does not necessarily mean that exports will stop. They may, for example, change their nature. For example, the FDI might be an assembly plant, so that instead of exporting a finished good, the parts are exported with final assembly taking place in the foreign location. This is consistent with the observation that foreign controlled firms frequently have much higher import propensities than their domestic counterparts. (e.g.Statistics Canada, 1981b).

Once the firm has established FDI abroad, the advantage that prompts the initial investment may depreciate quickly because the firm loses out in the competitive struggle. One of the frequently touted benefits of FDI to the host country is that positive externalities are generated. One of these is that the domestic firms will be able to learn from the foreign firm. For this and other reasons the MNE may lose its advantage and decide that disinvestment is the best

policy.[11] This is the suggested reason for the reduction of U.S. FDI in Canada in a number of industries, including food and kindred products (McFetridge,1989).

Intra-Industry FDI

An aspect of FDI that has attracted much interest in the recent past has been the two-way flow of direct investment across national boundaries. Canada's MNEs invest in the U.S., while U.S. MNEs have, of course, always invested in Canada. A similar two way flow has been observed between European and U.S. MNEs.[12] This has led to a discussion of the motivation for such inter-country flows, with particular attention paid to two-way flows in the same industry -- intra-industry FDI.[13]

One view sees the two-way FDI in terms of oligopolistic rivalry. The U.S. MNEs investment into Europe and Canada in the 1950s and 1960s would thus be characterised as FDI "into a stable oligopoly [that] might disrupt patterns of oligopoly conduct and stimulate rivalrous behavior on the part of local firms, manifested in the home market of the local firms and the home market of the foreign firm." (Graham,1978,p.89). If this view is accepted -- and Graham(1978) finds evidence that is consistent with it for U.S.-Europe FDI flows -- then FDI between countries would involve the same industries.

A second -- though related[14] -- view sees two-way FDI flows as an extension of the exchange of differentiated goods. In short, intra-industry trade precedes intra-industry investment. Differentiated products, whether because of advertising, product quality or innovation, are likely to be based upon some rent yielding asset and thus in some cases lead to FDI. It is not clear, however, why the lag in the response of Canadian MNEs occurred. For European MNEs the after affects of the Second World War seem a tenable explanation, but not so for Canada.

Of course, not all inter-country FDI will be intra-industry in nature. In Canada, there is a prohibition on foreign ownership in some sectors. Other countries sometimes have similar

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[11]These other reasons include the fact that it becomes cheaper to produce at home and export abroad, perhaps because of a tariff change.

[12]See, for example, Graham(1978) and Hymer and Rowthorne(1970).

[13]See, for example, Erdilek(1985), and Graham and Krugman(1989,pp.146-147).

[14]Related because product differentiation is often the basis for oligopoly.

limitations, although the sectors may differ. To the extent that Canadian FDI is based upon specialised knowledge based on areas of traditional comparative advantage such as resource-based industries, then there may be little intra-industry FDI.

New Forms of FDI

The traditional theory saw FDI based on some asset, the exploitation of which required a wholly or majority owned subsidiary. In the 1970s and 1980s, however, what has been referred to as "new forms" of international investment arose.[15] These included joint ventures, turnkey operations, licensing agreements, management and technical assistance contracts and franchising.[16] These forms of investment contrasted with that of wholly or majority owned operations abroad, in that the relationships were more arm's length. In some instances the MNEs operations were unbundled[17] -- production was controlled by host country interests, which purchased management and technical assistance services through contracts from the MNEs -- while in others the ownership, control and management was shared through joint ventures. There are at least three sets of reasons suggested for the emergence of these "new forms" of overseas investment.

One set of explanations for these "new forms" of investment abroad revolves around the policies of host countries, particularly by developing countries.[18] In the 1970s these countries frequently pursued policies designed to increase local control over, and place various conditions on, inward FDI. This was due to concerns over loss of sovereignty and a suspicion that the host economy was not benefiting to the fullest extent possible from inward FDI[19]. However, it would appear that by the 1980s the experience with these new forms of investment fell short of host country expectations and, when combined with increased interest rates and the debt crisis, meant

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[15]This discussion is based upon OECD(1981,pp.31-5;1987,pp.24-25;1990), but see also Blomstrom and Zejan(1989).

[16]It should be noted that while joint ventures have always been an integral part of Canada's official FDI statistics, the other "new forms" have and are not included in such statistics.

[17]Interestingly this was suggested in the area of raw material extraction as an appropriate way for the MNE to maximze the return on its intangible asset. (See Bergson et. al.,1978,pp.157-64).

[18]This discussion is based upon the references cited in footnote 15.

[19]The amount of technological transfer may, for example, have been less than desired.

11

host countries frequently had more pressing concerns, thus placing less emphasis on restrictive investment policies. Indeed, as noted in the introduction to the paper, many countries are now eager to attract inward FDI, even if it is wholly or majority foreign owned.[20]

A second set of explanations is based on the view that successful new products and processes frequently require the combination of several quite disparate skills.[21] The outcome of this process will often result in knowledge that can be used in many different industries. The outcome may be highly uncertain and the project short-lived. Furthermore, it is rare that one firm is a leading player in all of the different technologies. Mytelka(1990,pp.44-45) has put it as follows:

> In sum, the emergence of strategic partnerships between firms...reflects a number of fundamental changes in the process of production and in the form that competition now takes in the world economy. Among the most important such changes, are the growing knowledge-intensity of production, the need for flexibility, the development of competition on the basis of both price and innovation and the heightened uncertainity that has resulted from the coming together in the present conjuncture of these changes.

Under these conditions -- economies of scope, significant internalisation economies and perhaps with large firms involved -- joint ventures become, according to Mytelka, an attractive investment form.[22] To the extent that different countries have specialisation in different technologies this may result in such ventures crossing national boundaries.

A third set of explanations sees many industries as mature oligopolies. There may be only a handful of these firms that dominate the industry on a worldwide basis.[23] Such firms frequently have an interest in the long term stability of the market on a worldwide basis. While competition is not completely absent, each actor knows that it is both unlikely to go bankrupt or be acquired

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[20]Furthermore, in some instances such arrangements found favour with MNEs, particularly if the investment was large. Risks might thus be reduced.

[21]This is based on Casson(1988) and Mytelka(1990).

[22]Joint ventures have been promoted in the EC. See Mytelka(1990) and Porter(1990) for contrasting views on the wisdom of such policies.

[23]This approach draws upon the industrial organization literature.

by another member of the group -- national governments would not countenance either eventuality. One of the ways of maintaining stability and building trust in these mature oligopolies is through joint ventures in such areas as the development of new technologies or markets.[24] One would expect to see the number of such industries where such forms of oligoplistic co-ordination were prevalent to increase through time as national markets become more interdependent.[25] Such co-ordination might be preceded by the inter-penetration of national markets through FDI noted above.

The discussion of the theory of FDI, mixed with some empirical observations, presents a number of variables that could be used to characterise such investment as well as provide the basis for making inferences about the motivations for outward direct investment. It is to these topics that attention is now turned. However, first some discussion of the data sources are required.

DATA SOURCES AND DEFINITIONS

The information concerning Canadian outward FDI presented in this paper is based on the data collected by the International Investment Position Section, Balance of Payments Division, Statistics Canada.[26] This section conducts an annual survey of firms in Canada having direct and portfolio investment abroad. The initial questionnaire sent to the respondent, the BP-59, is entitled "Capital Invested Abroad by Canadian Enterprises". Increasingly, however, respondents pass their investment through one or more holding companies, located in several countries, to the ultimate location. In order to unravel the various layers, respondents are required not only to file the BP-

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[24]See, for example, the discussion of joint ventures in the automobile industry.(Economist,1990).

[25]It should be noted, of course, that these three explanations are not necessarily mutually exclusive. The mature oligopolies may and do form joint ventures in areas of new technology -- so-called pre-competitive consortia. This makes testing which explanation is most important difficult.

[26]See Richards(1987) and (Statistics Canada(1981a) for a discussion of the FDI concepts and definitions (ibid.,pp.191-219) and a copy of the BP-59 and BP-59S questionnaires (op.cit.,pp.284-288). In addition information on outward FDI is published in Statistics Canada,Canada's International Investment Position, Cat. No. 67-202, annual.

59S form, "Supplementary Schedule of Capital Invested Through A Primary Foreign Subsidiary," but also financial statements for the various foreign concerns. The purpose of these questionnaires is to collect financial information with which to prepare statements on Canada's balance of international payments and investment position. Little data is collected with respect to the firm's non-financial operations or its activities in Canada.[27]

The BP-59 (and BP-59S) questionnaire is responded to by the "reporting entity." In the case of an individual corporation, with no inter-corporate ownership links in Canada, the reporting entity and the corporation are one and the same. In the case of a group of corporations under common control the situation becomes somewhat more complex. The BP-59 is sent, in the first instance, to the parent firm. The parent has a choice of how to respond: it may complete a single BP-59 questionnaire for all its constituent Canadian corporations; or each of these corporations, or subsets thereof, may complete separate BP-59 returns. The choice is left to the discretion of the parent corporation.

In presenting patterns of Canada's outward FDI the reporting entity, as recorded by Statistics Canada, is used to identify individual firms with outward FDI. No attempt is made to roll-up or aggregate into a single consolidated "reporting entity" those instances where there are separate returns for corporations under common control. This procedure is followed for two reasons. First, there are some aggregation problems.[28] Second, and more importantly, firms vary in the degree of delegation of decision-making to their various constituent corporations. There may be considerable centralization of decision-making in the parent, with, it is suggested, the parent more likely to complete a single BP-59 form for all of its constituent corporations. On the other hand, individual or groups of corporations -- perhaps organised as divisions -- under common control may have considerable managerial decision-making discretion. In such instances it seems likely that each sub-unit will file their own BP-59 form. Thus, the implicit assumption being made here is

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[27]To collect data on the firm's operations in Canada requires linking the BP-59 and BP-59s file to other data sets within Statistics Canada.

[28]For example, two commonly-owned reporting entities may each own 50 per cent of the same foreign affiliate. In aggregating these two returns into a single consolidated return, this foreign affiliate should only be counted once. However, since there is not a unique identifier attached to each affiliate, matching cannot easily be accomplished, and some double counting may take place.

that the reporting entity is the relevant decision-making unit with respect to outward FDI decisions.[29]

In quantifying outward FDI of a reporting entity -- hereinafter referred to as a parent or firm unless otherwise specified -- two dimensions are used: the number of affiliates and an indication of their size. An affiliate is defined as a foreign entity in which the Canadian firm has a significant enough investment to play some role in its management. As a rule of thumb at least 10 per cent of the voting rights of the foreign entity have to be owned by the Canadian firm before it is classified as an affiliate, otherwise it is classified as portfolio investment.[30] This cutoff is "considered adequate for the owner to exert a measure of influence on the affairs of the company." (Richards,1987,p.2). The U.S., Japan, and the OECD use the same cutoff.[31] The importance of these affiliates can be measured in a number of ways. Two are considered here.

One commonly used measure of size is the book value of long-term investment or capital employed owned by the Canadian parent and its Canadian subsidaries. It is defined on the BP-59 form as the sum of five items: common stock; preferred stock; retained earnings; capital surplus; and net long-term inter-company debt. The first four items are equity, the last debt. The sum of these represents the total value of the long-term investment owned by the Canadian reporting entity.[32] It is, "valued according to the books of the ... affiliates abroad of Canadian entities."(Richards,1987,p.12). Book value is converted to Canadian dollars at the exchange rate prevailing at the end of the fiscal period of the affiliate.

Book value is usually measured in historic, not replacement terms. Thus more recent FDI,

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[29]One test for this might be to see if, others things being equal, such as reporting entity size, industry of origin and so on, reporting entities that are part of a larger family of firms are more likely to have FDI than those which are not.

[30]In some cases the foreign affiliate may, in turn own several other foreign firms. Unless these reported separately on the BP-59 or BP-59S forms they will not be counted as separate affiliates. However, they will be recorded in the book value of the affiliate.

[31]See Graham and Krugman(1989,pp.8-11) and Julius(1990,pp.14-20). However, not all countries use a 10 per cent cutoff. Some, such as the U.K., France and Germany use a higher cutoff -- between 20 and 25 per cent.

[32]If the reporting entity owns less than 100 per cent of the debt and equity of the foreign affiliate, then the total book value refers only to that portion which is owned by the reporting entity.

15

whether via the building of new plant -- greenfield -- or a new acquisition[33], will, other things being equal, be more highly valued than an older investment, which yields the same return or is valued the same in replacement terms.[34] This, therefore, probably imparts an upward bias to the ratio of outward to inward Canadian FDI presented in column (4) of Table 1. However, when examining only outward FDI its recent origin should not result in too serious an undervaluation.

An alternative method of capturing the size of the FDI abroad is the use of total book value of long-term investment in which the Canadian parent has a direct investment interest. This is taken to represent the amount of long term capital controlled as opposed to owned by the Canadian parent. It is the total of all long-term debt and equity of the foreign affiliate owned or held by all creditors and shareholders, including the reporting entity. It differs from the book value of long-term investment owned by the parent in that debt and equity held by third parties is included. While no systematic attempt is made by Statistics Canada to record the identity of the third parties, Richards(1985,p.19) comments that, "it is reasonable to expect that Canadian financial institutions and their various [affiliates] ... abroad would be significant third party investors in these enterprises."

During the period from 1979 -- the first year data on total book value was collected -- to 1986, between 50 and 60 per cent of the total book value of the overseas investment was owned by the parent.[35] The mean annual value as percentage held by the parent was 55 over this seven year period. No clear trend emerged with respect to the share held by the parent. Thus, Canadian parents controlled a substantially larger volume of investment abroad than they owned.[36]

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[33]It would appear that for acquisitions directly from Canada by the parent, historic valuation is used; when acquired through a U.S. affiliate, acquisition valuation is used. Most acquisitions appear to fall into the latter category.

[34]And which has not been recently acquired, and thus, probably, revalued.

[35]For details, see Statistics Canada(1989, Table 12, pp., 50-53). The asset abroad is measured as the sum of all long term liabilities -- bonds, debentures, loans, advances, etc.,-- and equity -- - common and preferred shares, retained earnings -- held by all creditors and shareholders. The term capital employed is sometimes used to describe this total.

[36]In 1986 the ratio of book value owned by the parent to that controlled was 62 per cent; for majority-owned affiliates 64 per cent; and for minority-owned affiliates 51 per cent. The definitions of majority- and minority-owned affiliate is discussed in more detail in the section below, "Ownership and Control: Parents and Affiliates." The percentages reported in this note refer to

The two concepts of the size and importance of FDI -- owned as opposed to controlled -- should be thought of as complements not substitutes. The difference between the two can be used to make inferences about the method by which firms finance their FDI, the degree to which there are joint ventures, and the amount of leverage -- the ratio of direct to total value. Both will be used here in characterizing FDI, but most attention will be paid to the book value of direct investment.[37]

As noted above, in this paper patterns of FDI are presented from the 1950s and 1960s to the present, with more detailed analysis of a single year, 1986. Reliance is placed upon the published data in Statistics Canada, Canada's International Investment Position, Cat.No.,67-202 for the historical picture. Microdata derived from individual BP-59 files are employed for the use of 1986 data. In using this microdata a small number of affiliates were omitted for the following reasons:

* the reporting entity that owned the affiliate was not classified to an industry in Canada, since it had no economic activity in Canada;

* the affiliate had a negative book value, usually because of negative retained earnings. In many cases it would appear that this signals the fact that an affiliate is set up solely to borrow for the parent abroad; and,

* the affiliate's book value was zero, suggesting that it was a shell.

Table A-1 provides the frequency of these reasons for affiliate omission. The two most important reasons, as measured by the number of parents affected, were that the book value was negative (191 parents affected), or zero (152 parents affected). Instances of the owning reporting entity having no econommic activity in Canada were very rare. The application of all of these criteria led, in 1986, to a set of 3,172 affiliates owned by 1,383 parents.

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the sample of firms discussed below. Data on the difference between book value and total value is not collected for unincorporated branches. They are thus not included in these percentages.

[37]In this connection it should be noted that Richards(1985,p.17) comments that the industrial distribution of owned and controlled outward FDI is similar.

THE SIZE DISTRIBUTION OF OUTWARD FDI

In 1970 Canada's FDI abroad was $6.2 billion, in 1986, $53.2 billion. (Table 1). The size distribution[38] of this investment can either be looked at from the parent/home country viewpoint, or the affiliate/country(s) in which the investment is located. The possible relationships between the two distributions are illustrated in Figure 1. The two distributions would be the same if each parent has only one affiliate. This is represented by the diagonal elments in the table. Alternatively the size distribution of parents is more concentrated than that of affiliates because parents have more than one affiliate. Since, in 1986, the ratio of the number of parents to the number of affiliates was appproximately 0.40, the bottom left hand quadrant would seem to be the most likely cell to characterise the relationship between the two distributions, in that the parent distribution should be more concentrated than the affiliate. Thus one of the issues to be addressed in this section concerns the magnitude of this difference.

The size distribution of parents (Table 3) and affiliates (Table 4) is measured for selected years in the period 1970 to 1986. A parent or affiliate is classified to one of eight size categories depending upon its book value of long term investment in the given year. The two tables present percentage of FDI and parents (or affiliates) classified to each category. In parenthesis the actual number of parents (or affiliates) is also presented. For example, in 1970 the 11 largest parents accounted for 65.4 per cent of all FDI (Table 3), the corresponding figure for the 12 largest affiliates in 1970 was 39.5 per cent (Table 4).

Five year intervals were selected since FDI about doubled between each adjacent pair of years (Table 1). The number of parents and affiliates increased at a much slower rate, both barely doubling between 1970 and 1986. (Graph 1). Thus the average size of an affiliate and a parent grew at much the same rate. Nevertheless, although the relative size of parents to affiliates will remain much the same there will, of course, be widening absolute size differences.

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[38]The size distribution is measured by the number of parents or affiliates and the degree of inequality in their book value of long term investment. Inequality is proxied by concentration, which is measured using either the percentage of FDI accounted for by the leading N parents (or affiliates) or some summary index such as the Herfindahl index, explained below.

Tables 3 and 4 both show that a relatively small number of parents and affiliates account for a large percentage of FDI and that a very large number of parents and affiliates account for a small percentage of FDI. In 1986, for example, the leading 97 affiliates accounted for 2.7 per cent of all affiliates and 66.6 per cent of FDI; while the leading 87 parents accounted for 5.9 per cent of all parents and 79.7 per cent of FDI. In contrast, 2,110 affiliates accounted for 58.3 per cent of affiliates and 4.3 per cent of all FDI; 857 parents, 57.9 per cent of all parents and 2.0 per cent of FDI.

It is difficult to make inferences based on the data in Tables 3 and 4 about whether parent or affiliate concentration is increasing or decreasing over time using conventional indices such as the percentage of FDI accounted for by the leading N parents (or affiliates) or summary indices such as the Herfindahl index. Nevertheless, while it is difficult to make comparisons between 1970, 1975 and 1980, good comparisons can be made between these years and 1986. The microdata for 1986 can be used to estimate various N-firm concentration ratios, which can then be compared to the corresponding published ratios available for earlier years. Tables 5 and 6 present these results for parent and affiliate concentration, respectively.

It would appear that both parent and affiliate concentration has declined between 1970 and 1986. The leading 11 parents accounted for 65.4 per cent of all FDI in 1970, 38.2 per cent in 1986; the corresponding percentages for the leading 20 parents were 75.5 and 50.2, respectively. The percentage point decline was somewhat less for affiliates: the leading 12 affiliates accounted for 39.5 per cent of FDI in 1970, but 26.1 per cent in 1986; while the corresponding percentages for the leading 45 affiliates was 65.1 per cent and 50.5 per cent, respectively. It is difficult, however, from the information in Tables 5 and 6 to make inferences about when the decline took place over the 1970-1986 period. Thus, the huge growth in outward FDI has led to a marked decline in the dominance of Canadian outward investment by a handful of parents and their affiliates.[39]

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[39]For further discussion of the changing size distribution of parents see Richards(1985, pp.9-13). This paper traces the mobility of parents across various size categories over the period 1977 to 1981. In particular, Richards finds that, " Of the 66 enterprises in the $100 million plus category ... at the end of 1981, only 16 had already been large investors at the beginning of 1977. Another 35 had graduated from the medium-sized[$10 - $100 million FDI]group of companies by 1981. Ten others had been small companies at the beginning of 1977. There were also five new investors who had not had any direct investments abroad prior to 1977."(p.10).

It is difficult to compare parent and affiliate concentration on the basis of Tables 3 to 6, since the same N-firm concentration ratio is not available for both parents and affiliates. In order to accomplish this task use is made of the microdata for 1986. Two measures of concentration are estimated and presented in Table 7 for parent and affiliate concentration. The first measure is the percentage of FDI accounted for by the leading N parents or affiliates, where N is set equal to 4,8, and so on. The second measure is the Herfindahl index, the sum of the proportion of each parent's (or affiliate's) share of FDI squared. It will vary between 1, one parent with one affiliate accounts for all FDI and a very small number when FDI is spread equally among all of the 1,383 parents -- 0.0007 -- or 3,172 affiliates -- 0.0003.

Parent concentration substantially exceeds that of affiliate concentration. The Herfindahl index of parent concentration, 0.0238, is more than twice that of affiliate concentration, 0.0103. The number of equal sized parents and affiliates required to generate these Herfindfahl indices is 42 and 97, respectively. The leading 4 parents account for 23 per cent of all FDI, the leading 4 affiliates, substantially less, 14 per cent. Of course, as the size of N increases the differences between parent and affiliate concentration decreases.

The discussion of the size distribution of FDI suggests that:

* only a small number of firms in Canada undertake FDI, but this number has gone up over time, from 796 in 1970 to 1479 in 1986;

* a small number of parents account for a large percentage of FDI, in 1986 the leading 24 parents accounted for 54 per cent of all FDI. Nevertheless, there has been a decline in parent concentration over time as FDI has expanded;

* the number of affiliates has also increased over time, with affiliate concentration also declining. In 1986 the leading 24 affiliates accounted for 38 per cent of all FDI.

* the degree of parent concentration is substantially above that of affiliate concentration, by a factor of more than two using one index.

HOW DO PARENTS GROW: MORE INVESTMENT PER AFFILIATE AND/OR MORE AFFILIATES ?

Parents can increase the size of their outward FDI either by raising the number of affiliates or, for a given number, investing, on average, more in each affiliate. Firms may wish to grow through larger affiliates because of economies of scale in production at the affiliate level; through more affiliates because of geographic or product diversification. A priori it is difficult to predict which of these alternatives will be selected by firms as they grow. Furthermore, to properly evaluate each would require taking into account a series of industry specific factors, such as the availability of plant and multiplant scale economies.

Although, on average, each parent had 2.3 affiliates in 1986, there was considerable variance around this measure of central tendency. There was a very large number of firms with one or two affiliates. For example, 81 per cent or 1,122 of the 1,383 firms with FDI abroad had either one or two affiliates. (Table 8, column 3). In contrast, 16 parents accounting for 1.2 per cent of all of the parents had 15 or more affiliates each. In one of these latter cases the parent had in excess of fifty affiliates. Thus any examination of the relationship between parent size and the number and size of affiliates may be unduly affected by one or two parents with a very large number of affiliates.

Columns (4) and (5) of Table 8 provide a first approximation as to whether parents grow by increasing the size and/or the number of affiliates. The size of parents and their affiliates is expressed relative to a parent with only one affiliate.[40] Column (4) records, for example, that, on average, parents with 9 affiliates in 1986 were 4.9 times as large as parents with only one affiliate. In contrast, as column (5) shows, the average size of affiliates belonging to parents with 9 affiliates was 0.5 times as large as an affiliate belonging to parent with a single affiliate.

No clear simple relationship emerges between parent size and either the number of

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[40]When a parent has only one affiliate, the size of the foreign investment of the parent and the affiliate are the same. This follows since the size of the parent is defined here in terms of the number and size of the affiliates that it owns.

affiliates, N, or their size. Apart from the fact that parents with a large number of affiliates (>10) were bigger that those with a small number of affiliates (<3), there was little discernible trend between parent size and N. In contrast, the relative size of affiliates showed little variability. However, for parents with values of N greater than 15, mean affiliate size increased substantially. Thus, it would appear firms grow primarily by adding affiliates, up to parents with a large number of affiliates, beyond which both N and average affiliate size tend to increase.

An alternative method of examining the relationship between parent size and the affiliate size is to estimate the following equation:

$$\log(BV) = a + b.\log(N),$$

where,

BV is the book value of long term FDI of the parent in 1986,

N is the number of affiliates owned by the parent, and

b is the elasticity of parent FDI with respect to N.

If parents only grow through adding equal-sized affiliates then b will not be significantly different from unity. However, when estimated across 1,383 parents for 1986 b, at 1.84, was significantly different from unity.[41] In other words, a 100 per cent increase in the number of affiliates -- from 1 to 2, is associated with a 184 per cent increase in the size of the parent. To the extent that the value of b reflects the locus of observations of parents with one to three affiliates then this does not seem an unreasonable result. However, the regression only explained a quarter of the variance of BV, a result that did not change if the influence of industry effects were introduced.[42]

PARENTS AND AFFILIATES: OWNERSHIP AND CONTROL

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[41]The result was as follows:

$$\text{Log(BV)} = 6.95 + 1.84.\log(N) \quad R^2 = 0.2609$$
$$\quad\quad\quad (0.69) \quad (0.08)$$

where the standard errors are in parenthesis. The coefficients are significantly different from zero (and unity for b) at 0.0001.

[42]Industry dummy variables were introduced, based on the sevenfold classification in Table 13. The excluded industry was "other." These dummy variables were added to the equation in the previous footnote. All the industry dummy variables were insignificant at 0.10, except for that on petroleum and natural gas which was, -0.40. The b coefficient was 1.81 and was significantly different from both unity and zero at 0.0001. The R^2 was 0.2646.

Ownership and control in the context of outward FDI has several dimensions, as illustrated in Figure 2. Parents can either be foreign or domestically controlled. Considerable concern has been expressed that Canada does not have enough of its own MNEs. This raises the issues of whether the huge rise in outward FDI has been fueled by foreign rather than Canadian controlled MNEs. Worldwide trends in parent-affiliate relationships suggest a decrease in importance of wholly or majority owned affiliates. It is thus of some interest whether Canadian outward FDI has experienced a similar trend. This section examines these forward and backward parent ownership links.

Canadian MNEs are controlled by and large by residents of Canada rather than foreign countries. Furthermore, in the past twenty or so years this dominance has increased substantially. In 1970, for example, 65.2 per cent of outward FDI was controlled by Canadians; in 1986 it had jumped to 86.9 per cent, as shown in Table 9. Thus the huge growth in Canadian outward FDI has been to a large extent the result of the activity of Canadian as opposed to foreign controlled parents.[43]

The nature of the ownership link between <u>Canadian</u> parents and their <u>foreign</u> affiliates is divided into three categories by Statistics Canada:[44]

  * wholly or majority owned -- a company incorporated abroad in which the parent[45]owns a majority of shares carrying the right to elect a majority of the members of the board of directors.

  * minority owned -- a company incorporated abroad in which the parent owns at

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[43]Part of the increase in Canadian control between 1970 and 1975 was the reclassification of a small number of large firms from foreign to Canadian controlled.

[44]The official Statistics Canada(1989) terms are "foreign subsidiaries", "foreign affiliates", and "foreign branches and miscellaneous investments". For ease of exposition a different terminology is used here.

[45]The parent is referred to as the reporting entity by Statistics Canada. Some firms in Canada may own several companies, each with outbound FDI. In some instances these companies will report separately, in others as one unit. This should not affect the book value of affiliates abroad. If, however, several companies under common ownership all own part of a particular affiliate then this will inflate the number of affiliates but not their book value, compared to a situation in which all these companies report as a single unit.

least 10 per cent, but less than 50 per cent, of the voting rights.

        * unincorporated -- a parent has a direct investment activity abroad not being conducted through an incorporated company. Such businesses are conducted as branch operations -- as extensions of the Canadian parent outside Canada.

These categories refer to the FDI abroad which is owned directly by the Canadian parent.[46]

The broad picture of parent-affiliate relationships of Canadian FDI is presented annually for the period 1965 to 1986 in Table 10. Most Canadian FDI is in the form of wholly or majority-owned affiliates. For example, in 1965, such parent-affiliate relationships accounted for 73 per cent of all affiliates abroad and 92 per cent of the book value; twenty-one years later the corresponding percentages were 78 and 84, respectively. Nevertheless there has been an increase in the size of "new forms" of FDI, which is proxied, albeit somewhat imperfectly, by minority ownership. This has grown, at least when measured by book value, from 5 per cent in 1965 to 11 per cent in 1986. In contrast, such links declined in importance when measured in terms of numbers, from 15 per cent to 11 per cent, respectively. Thus, the average size of a FDI in minority ownership situations has increased relative to other parent-affiliate relationships.

In view of the earlier discussion concerning the motivation of "new" forms of FDI some attempt was made to determine whether the patterns of Canadian FDI were consistent with any of the explanations. One of the predictions from that discussion was that minority ownership should be particularly important in developing countries. Canadian outward FDI was broken down into seven regions, with one proxying for developing countries.[47] The percentage of FDI in each region that was classified as minority ownership was estimated for 1986, with the results presented in Table A-2. Minority ownership was not particularly important for Canadian investment in developing countries, at 7 per cent, but rather in Japan, where 39 per cent of all FDI was in this category. The high proportion for Japan may reflect the fact that it is hard to

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[46]The affiliate abroad may, in turn, invest in joint ventures or add wholly-owned affiliates. These second tier relationships are not captured here, except insofar as the assets are included in the affiliate's book value. The extent of such second tier investment is not known.

[47]The category "other" in panel A of Table A-2.

penetrate the Japanese market without a local partner.[48]

A second strand to the arguement concerning the new forms of ownership is that they are likely to be particularly important in manufacturing industries, since this is where much of the R&D is conducted that forms the basis for some classes of joint-ventures. The evidence is consistent with this prediction, since 16 per cent of the book value of Canadian FDI in manufacturing was classified as minority ownership, compared to 10 per cent for all FDI abroad. A final comparison also presented in Table A-2 examines minority ownership controlling for region of investment: U.S. and the rest of the world.[49] There are quite marked differences between the two distributions. Minority ownership is, for example, particularly important in manufacturing for the U.S., and in mining for the rest of the world. Thus, it appears that taking into account region of investment there are inter-industry differences in the propensity to form joint ventures.

INDUSTRY AND GEOGRAPHIC DESTINATION OF FDI

The large expansion of Canadian FDI, which saw many new firms undertaking FDI abroad as well as the expansion of existing overseas investments, raises the possibility that the 1970s and 1980s saw a dramatic change in the industry and geographic destination of Canadian FDI abroad. Tables 11 and 12 provide the distribution of FDI abroad by industry and various country groupings, respectively.[50] As with previous tabulations, the years selected approximate a doubling of the stock of FDI abroad.

In terms of the geographic distribution of Canadian FDI, the major trend is the steady increase in the importance of the U.S. This was particularly marked between 1975 and 1986 when the share of Canadian FDI accounted for by the U.S. rose by nearly a half -- from 53 per cent to 71 per cent. The share of Canadian FDI accounted for by virtually all of the other country

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[48]We do not know the identity of the other shareholders but assume that they are Japanese.

[49]Further geographical disaggregation would be severely hampered due to confidentiality problems.

[50]No published data is available by the industry of origin of FDI in Canada. However, using the unpublished microdata for 1986, some tabulations are presented in the next section concerning the industry of origin and destination.

groupings in Table 11 declined in the 1975 to 1986 period.[51] Particularly important declines occurred in South and Central America, and, to a lesser extent, Australia and Europe. Future trends might see a diminution in the importance of the U.S.. Balcombe(1986) finds that Canadian firms typically export first to the U.S., before venturing into other jurisdictions. If this pattern holds for the rapid rise in investment since the 1970s, then a decline in the prominence of the U.S. may occur.[52] Offsetting this is, of course, the influence of the Canada-U.S. Free Trade Agreement.

The industry distribution is presented in Table 12. Manufacturing accounts for about half of all Canadian outward FDI throughout the 1970s and 1980s. However, this stability masks considerable change in the relative importance of particular manufacturing industries: beverages decreases from 15 per cent in 1970 to 7 per cent in 1986, iron and products from 10 per cent to 5 per cent over the same period; substantial increases were accounted for by chemical and allied products from 1.8 per cent to 9.3 per cent, while paper and wood products showed a modest increase of two percentage points.

Not all of the other sectors in Table 12 displayed the same stability as manufacturing. Utilities declined substantially from 20 per cent in 1970 to a mere 3 per cent in 1986. Virtually all the other sectors increased in importance. Particularly noticeable increases occurred in the financial (which includes real estate), merchandising and, to a lesser extent, petroleum and natural gas sectors. Not all sectors experienced gradual change. In the case of petroleum and natural gas as well as mining and smelting there was considerable instability in the proportion of FDI accounted for by each over the 1970s and 1980s. This might, in part, be due to the National Energy Policy.[53]

Thus the huge increase in Canadian outward investment in the past twenty years has seen quite a dramatic change in the industry and geographic composition. The focus on the U. S. has

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[51]The only exception was Asia.

[52]Litvak and Maule(1981,p.49) state that typically firms export to the U.S. prior to establishing FDI in that country, but they make no comment on whether the U.S. is the jumping off point for investment in other countries.

[53]See note 2 for a discussion of the NEP.

26

increased quite strikingly, while the share of chemicals, finance and petroleum have increased, and beverages, iron and products and utilities decreased.

MOTIVATION OF FDI

Firms invest abroad for a variety of reasons. One of the ways of infering, or perhaps more accurately characterizing that motivation, is by examining the relationship between the industry of origin and destination. The industry of origin is that to which the reporting entity -- the parent -- is classified in Canada. In other words, it is that Canadian industry which accounts for the largest percentage of the parent's economic activity in Canada.[54] The industry of destination is the industry to which the outward FDI is classified. Since the parent can -- and does -- have more than one affiliate abroad, a separate industry of destination is recorded for each such investment.

The links between the industry of origin and destination can be divided into three:

Horizontal. The industry of origin and destination are the same. For example, firm XYZ may brew beer in Canada and the U.K.

Vertical. The FDI abroad is in an industry that is in either prior or subsequent to the industry of origin in the production process. For example, a manufacturer of steel pipes in Canada might integrate backwards and buy an iron ore mine in Australia or integrate forwards and buy a wholesaler of steel products in the U.S. or Europe.

Conglomerate. The final category is where there is no apparent relationship between the industry of origin and destination. In other words, the relationship between the industry of origin and destination is neither horizontal or vertical. Since the Canadian parent, together with any firms it owns, may span several industries, but is classified to only one, it may be that some of the origin/destination conglomerate categorizations should more appropriately be classified as either horizontal or vertical.

The relationship between the industry of origin and destination of outward FDI is presented in Table 13, for the single year 1986. Thus it represents a picture at the end of the period of

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[54]The economic activity of the parent includes that of any firms it may own in Canada.

change recorded in Tables 11 and 12. The industry classification divides the economy into seven sectors: petroleum and natural gas; manufacturing; mining; utilities; merchandising; finance; and other. Of the three categories of the relationship between the industry of origin and destination it is only the horizontal link that can be characterised with much confidence using the information in Table 13.

The main inference to be drawn from Table 13 is that the overwhelming proportion of FDI abroad in virtually all industries is horizontal in nature. The diagonal elements in the matrice in Table 13 are almost without exception very high. For example, parents classified to petroleum and natural gas in Canada invested 91.4 per cent of the book value of their outward FDI in the same industry. For the remaining industries the percentage never fell below 75 per cent, with the exception of mining. In those cases where there was significant non-horizontal FDI,[55] the industry of destination favoured was manufacturing -- mining allocated 40.2 per cent of its FDI to this sector[56], utilities, 11.2 per cent, and finance 10.9 per cent.

Although most FDI can be characterised as horizontal using the broad aggregative classification in Table 13 this might not be the case if a finer level of classification is used. The finest level of industry classification available divides the outward FDI into twenty one industries, with the most detailed breakdown being for manufacturing. (See Table A-3). Even at this more detailed level most FDI is horizontal in nature, but to a lesser extent than the classification employed in Table 13. For example, of the twenty-one diagonal elements to the full matrix, fifteen were above 50 per cent, thirteen above 70 per cent. In contrast, in Table 13 all but one were above 70 per cent.

Overall, for the industrial classification system in Table 13, 82.1 per cent of all FDI abroad is horizontasl in nature; for the more detailed twenty-one industry level, 70.6 per cent. Thus while there is a decline in the importance of horizontal FDI between the two industry classifications this is not as dramatic as suggested by simply comparing the number of industries with more than 70 per cent of their investment as horizontal.

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[55]Significant is arbitrarily set at 10 per cent.

[56]In the case of mining, investment in the manufacturing sector may be forward integration for the purposes of processing and refining.

INTRA-INDUSTRY FDI

As noted above an issue that has attracted much interest is large two-way inter-country direct investment flows that have developed in recent years. One aspect of these flows that has garnered attention is the degree to which the two-way flows are intra- as opposed to inter-industry. This is examined by a comparison of the distribution of direct investment in the industries in which foreign firms have invested in Canada to the industries in which Canadian firms have invested abroad. This will be referred to as inward and outward investment, respectively.

The distribution of outward and inward investment is presented, for selected years between 1970 and 1986, in Table 14. Unfortunately, the number of industries is confined to only eleven. For each year a dissimilarity index is estimated to determine the closeness of the inward and outward FDI distributions. The index is estimated as folows: for each industry the absolute percentage point difference in its share of all outward and inward FDI is estimated; this difference is then summed, across all industries, and divided by two. The index will equal zero, when the pattern of inward and outward investment is the same, and 100, when the industries in which outward investment takes place do not include any in which inward investment takes place. In other words, if FDI is only intra-industry the index has a value of 100, if only inter-industry, zero.

Overall Table 14 shows that the industry pattern of inward and outward investment is getting perceptibly closer over the period 1970 to 1986. In 1970 the dissimilarity index was 35.1, in 1986, 23.3. Most of the reduction had taken place by 1980. The reason for the change in the index was the disinvestment by Canadian firms abroad from utilities, and the increase in involvement in the financial sector. Another important factor was the simultaneous expansion of outward investment and reduction in inward investment in petroleum and natural gas. However, in not all cases did the two distributions move closer to one another. Non-ferrous metals as well as iron and products are good examples of the contrary trend. In sum, using rather an aggregative industry classification and grouping all inward and outward investment together, irrespective of the country of origin or destination, we find that that intra-industry investment is increasing. This

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The theory of FDI outlined above sees such investment, where the industry of origin and destination are the same, as being based on some sort of intangible asset. At this stage in the analysis our discussion of the nature of these assets must necessarily be somewhat tentative. A closer look at the more important industries accounting for outward FDI shows that they are usually in a resource or resource-based industry -- petroleum and natural gas extraction, transportation by pipeline and shipping, vegetable products, wood and paper products, iron and its products, non-ferrous metals, non-metallic minerals, mining, and, perhaps, real estate.[57] Thus skill developed in these areas, areas traditionally regarded as those where Canada has a comparative advantage with respect to tradeable goods, appears to be sufficient to warrant outward FDI. Trade and investment are apparently determined by the same factors.

The discussion as to the motivation of FDI can be taken a few steps further. A small number of papers have attempted to determine the motivation for Canadian outward FDI by conducting surveys of business executives.[58] These surveys suggest that distortions introduced by Canadian and foreign governments explain at least some outward FDI. These distortions include foreign tariff structures that discriminate against processed products,[59] pressure to site production locally[60] and Canada's National Energy Policy, introduced in 1980[61]. Other reasons include being close to the consumer, seeking alternative sources of supply -- risk spreading, pre-empting a rival, and what might be interpreted as management's desire to grow once the limited opportunities of the Canadian market have been reached.[62]

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[57]However, there are some exceptions: beverages; merchandising; and financial (except real estate).

[58]These include Litvak and Maule(1981) and Matheson(1985).

[59]This partly explains FDI by firms in mining and smelting as well as wood and paper products.

[60]This was a factor with respect to telecommunications equipment and mass transit systems.

[61]This applied particularly to petroleum and natural gas.

[62]There is some evidence consistent with this in that there was a substantial increase in corporate concentration in Canada. It is possible that firms looked abroad as a method of expansion once a certain level of domestic concentration had been reached.

is consistent with results for other countries.[63]

FUTURE RESEARCH

In this paper we have started the process of describing and analysing Canadian FDI abroad with the aid of existing data sets at Statistics Canada. Attention has been confined to parents and their affiliates using a relatively small set of characteristics from a single file -- that based on the BP-59 and BP-59S questionnaires administered by the Balance of Payments Division. In future research the set of parent characteristics will be substantially expanded as other data sets within Statistics Canada are linked to the BP-59. In particular, data related to the MNE's operations in Canada will be introduced. The size dimension, for example, will be captured using several different indicators including assets, sales and employment. This will enable a much better perspective to be gained of the relative importance of FDI abroad relative to the Canadian operations of the firm. However, research will not be confined just to those firms that have outward FDI. The degree to which firms of certain size invest abroad in a given industry will also be presented.

Finally, some attempt will be made in a systematic way to assess the importance of various firm and industry characteristics leading to outward FDI. The firm characteristics might include size, country of control, rate of growth, and profitability; the industry characteristics, the degree to which a small number of firms account for a large percentage of industry output, the use of skilled labour, research and development intensity, openness to trade and the importance of raw materials in the production process. The results should enhance our understanding of outward FDI and thus assist those charged with making policy in this area.

[63]See Norman and Dunning(1984).

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TABLE 1

THE STOCK OF INWARD AND OUTWARD DIRECT INVESTMENT, CANADA, SELECTED
YEARS, 1950-1988.

YEAR[1]	FOREIGN DIRECT INVESTMENT		RATIO:COLUMN (3)/(2)
	INWARD[2]	OUTWARD[3]	
(1)	(2)	(3)	(4)
	(Billions of current dollars)		(percent)
1950	4.0	1.0	25.0
1955	7.7	1.7	22.1
1960	12.9	2.5	19.4
1965	17.4	3.5	20.1
1970	26.4	6.2	23.5
1975	37.4	10.5	28.1
1977	43.7	13.5	30.9
1978	48.3	16.4	34.0
1979	54.3	20.5	37.8
1980	61.7	27.0	43.8
1981	66.6	33.8	50.8
1982	68.9	35.6	51.7
1983	73.2	37.8	51.6
1984	78.8	44.1	56.0
1985	82.0	50.2	61.2
1986	90.7	53.2	58.7
1987[4]	100.4	56.9	56.7
1988[4]	110.3	60.5	54.9

1. Valued at year end.
2. Classified as "Direct Investment" under Liabilities in data source.
3. Classified as "Direct Investment" under Assets in data source.
4. Preliminary

Source: Statistics Canada (1989, Text Table 1, p.13; Table 1, pp. 28-29).

TABLE 2
INWARD AND OUTWARD DIRECT INVESTMENT FLOWS, OECD COUNTRIES, SELECTED PERIODS, 1961-1983

Country[3]	INWARD FLOWS				OUTWARD FLOWS			
	1961-67	1968-73	1975-79	1980-83	1961-67	1968-73	1975-78	1980-83
				(per cent)				
Canada	16.2	12.1	2.4	-3.1	2.3	4.5	6.4	13.4
France	8.2	8.2	14.0	7.9	6.9	5.2	8.1	14.7
Germany	21.3	16.4	8.1	4.8	7.2	12.5	12.5	15.5
Japan	2.0	1.7	2.0	2.5	2.4	6.7	19.2	34.5
Netherlands	4.7	8.5	5.4	4.0	4.4	6.8	8.4	8.9
U.K.	9.7	7.4	6.3	6.3	8.7	9.1	8.7	14.6
U.S.	2.6	11.4	28.9	52.6	61.1	45.8	27.0	20.0
Others	35.3	34.3	32.9	25.0	7.0	9.4	9.7	18.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1. Measured in current U.S. dollars excluding reinvestment earnings
2. The same sample of OECD countries was not used for all comparisons. See data sources for details
3. Selected countries

Source: OECD (1981, Table 3, p. 40, Table 4, p.41; 1987, Table 1, p.12 and Table 2, p.13)

TABLE 3

THE NUMBER AND SIZE DISTRIBUTION OF CANADIAN OUTWARD FDI, BY PARENT, SELECTED YEARS, 1970-1986.

Book Value of Long Term Investment of Canadian Parent	1970		1975		1980		1986	
	Number	Value	Number	Value	Number	Value	Number	Value
				(per cent)[1]				
over $100 million	1.4 (11)[2]	65.4	1.9 (17)[2]	66.9	5.1 (50)[2]	74.0	5.9 (87)[2]	79.7
$50 - $100 million	1.1 (9)	10.1	1.8 (16)	10.1	3.7 (36)	10.0	4.1 (61)	8.0
$25 - $50 million	1.8 (14)	7.6	2.6 (23)	7.5	4.7 (46)	6.3	6.2 (92)	6.0
$10 - $25 million	2.8 (22)	5.5	6.3 (56)	8.1	7.6 (74)	4.6	10.5 (155)	4.5
$5 - $10 million	4.6 (37)	4.3	3.9 (35)	2.4	8.8 (86)	2.4	8.2 (121)	1.7
$1 - $5 million	19.5 (55)	5.4	19.6 (176)	4.0	26.9 (263)	2.4	24.5 (363)	1.7
$0 - $1 million	68.8 (548)	1.7	64.0 (573)	1.0	38.6 (378)	0.5	33.4 (494)	0.3
Less than $0					4.7 (46)	-0.2	7.2 (106)	-1.9
Total	100 (796)	100	100 (896)	100	100 (979)	100	100 (1,479)	100

1. Of total number of firms with outward FDI or the total value of outward FDI
2. Figures in parenthesis represent the number of firms in each category

Source: Statistics Canada. 1975, Table 6, p.94; 1979, Table 6, p. 54; 1986, Table 5, p.36; 1989, Table 5, p.40)

TABLE 4

THE NUMBER AND SIZE DISTRIBUTION OF CANADIAN OUTWARD FDI, BY AFFILIATE, SELECTED YEARS, 1970-1986.

Book Value of Long Term Investment of Affiliate	1970		1975		1980		1986	
	Number	Value	Number	Value	Number	Value	Number	Value
				(per cent)[1]				
over $100 million	0.6 (12)[2]	39.5	0.9 (21)[2]	45.8	1.8 (53)[2]	54.9	2.7 (97)[2]	66.6
$50 - $100 million	0.6 (12)	13.8	0.8 (19)	12.0	1.5 (44)	12.1	2.5 (91)	11.7
$25 - $50 million	1.1 (21)	11.8	1.7 (39)	12.7	3.1 (92)	12.5	4.1 (148)	9.6
$10 - $25 million	2.7 (54)	13.4	3.4 (79)	11.8	5.7 (167)	10.3	7.7 (280)	8.2
$5 - $10 million	3.1 (62)	7.1	4.4 (102)	6.7	6.8 (201)	5.4	8.4 (303)	4.1
$1 - $5 million	15.3 (302)	10.7	18.1 (417)	9.5	21.0 (619)	5.7	22.0 (796)	3.5
$0 - $1 million	76.5 (1507)	3.7	70.7 (1633)	1.5	52.2 (1538)	1.4	36.3 (1314)	0.8
Less than $0					7.8 (230)	-2.3	16.3 (591)	-4.5
Total	100 (1970)	100	100 (2310)	100	100 (2944)	100	100 (3620)	100

1. Of total number of affiliates or the total book value of affiliates.
2. Figures in parenthesis represent the number of affiliates in each category

Source: Statistics Canada. (1975, Table 7, p.95; 1979, Table 7, p. 55; 1986, Table 6, p.37; 1989, Table 6, p.42)

TABLE 5

THE CONCENTRATION OF OUTWARD FDI[1], BY PARENT, SELECTED YEARS, 1970-1986

Percentage of Book Value of Long Term Investment in Outward FDI Accounted for by the Leading:		Year			
		1970	1975	1980	1986
11	Parents	65.4	..	..	38.2
17	"	..	..	..	46.8
20	"	75.5	..	..	50.2
33	"	..	77.0	..	61.2
50	"	..	..	74.0	70.0
56	"	88.6	84.5	..	72.1
87	"	..	..	..	79.8
93	"	92.9	..	..	81.0
112	"	..	92.6	90.3	83.8

1. The data for 1970, 1975 and 1980 is taken from Table 3, while that for 1986 is taken from the microdata. Due to various exclusion criteria discussed in "Data Sources and Definitions", the published numbers for 1986, where available, and those presented here may differ slightly.

Source: Table 3 and Business and Labour Market Analysis, Statistics Canada.

TABLE 6

THE CONCENTRATION OF OUTWARD FDI[1], BY AFFILIATE, SELECTED YEARS, 1970-1986

Percentage of Book Value of Long Term Investment in Outward FDI Accounted for by the Leading:		Year			
		1970	1975	1980	1986
12	Affiliates	39.5	..	..	26.1
21	"	..	45.8	..	35.7
24	"	53.3	..	..	38.3
40	"	..	57.8	..	48.2
45	"	65.1	..	..	50.5
79	"	..	70.5	..	60.5
97	"	..	..	67.0	64.1

1. The data for 1970, 1975 and 1980 is taken from Table 4, while that for 1986 is taken from the microdata. Due to various exclusion criteria discussed in "Data Sources and Definitions", the published numbers for 1986, where available, and those presented here may differ slightly.

Source: Table 4 and Business and Labour Market Analysis, Statistics Canada.

TABLE 7

THE CONCENTRATION OF CANADIAN OUTWARD FDI, BY PARENT AND AFFILIATE, 1986

1. Percentage of Book Value of Long Term Investment
    in Outward FDI Accounted by the Leading:[1]

	Parents	Affiliates
4	23.0	14.4
8	32.7	20.8
24	54.2	38.3
50	70.0	52.5
100	82.1	64.6
500	98.1	89.6
1000	99.9	96.4
1383	100.00	98.4
3172	..	100.00

2. Herfindahl Index[2]	0.0238	0.0103
NE[3]	42.0	96.9

1. Ranked on basis on book value of long term investment.
2. The sum of squares of each firm's share of total outward FDI. The index will between one (a single firm account for all outward FDI) to infinity (a very large number of firms all account for an equal proportion).
3. The reciprocal of the Herfindahl index. It is the number of equal sized firms that would generate the given value of the Herfindahl index.

Source: Business and Labour Market Analysis, Statistics Canada

TABLE 8

THE NUMBER, DISTRIBUTION, AND RELATIVE SIZE OF AFFILIATES AND PARENTS, CANADIAN FDI, 1986

Number of affiliates Per Parent	Parents with that Number of Affiliates		Relative Size[1] of	
			Parents	Affiliates
	Number	%		
(1)	(2)	(3)	(4)	(5)
1	859	62.1	1.0	1.0
2	263	19.0	2.0	1.0
3	88	6.4	1.2	0.4
4	41	3.0	6.0	1.5
5	33	2.4	3.8	0.8
6	24	1.7	11.1	1.9
7	11	0.8	4.6	0.7
8	8	0.6	15.3	1.9
9	10	0.7	4.9	0.5
10-14	30	2.2	20.5	1.8
15-19	4	0.3	187.7	10.7
20-29	3	0.2	20.4	0.9
30 or more	9	0.7	89.6	2.3
Total	1,383	100	..	..

1. In each case the average size of affiliates or parents classified to each category is calculated; their size is then expressed relative to those parents with only one affiliate, which is set equal to 1.00. Size is measured based on book value of long term investment.

Source: Business and Labour Markets Analysis, Statistics Canada

TABLE 9

COUNTRY OF CONTROL OF CANADIAN OUTWARD FDI, BY PARENT, SELECTED
YEARS, 1970-1986

YEAR	NUMBER OF PARENTS		BOOK VALUE OF LONG TERM INVESTMENT	
	COUNTRY OF CONTROL		COUNTRY OF CONTROL	
	CANADA	FOREIGN	CANADA	FOREIGN
	(per cent)		(per cent)	
1970	67.7	32.3	65.2	34.8
1975	62.2	37.8	79.1	20.9
1980	73.6	26.4	83.3	16.7
1986	75.3	24.7	86.9	13.1

Source: Statistics Canada (1975, Table 6, p.94; 1979, Table 6, p.54; 1986, Table 5, p.36; 1989, Table 5, pp 40-41).

TABLE 10

CANADIAN OUTWARD FDI, CLASSIFIED BY NATURE OF PARENT-AFFILIATE OWNERSHIP LINK, 1965-1986

Year	Incorporated				Unincorporated		Total	
	Complete or Majority Ownership		Minority Ownership					
	No.	$Million[4]	No.	$Million[4]	No.	$Million[4]	No.	$Million[4]
1965	1,104	3,182	220	176	192	111	1,516	3,469
	(72.8)[5]	(91.7)[5]	(14.5)[5]	(5.1)[5]	(12.7)[5]	(3.2)[5]	(100)[5]	(100)[5]
1966	1,135	3,405	230	190	205	116	1,570	3,711
	(72.3)	(91.8)	(14.6)	(5.1)	(13.1)	(3.1)	(100)	(100)
1967	1,144	3,733	225	178	207	119	1,576	4,030
	(72.6)	(92.6)	(14.3)	(4.4)	(13.1)	(3.0)	(100)	(100)
1968	1,222	4,255	248	234	235	128	1,705	4,617
	(71.7)	(92.2)	(14.5)	(5.1)	(13.8)	(2.8)	(100)	(100)
1969	1,273	4,769	276	295	257	147	1,806	5,211
	(70.5)	(91.5)	(15.3)	(5.7)	(14.2)	(2.8)	(100)	(100)
1970	1,406	5,721	319	325	245	142	1,970	6,188
	(71.4)	(92.4)	(16.2)	(5.3)	(12.4)	(2.3)	(100)	(100)
1971	1,448	6,074	304	307	255	157	2,007	6,538
	(72.1)	(92.9)	(15.2)	(4.7)	(12.7)	(2.4)	(100)	(100)
1972	1,547	6,202	341	343	229	161	2,117	6,706
	(73.1)	(92.5)	(16.1)	(5.1)	(10.8)	(2.4)	(100)	(100)
1973	1,618	7,075	349	550	225	185	2,192	7,810
	(73.8)	(90.6)	(15.9)	(7.0)	(10.3)	(2.4)	(100)	(100)
1974	1,658	8,295	368	744	263	268	2,289	9,307
	(72.4)	(89.1)	(16.1)	(8.0)	(11.5)	(2.9)	(100)	(100)
1975	1,699	9,324	373	943	243	259	2,315	10,526
	(73.4)	(88.6)	(16.1)	(8.9)	(10.5)	(2.5)	(100)	(100)
1976	1,727	10,082	352	1,054	247	355	2,326	11,491
	(74.3)	(87.7)	(15.1)	(9.2)	(10.6)	(3.1)	(100)	(100)
1977	1,771	11,793	386	1,153	283	563	2,440	13,509
	(72.6)	(87.3)	(15.8)	(8.5)	(11.6)	(4.2)	(100)	(100)
1978	1,788	14,233	370	1,271	330	918	2,488	16,422
	(71.9)	(86.7)	(14.9)	(7.7)	(13.2)	(5.6)	(100)	(100)
1979	1,970	17,801	351	1,435	344	750	2,665	19,986
	(73.9)	(89.1)	(13.2)	(7.2)	(12.9)	(3.7)	(100)	(100)
1980	2,113	21,086	409	3,644	422	1,123	2,944	25,853
	(71.8)	(81.6)	(13.9)	(14.1)	(14.3)	(4.3)	(100)	(100)
1981	2,470	29,112	456	3,053	489	1,682	3,415	33,847
	(72.3)	(86.0)	(13.4)	(9.0)	(14.3)	(5.0)	(100)	(100)
1982	2,653	31,439	455	2,315	403	1,804	3,571	35,558
	(74.3)	(88.4)	(12.7)	(6.5)	(13.0)	(5.1)	(100)	(100)
1983	2,796	33,057	442	2,526	485	2,210	3,723	37,793
	(75.1)	(87.5)	(11.9)	(6.7)	(13.0)	(5.8)	(100)	(100)
1984	2,909	36,178	450	5,470	490	2,471	3,857	44,119
	(75.4)	(82.0)	(11.7)	(12.4)	(12.9)	(5.6)	(100)	(100)
1985	2,922	41,690	433	5,656	477	2,847	3,832	50,193
	(76.3)	(83.0)	(11.3)	(11.3)	(12.4)	(5.7)	(100)	(100)
1986	2,834	44,693	381	5,564	405	2,916	3,620	53,173
	(78.3)	(84.1)	(10.5)	(10.5)	(11.2)	(5.5)	(100)	(100)

1. Parent owns majority of shares carrying the right to elect a majority of the board of directors. (The data includes some foreign concerns controlled y unincorporates Canadian residents.) These are referred to as subsidiaries in the data source.
2. Parents own at least 10% (but less than 50 per cent) of the voting rights or is controlled by the same shareholders. These are referred to as affiliates in the data source.
3. Miscelleneous investments
4. Current Canadian dollars
5. Figures in parenthesis are row percentages for No. and $millions.

Sources: Statistics Canada. Canada's International Investment Position, Cat No. 67-202, various issues

TABLE 11

THE GEOGRAPHIC DESTINATION OF CANADIAN OUTWARD FDI, SELECTED YEARS, 1970-1986

Geographic Area	Proportion of Book Value of Long Term Investment Accounted for by Each Area			
	1970	1975	1980	1986
	(PER CENT)			
Grouping 1				
U.S.	52.5	53.2	63.4	71.2
U.K.	9.5	9.5	9.4	7.9
EEC[1]	4.9	6.0	5.1	4.7[2]
Other	33.1	31.3	22.1	16.2
Total	100	100	100	100
Grouping 2				
North America	60.7	61.9	70.6	74.9
South and Central America	13.3	11.6	4.0	3.2
Europe	17.4	17.7	17.0	15.5
Africa	2.2	1.5	1.1	0.8
Asia	2.2	3.0	4.4	3.6
Australia	4.0	4.1	2.6	1.8
Other	0.3	0.3	0.3	0.3
Total	100	100	100	100
Grouping 3				
Developed Countries	75.5	76.7	83.4	88.8
Developing Countries	24.5	23.3	16.6	11.2
Total	100	100	100	100

1. Excluding U.K. Note membership of E.E.C. increases through time.
2. Data not published for 1986, so 1985 percentage used instead.
3. Includes Caribbean.

Source: Statistics Canada (1975, Table 4, p.92; 1979, Table 4, p.52; 1986, Table 4, pp. 34-35; 1989, Table 4, pp. 38-39).

TABLE 12

THE INDUSTRY DESTINATION OF CANADIAN OUTWARD FDI, SELECTED YEARS, 1970-1986

Industry	Proportion of Book Value of Long Term Investment Accounted for by Each Industry			
	1970	1975	1980	1986
	(PER CENT)			
Petroleum and Natural Gas	8.0	13.5	21.4	13.5
Manufacturing				
Beverages	15.2	12.0	7.8	7.1
Non-ferrous Metals	13.5	14.6	15.5	15.2
Wood and Paper Products	7.8	8.8	7.8	10.0
Iron and Products	9.6	10.0	4.9	5.0
Chemical and Allied Products[1]	1.8	1.9	2.6	9.3
Other Manufacturing	4.0	2.6	3.4	3.1
All Manufacturing	51.8	49.8	42.1	49.8
Mining and Smelting	6.1	8.7	10.3	6.0
Utilities				
Railways	5.3	3.8	2.4	1.4
Other Utilities	14.5	10.0	3.2	1.3
All Utilities	19.8	13.9	5.6	2.6
Merchandising	4.5	4.5	4.2	7.1
Financial	6.8	7.1	14.1	15.1
Other	3.0	2.5	2.3	5.9
Total	100	100	100	100

1. Includes real estate.

Source: Statistics Canada (1975, Table 3, pp. 88-91; 1979, Table 3, pp. 48-51; 1986, Table 3, pp. 30-33; and 1989, Table 3, pp. 36-37).

TABLE 13

THE INDUSTRY OF ORIGIN AND DESTINATION OF CANADIAN OUTWARD FDI, 1986

		INDUSTRY OF ORIGIN						
		PETROLEUM AND NATURAL GAS	MANUFACT-URING	MINING	UTILITIES	MERCHAND-ISING	FINANCIAL	OTHER
		DISTRIBUTION OF BOOK VALUE OF FDI BY INDUSTRY OF DESTINATION, FOR PARENTS CLASSIFIED TO EACH INDUSTRY OF ORIGIN (PER CENT)						
I N D U S T R Y	PETROLEUM AND NATURAL GAS	91.42	0.29	13.08	3.39	0.00	0.91	0.72
O F	MANUFACT-URING	3.45	86.93	40.16	11.15	2.36	7.68	1.57
	MINING	2.33	1.18	39.53	0.00	0.00	0.28	0.53
D E S T I N A T I O N	UTILITIES	0.00	0.09	0.07	78.05	0.00	0.45	0.46
	MERCHAND-ISING	0.15	4.14	5.53	0.00	94.08	4.09	0.05
	FINANCIAL	1.81	5.20	0.96	4.64	3.07	85.73	11.45
	OTHER	0.83	2.18	0.67	2.77	0.48	0.86	85.23
	TOTAL	100	100	100	100	100	100	100

Source: Business and Labour Markets Analysis, Statistics Canada

TABLE 14

INWARD AND OUTWARD CANADIAN FDI, SELECTED YEARS, 1970-1986

Industry	Proportion of Book Value of Long Term Investment Accounted for by each Industry							
	1970		1975		1980		1986	
	INWARD	OUTWARD	INWARD	OUTWARD	INWARD	OUTWARD	INWARD	OUTWARD
				(PER CENT)				
Petroleum and Natural Gas	27.3	8.0	24.0	13.5	27.3	21.4	20.5	13.5
Manufacturing								
Non-ferrous Metals	13.2	13.5	4.5	14.6	3.8	15.5	4.5	15.2
Wood and Paper Products	6.5	7.8	7.1	8.8	6.5	7.8	4.5	10.0
Iron and Products	13.2	9.6	13.0	10.0	13.2	4.9	16.0	5.0
Chemical and Allied Products	7.5	1.8	6.5	1.9	7.5	2.6	7.1	9.3
Other Manufacturing[1]	9.3	19.2	9.7	14.6	9.3	11.2	12.5	10.2
All Manufacturing	40.2	51.8	40.9	49.8	40.2	42.1	44.7	49.8
Mining and Smelting	7.5	6.1	10.9	8.7	7.5	10.3	4.5	6.0
Utilities	0.9	19.8	1.5	13.9	0.9	5.6	0.9	2.6
Merchandising	7.6	4.5	6.7	4.5	7.6	4.2	7.9	7.1
Financial	12.7	6.8	12.3	7.1	12.7	14.1	17.3	15.1
Other[2]	3.8	3.0	3.7	2.5	3.8	2.3	4.2	5.9
Total	100	100	100	100	100	100	100	100
Dissimilarity Index[3]	35.1		29.0		23.9		23.3	

1. For inward, "other" combines vegetable products, animal products, non-metallic minerals, textiles and other manufacturing all of which are listed separately in the data source. For outward, beverages and other manufacturing are combined.
2. includes real estate.
3. It is defined as half of the sum of the absolute percentage point difference for each industry's share of inward and outward FDI for each the years 1970, 1975, 1980 and 1986.

Source: Table 12 and Statistics Canada (1975, Table 16, pp. 118-119; 1979, Table 23, pp. 82-83; 1986, Table 18, pp. 54-57; and 1990, Table 10, pp. 49-52).

TABLE A-1

AFFILIATE EXCLUSION CRITERIA FROM 1986 BP-59 FILE

Sector	Reason for Exclusions					
	Parent Not classified to an Industry in Canada		Affiliates with Negative Book Value of FDI		Affiliates with Zero Book Value of FDI	
	No.	BV	No.	BV	No.	BV
		($000's)		($000's)		($000's)
Petroleum and Natural Gas	..	..	45	-274,330	27	0
Manufacturing	..	..	68	-1,006,662	50	0
Mining	..	..	18	-105,657	22	0
Utilities	..	..	4	-39,479	6	0
Merchandising	..	..	7	-31,772	12	0
Financial	..	..	20	-976,545	19	0
Other	..	..	29	-47,568	16	0
No. Activity in Canada	3	...	..	..	..	..
Total	3 (9)	...	191 (265)	-2,482,013	152 (605)	0

No= number of parents with at least one affiliate excluded classified to each category. The number in parenthesis refers to the total number of affiliates excluded classified to each category.
BV= book value of excluded affiliates classified to each category

Source: Business and Labour Market Analysis, Statistics Canada.

TABLE A-2

THE IMPORTANCE OF MINORITY OWNERSHIP IN ACCOUNTING FOR THE BOOK VALUE OF CANADIAN FDI, BY INDUSTRY AND REGION, 1986

PANEL A: BY REGION OF FDI INVESTMENT

	USA	UK	ECC	OECD (EXCEPT ECC)	JAPAN	OTHER	TOTAL
	(PER CENT OF FDI IN REGION ACCOUNTED FOR BY MINORITY OWNERSHIP)						
MINORITY OWNERSHIP	10.44	5.63	7.34	12.59	39.21	7.35	9.62

PANEL B: BY SECTOR OF FDI INVESTMENT

| | PETROLEUM AND NATURAL GAS | (PER CENT OF FDI IN SECTOR ACCOUNTED FOR BY MINORITY OWNERSHIP) | | | | | | |
		MANUFACT-URING	MINING	UTILITIES	MERCHAND-DISING	FINANCIAL	OTHER	TOTAL
MINORITY OWNERSHIP	2.01	15.91	13.05	3.39	1.59	5.39	4.52	9.62

PANEL C: FDI IN US, BY SECTOR OF INVESTMENT

| | PETROLEUM AND NATURAL GAS | (PER CENT OF FDI IN SECTOR ACCOUNTED FOR BY MINORITY OWNERSHIP) | | | | | | |
		MANUFACT-URING	MINING	UTILITIES	MERCHAND-DISING	FINANCIAL	OTHER	TOTAL
MINORITY OWNERSHIP	1.26	19.67	9.61	...	...	2.14	3.41	10.44

PANEL D: FDI IN ALL COUNTRIES EXCEPT THE U.S., BY SECTOR OF INVESTMENT

| | PETROLEUM AND NATURAL GAS | (PER CENT OF FDI IN SECTOR ACCOUNTED FOR BY MINORITY OWNERSHIP) | | | | | | |
		MANUFACT-URING	MINING	UTILITIES	MERCHAND-DISING	FINANCIAL	OTHER	TOTAL
MINORITY OWNERSHIP	3.49	6.21	16.31	...	...	9.95	18.70	7.88

Source: Business and Labour Markets Analysis, Statistics Canada.

TABLE A-3

DETAILED INDUSTRY CLASSIFICATION FOR STUDYING ORIGIN AND DESTINATION OF FDI

PETROLEUM AND NATURAL GAS
   01. Refining
   02. Extracting
   03. Transportation by pipelines and shipping
   04. Merchandising
   06. Drilling (after 1971)

MANUFACTURING
   10. Vegetable Products (excl. beverages)
   11. Beverages
   12. Animal Products
   13. Textiles
   14. Wood and Paper Products
   15. Iron and its Products
   16. Non-ferrous Metals (incl. electrical apparatus)
   17. Non-metallic Minerals
   18. Chemicals and Allied Products
   19. Miscellaneous

MINING
   20.

UTILITIES
   30.

MERCHANDISING
   40.

FINANCIAL
   50. (All others except Real Estate)
   56. Real Estate

OTHER
   60.

FIGURE 1

THE SIZE DISTRIBUTION OF OUTWARD FDI, PARENT AND AFFILIATE: A SCHEMATIC OVERVIEW[1]

		PARENT	
		CONCENTRATED	UNCONCENTRATED
AFFILIATE	CONCENTRATED	CONSISTENT	INCONSISTENT
	UNCONCENTRATED	CONSISTENT	CONSISTENT

1. The size distribution is measured by the proportion of FDI controlled by a small number of leading concerns. When this proportion is high, the size distribution is concentrated; when low, unconcentrated. The two by two matrix details whether the size distribution of parents and affiliates are consistent with one another or not.

FIGURE 2

OWNERSHIP AND CONTROL: PARENT AND AFFILIATE RELATIONSHIPS
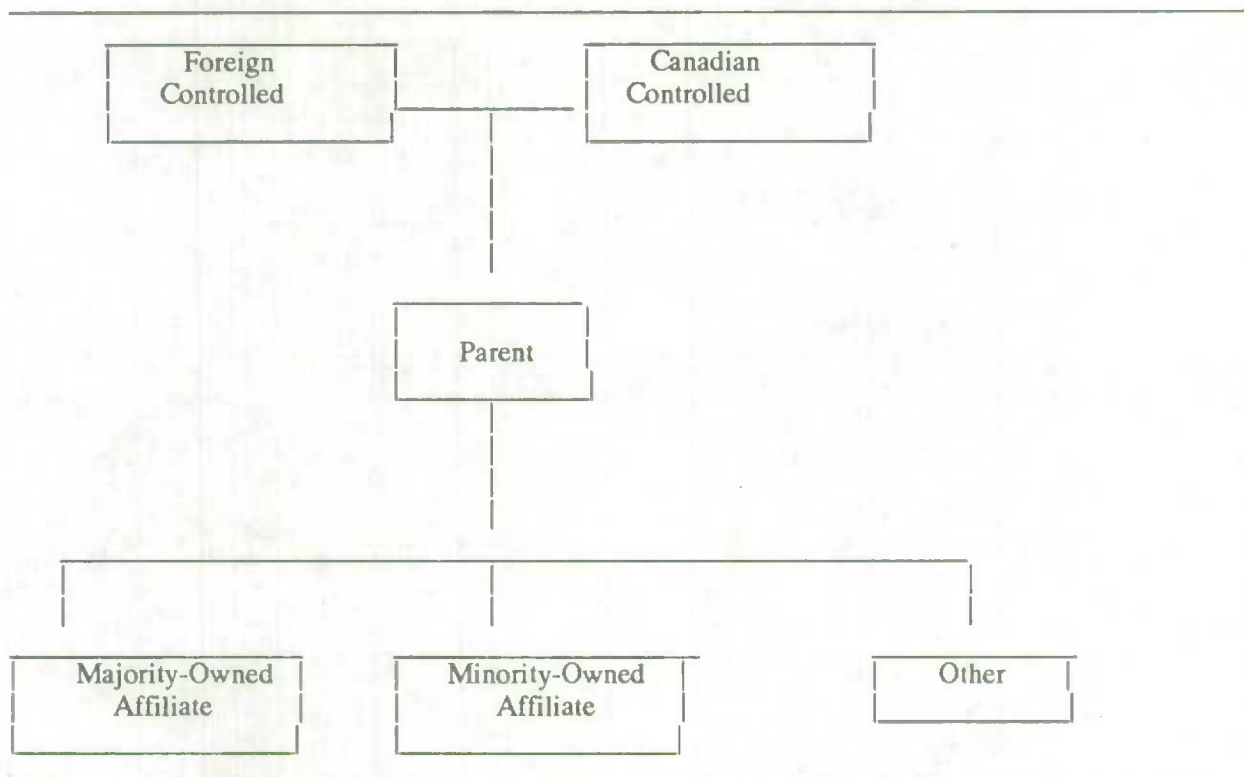
Graph 1: Growth of Book Value of Long Term Outward FDI, Parents and Affiliates, Selected Years, 1970-1986

Legend:
- ◇ Book Value of FDI
- + Number of Affiliates
- ▣ Number of Parents

1970 = 100

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