

# The Canadian Experience with the Investment Development Path

Michael J. Twomey  
Department of Social Sciences  
University of Michigan, Dearborn USA 48128-1491  
[mtwomey@umd.umich.edu](mailto:mtwomey@umd.umich.edu)  
313-593-5176

This paper will investigate Canada's twentieth century experience with inward and outward foreign direct investment (FDI), utilizing as a framework the model known as the Investment Development Path (IDP). After a brief description of the IDP, we move to an analysis of the Canadian data. Comparisons are then drawn with Australia and other countries. We end with several evaluative comments, both on the theoretical model itself, and on certain policy issues relating to foreign investment.

The central idea of the IDP is that over time, a country's economy will evolve from a position of net recipient of FDI to net exporter of FDI. John Dunning, one of today's leading experts on foreign direct investment, introduced this idea over two decades ago.<sup>1</sup> Important empirical contributions to the IDP literature were presented in the doctoral thesis of Dunning's student, published as Narula (1996), and in their edited volume—Dunning and Narula (1996). The latter, it turns out, did not contain a case study of Canada, which is part of the motivation of this paper. We should note that our interest is direct investment, which excludes portfolio investment.

## The IDP and the OLI

The IDP is framed by the OLI variables which Dunning's "eclectic model" uses to explain FDI: ownership advantages of the investing firm (copyright, trademark, or other technological advantage, increasing returns to scale of some management process), locational attractions of the investment site (availability of natural resources or inexpensive labor, tariffs or other governmental incentives for local production); and a perceived benefit from internalising<sup>2</sup> the overseas production, as opposed to either exporting from home, or co-production such as via licensing or joint ventures.<sup>3</sup> The basic driving force in the description of the IDP in Narula (1996) is changes in the relative levels of organizational advantages. To the extent that the IDP is

---

<sup>1</sup> Dunning (1981). See also the discussion of Buckley ( )

<sup>2</sup> A less cursory review of the evolution of this paradigm would reflect the dominance of the internalisation consideration, in the opinion of several authors, as discussed for example by Rugman (1980). Similarly, the origin of the organizational advantages comes, via the work of Hymer, from the industrial organization perspective of imperfect markets, leading to oligopolistic profits, barriers to entry, and so on.

<sup>3</sup> Dunning's presentation of this model has evolved over time, but the model has not yet succumbed to mathematization such as Samuelson did to the Heckscher Ohlin model. Indeed, given its plausibility, one could argue that the OLI model needs empirical refutation *à la* Leontieff in order to gain wider attention in the profession.

a useful heuristic device, it should provide at least partial explanations of the growth or decline of FDI, that hopefully will lead to fruitful policy discussions. Of interest to this audience is the attempt to stretch from a micro to a macro analysis.

In contrast to the standard approach of international trade theory, the theoretical models of FDI have not been oriented towards analyses of the impact of FDI on national welfare. In part this is undoubtedly due to the relatively young age of the sub-discipline. One might argue that although FDI theories originate from cross country comparisons of industries, their emphasis on sectoral or firm-specific differences would lead to a downplaying of economy-wide predictions on distributional impacts of allowing or prohibiting FDI. It could also be argued that models based on market imperfections may well be less amenable to such an approach.<sup>4</sup> Nevertheless, intuition suggests that the market based analysis of the OLI literature on FDI will lead toward several market friendly conclusions. For example, FDI which results from organizational advantages such as trade-marks, technology, or increasing returns to scale would improve efficiency and welfare. A similar story happens in cases where FDI results from a location's attraction of plentiful raw materials. However, a different situation would arise where FDI results from market seeking actions wherein firms must produce locally in a market protected by tariffs—certainly an important factor in Canadian history. One might presume that a market based theoretical analysis of tariff-jumping FDI would describe these tariffs as essentially harmful to national welfare, while the resulting FDI reduced some but not all of the resulting inefficiency.<sup>5</sup> Similarly, FDI enticed by government tax breaks or subsidies would not improve welfare. It goes without saying that allowing dynamic considerations such as endogenous technological growth would complicate such models to the point of eliminating any clear welfare prediction of FDI. This would be the story for strategic motives for FDI. Trade theory also predicts that free trade will affect income distribution—the famous Stolper Samuelson theory. While textbook treatments of FDI provide a parallel analysis, one senses that other factors of the OLI model make an economy-wide income distribution consideration less important.

This theoretical ambivalence about the welfare impacts of FDI is accentuated in discussions about historical or cyclical trends, such as the IDP. For example, it is quite common to see commentators put a positive interpretation on the growth of a country's net outward FDI, and a negative interpretation on growing inward FDI. In some contexts, this must surely be read as a neo-mercantilist position. However, such an attitude could be explained as reflecting an implicit belief that the shifting net position of FDI results from changes in the country's organizational advantages, and thus the growth of net outward FDI reflects technological progress and is beneficial. Recent policy discussion has focused on several drawbacks to that position: the technological progress may well have non-negligible economy-wide costs, such as national R&D

---

<sup>4</sup> See the work of Markusen and Venables (1998) and the papers from the FDI network of the CEPR at <<http://www.cepr.org/research/networks/fdimc/Papers.htm>>.

<sup>5</sup> One version of this argument is that of tariffs and immiserizing growth—Brecher and Diaz Alejandro ().

programs, some inward FDI is motivated by strategic asset seeking, and the impact of either inward or outward FDI on the investing firms' R&D is not clear (McFetridge 1991). More generally, the growth of OFDI might reflect changing locational advantages—in the Canadian case the issues of allegedly high domestic tax rates and local regulations are frequently mentioned. In these situations, the theoretical presumption would be that growing FDI accompanies a worsening of national welfare. The converse situation occurs when commentators exult at growing inward FDI, because it is presumed to reflect greater openness on the part of the policy-makers, as well as more confidence in the country by the external investors. Evidently, growth of IFDI might also represent declines in organizational advantages, increased government subsidies, etc., leading to a worsening of national welfare, as discussed above.

### **Stages in the IDP**

Narula and Dunning provide Graphs with schematic descriptions of the phases of the evolution of the IDP. In Graph 1a we see the stages that Narula (1996) used, and which formed the basis of much of his work. The first stage depicts growing importance of FDI, while stage two would be of interest as it indicates a decline in that growth. The implicit explanation is the growth of domestic production, or the exhaustion of new attractions for foreign firms. The logic of cyclical models is that there will be a third stage characterized by an absolute decline in net FDI, for similar reasons. Presumably many industrializing countries might find themselves either in stage two or stage three, and a finding that a country had turned the corner, so to speak, would be an encouragement that further progress is imminent. The fourth stage is one of being a net exporter of direct investment. For the fifth and final stage, it is asserted that countries that are highly advanced in terms of technology and living standards will be marginal exporters or importers of capital, which is labeled stage 5 in Graph 1a. The next Graph 1b, also from Narula (1996), illustrates the expected influence of raw materials; the idea is that resource-rich countries will attract more investment, and hence their net investment position will be more negative, and stay negative for a longer period of time. Finally, Graph 1c illustrates the view from Dunning and Narula (1996), in which the heightened attractiveness of investing in industrial countries has shortened the third stage, and lessened the magnitude of the net inward investment position. The standard example is the so-called strategic asset seeking investment, where firms invest in countries that are more technologically (or entrepreneurially) sophisticated, in the hopes that some of those advantages will rub off.

It should be noted that the variable on the horizontal axis of these graphs is GNP—or GNP/capita—as a proxy for some broad concept of development. While this is appropriate for cross country studies, such as most of the empirical work in Narula (1996), it will be shown below that the use of time on the horizontal axis is more useful. There will be a discussion below of the appropriate mode of specifying the FDI variable to put on the vertical axis.

Like the product cycle from which it was developed, the IDP is an essentially dynamic model, without the pretense of analytical rigor associated with its intellectual cousin, the Heckscher Ohlin Samuelson theory. Dunning's original article stated "...changes in the outward or inward investment position of a particular country can be explained in terms of changes in the ownership

and internalisation advantages of its enterprises, relative to those of other nationalities and/or changes in its location specific endowments relative to those of other countries...” (1981, 31). It would appear that the concept of IDP has undergone considerable revision since then. Thus in their jointly edited 1996 book Dunning and Narula state “... the shape and position of the IDP probably varies much more between individual countries than it was originally thought,” which they attribute to the influence of “...the economic structure of countries, and the development strategies and macro-organizational policies of governments.” In addition, “...the underlying nature of the IDP for all countries appears to be undergoing some change, due to a series of events of the global economy...” (1996, 11-12). In the summary chapter of that book, these authors highlight the important role of the influence on the IDP of governmental policies. (1996, 425). Other findings are the growing importance of strategic asset seeking FDI, and the growing gap between least developed countries and several newly industrializing countries, with respect to FDI as well as GDP. In their newer working papers (e.g. Narula and Dunning 1997), these authors analyze the role of government policies in augmenting location advantages, which will encourage both inward and outward FDI in stage 5 economies. As a broad summary, we can describe these authors as changing their a priori expectations of the relative importance of the factors highlighted by their model, without fundamentally altering the structure of the model itself.

### **The Canadian Data**

Our major set of data utilizes the official *Canada's international investment position* (or *CIIP*), for most series in which the first year is 1926. For earlier years, the *Historical Statistics of Canada* reports the respected estimates of Viner and Knox, to which we will add the pre-World War I estimates of inward FDI from Patterson and Lewis. The Canadian authorities also produced a set of data on FDI, referred to as Calura (Canadian Labor Union r Act), which measured foreign involvement, distinguishing ownership from control. The 1992 retrospective issue of the *CIIP* published both data sets, and there is good correspondence in terms of total or sectoral FDI. Graph 2 shows estimates of per capita total foreign investment and FDI for the twentieth century, deflated by a price index for GDP in Canada. Several items are noteworthy. First of all, the country had a net debtor position throughout the century, if we include portfolio as well as direct investment. Secondly, except for a brief period after mid-century, inward FDI always accounted for less than half of Canada's external liabilities, as portfolio investments have always been sizeable. However, because our interest is direct investment, we will not pursue this issue. Graph 2 indicates that, with respect to foreign direct investment, the country's net position has recently been reversed, and now the accumulated amount of FDI by Canadian firms is larger than that inside the country. There is, thus, a *prima facie* case supportive of the IDP. Graph 3a repeats this, without the FI data, which by altering the scale on the vertical axis allows us to visualize more clearly the various phases of the country's IDP.

To illustrate the preferability of using time on the horizontal axis, Graph 3b presents these data with GDP/capita on the horizontal axis. It should be clear that the decline in real GDP during the 1930s Depression considerably reduces the utility of having that variable on the horizontal axis, in an exercise focusing on one country's chronological experience. Another point is the changing

incidence of FDI in the country's overall international position, either inward or outward. A recent article (Dunning and Dilyard 1999) has suggested that FDI and portfolio investment move in broadly parallel paths, especially since the early 1980s. Graph 3c shows that although this is basically accurate for Canada, it does not hold for the rest of the century, when the behavior of the two variables diverged considerably.

Let us now turn to the issue of the timing of the IDP cycle in Canada. To a certain extent, of course, this will depend on the measure utilized. The above data reported stocks of real FDI per person. Evidently, for the position in net stocks to change, there had to have been a prior change in the net flow position, one which would have been sustained over several years—an non-trivial issue for these 'flow' series which are inherently unstable. Thus the shifts between stages two, three and four will be earlier if flows are referenced, instead of stocks, as will be indicated below.

A more subtle consideration relates to the possibilities of different deflators of FDI; population, GDP (or GNP) and the capital stock (K). One attraction of the study of Canada is the quality of the country's data. Respectable estimates of Canada's GDP are available from the last few decades of the nineteenth century, which join the official data in 1926. Official capital stock estimates begin in 1926. Two extensions of this data are used in this paper. The series on capital stocks were extrapolated backwards by this author, as described in a footnote to the Graphs. In addition, an attempt was made to account for the distortionary effects of inflation and depreciation by using a modification of the permanent inventory model on the FDI data.

Graph 4 presents series on inward and outward FDI deflated by GDP. The first item of note is how the ratio of the nominal values of IFDI to GDP grows dramatically during the early 1930s. This is an exaggeration due to the unusually low level of nominal income during the depression.<sup>6</sup> Use of this author's estimated real values of IFDI, together with official estimates of real GDP, eliminates most of that early 1930s increase, while also accentuating the subsequent decline until the post WWII era. According to the official data beginning in 1926, outward direct investment was not large from 1926 until the 1970s, nor was it according to Viner's estimates for the beginning of the twentieth century. Moreover, because the adjustments for inflation do not noticeable change the OFDI/GDP line, the estimates of the ratio of the real variables are not shown.

What, then, does the Graph tell us about the shape and the timing of the phases of the IDP in Canada? Note that the dominance during the 1960s of the net IFDI position, so marked in Graph 3a (and Graph 2), almost disappears when IFDI is deflated by GDP. The levels of IFDI/GDP for 1930 and 1939 were actually higher than those of the 1960s. It was also the case that in 1900 the estimated value of FDI/GDP was at a cyclical peak, somewhat higher than the levels more confidently observed afterwards, especially in the 1960s. Basically, when foreign direct investment is deflated by GDP, Canada appears to have had three cyclical peaks during the twentieth century—in 1900, around 1929, and in the early 1960s. Indeed, one might well prefer to de-emphasize the cyclical aspect of the IDP in Canada, and speak of the level of IFDI/GDP

---

<sup>6</sup> More precisely, the sharp price deflation is reflected in the GNP data, but not that of FDI. In addition, there was a significant decline of real GDP during that period.

(using our real values) fluctuating around a level of 25-30 percent during the entire century, with the exception of the unusually severe period of the 1930s depression and World War II. In this reading, the IDP stages one through three span more than the seventy five years covered by official statistics, and even more than a century, using our early estimates, while IFDI/GDP maintains a plateau during most of that period.

The relative decline in IFDI at the beginning of the century merits separate attention. Let us first note that our measure of IFDI omits all railroads, and this sector alone accounted for forty percent of British capital in Canada in 1914.<sup>7</sup> Of course total British investment into Canada grew considerably during the years up to WWI, but our focus on direct investment excludes the dynamic sectors of that investment. Using the series in Paterson (1976), the ratio of British FDI to Canadian GDP grows steadily during the last quarter of that century, peaking at seventeen percent 1899. Alternative sources of series on British FDI, using the data on capital raised in Britain for private firms (outside of railroads) in Davis and Gallman (1994) and Stone (1999), also result in a peak in IFDI/GDP at the start of the century.<sup>8</sup> With regard to FDI from the US, the first year for our series is 1897 (when US FDI/Canadian GDP was 21 percent), so we cannot track backwards into the nineteenth century the trend in the value of FDI from Canada's major investor. Marshall et al. (1936) provide ample qualitative evidence of US FDI in Canada before 1900, with branch plants having been established as early as the 1870s, even before the national tariff. Along parallel lines, Taylor (1975 II, 73ff) speaks of the period after 1896 as involving a new wave of US investment, following on changes in the US economy.

A similar story of the relative size of FDI during the twentieth century emerges with Graph 5's calculations of FDI compared to the capital stock (K). This Graph suggests that foreigners never owned more than ten percent of Canada's total gross fixed capital during the twentieth century. The proposition that the turn of the century level of IFDI/K was also a cyclical peak certainly depends on the credibility of our measure of the capital stock, which is discussed in more detail

---

<sup>7</sup> After 1926, the official data report that FDI in Canadian railroads was small. It would be very difficult to sort out which railroad investments before WWI involved control, and in any event, Paterson's data explicitly excludes this sector for this period. There was not much US investment in Canadian railroads, according to Lewis, and this was easily subtracted from her totals.

<sup>8</sup> These comparisons are imperfect. Paterson's estimates were generated after a careful examination of information at the level of individual firms, using a variety of Canadian and UK sources, while the rather larger estimates of Stone and Davis-Gallman are based on listings of new issues in Britain—including bonds and equity, and therefore potentially including non-controlling or portfolio investments, and make no account of re-sales or liquidations, nor of investments financed individually. The ratios of Stone's or Davis-Gallman's subtotals to Canadian GDP decline through 1907, and then recover, resulting in a higher peak in 1913/14 than they had before 1900, whereas by 1914 the ratio based on Paterson's data has fallen by half. Paterson's results are used here, because they are specifically limited to FDI, and they appear to incorporate re-sales and liquidation.

in the appendix. The major contrasts between deflating FDI by GDP and by K are the sensitivity of the relative sizes of the increases during the late 1920s and the late 1960s, and the stronger hint of an end of the twentieth century relative decline in IFDI, when it is compared to the capital stock. In addition, these results are essentially maintained when alternative specifications of capital are used, such as gross or net capital, and with or without residences, these other data are not graphed. Naturally, use of these other variables leads to changes in the levels of foreign ownership. For example, limiting ourselves to net, non-residential capital, the maximum foreign ownership ratio is still under twenty percent.

It may be helpful to display the data for net FDI for the three measures, corresponding to the different denominators; population, GDP and the capital stock (K). This is presented in Graph 6, calculated in terms of outward FDI, to correspond to the presentation of Narula, in Graphs 1a and 1b above. A close look at this Graph reveals the differences between the path of net OFDI/capita and the paths of both net OFDI/GDP and net OFDI/K. The lowest level of net OFDI/capita occurs during the late 1970s, and that trough is much lower than any previous decade. In contrast, for net OFDI/GDP and net OFDI/K, there are two or three waves of declines in OFDI; one as the twentieth century was beginning, one during the 1930s and 1940s, and the last starting as early as the late 1950s. These differences are not a function of inconsistencies in the data, but rather can be explained in terms of a set of arithmetical identities:  $FDI/K = FDI/GDP \div \text{capital output ratio}$ ;  $FDI/GDP = FDI/\text{capita} \div GDP/\text{capita}$ . The paths taken by either of the pairs of variables FDI/K and FDI/GDP, or FDI/GDP and FDI/capita, will be parallel only if the other variable in the corresponding identities is constant. In particular, the apparently larger post-WWII bulge in FDI/capita is reduced, compared to FDI/GDP, by the corresponding increase in GDP/capita in that period, which is why FDI/capita has only one peak, while the other variables have three. The choice of which indicator to prefer, FDI/capita or one of the other two variables, would depend on the question being asked.<sup>9</sup> Our preference is for the latter two.

The *CIIP* indicates that the change in flows of FDI, towards a positive net outflow of FDI, occurred in the latter part of the 1970s. This outflow has been maintained for essentially two decades, and now the country's net stock of outward FDI is also positive. Each of Graphs 2, 4, and 5 indicates that the contribution of increased outward FDI was greater than the relative decline of inward FDI. In addition, the increase in OFDI occurred after IFDI had stagnated. These are important results, to which we will return below.

One of the major reasons for generating estimates of IFDI relative to GDP or the capital stock is to use these ratios as proxies for the degree of foreign involvement in a country. In this regard, we are fortunate that a long time series exists for Canada reporting official, direct, estimates of

---

<sup>9</sup> Another way that the choice of denominator affects these comparisons is in the ranking of different countries by amounts of FDI. The data in Twomey (2000) places Canada third in IFDI/capita in 1914, out of a group of about 40 less developed countries, colonies, and regions of recent settlement. However, Canada places in the lower third in rankings by IFDI/GDP, because of its high level of GDP. By this reckoning based on a comparative perspective, Canada already had relatively low amounts of IFDI in 1914.

foreign ownership and control of the assets of non-financial enterprises; total and by sectors.<sup>10</sup> Graph 7 depicts the estimates for foreign control for the period 1926-1987. The average ratio for the country rises from seventeen percent in 1926 to thirty six percent in 1970, falling back to twenty four percent in 1992. Now, it is important to emphasize that the message from this data is quite different from what was seen above in Graph 5, in three ways. In the earlier Graph the overall level of FDI/K was about the same in 1930 and 1970, while in this Graph the latter year's level was double the earlier one. Secondly, the ownership ratios indicated by FDI/K were always less than ten percent, and the Calura data indicates ownership/control ratios of double that size. Finally and as a result of the first consideration, the absolute fluctuations of FDI/K were correspondingly much smaller than those of ownership or control in the Calura source.

Although different methodologies<sup>11</sup> relating to measuring FDI may contribute to these discrepancies, the dominant explanatory factor is the difference in measures of the capital stock. Table 1 provides further detail on these measurement and comparability issues. The overall question of the levels of the two graphs is easily explained. The denominator in Graph 5 is the gross value of all capital stock—residence and non-residence—which was four times the value of total capital utilized for that year in the Calura data. More important than the issue of levels is that of trends of the various aggregates. Graph 7 further indicates that the national total of foreign control is composed of disparate sectoral trends. In particular, foreign control increases in manufacturing, mining and petroleum, with the maximum levels typically being reached in the late-1960s, after which point it declines. During that same period, foreign control of utilities<sup>12</sup> and trade declines or is stagnant, at much lower levels than in the above mentioned sectors. Manufacturing, mining, and petroleum account only for one quarter of the non-residential capital

---

<sup>10</sup> That source also reports series of foreign ownership. The major differences between ownership and control arise from in railroad sector, and utilities in general, which had significant foreign ownership, but not control.

<sup>11</sup> Graph 7 uses the Calura data, which reports market valuation of corporate assets, both foreign and domestic owned/controlled. The FDI data in the previous graphs are based on total inflows (and reinvested profits), so that no allowance is made for partial domestic ownership—this leverage may change over time. Moreover, the capital stock figures are generated by the perpetual inventory method, which we saw did not correspond to market valuations. Not only are there differences in the methodology of valuation, the economy-wide measure of Graph 5 includes coverage of non-corporate firms, non-profits, and the government. The Calura data focuses on those sectors which have been attractive to FDI, thus omitting major growth areas and contributing to the different paths reported in Graphs 5 and 7. While the ratio in the Calura data of capital in manufacturing, mining, oil and natural gas to total capital rose over 1926-1980 from 35 percent to 50 percent, it stayed relatively constant at about 25 percent (excluding residences) in *FCFS*. A detail is that the Calura data used in this graph refers to *control*, which is distinct from *ownership*, although such differences were most important before the 1930s.

<sup>12</sup> Marr and Paterson (1980, 296) state that the post-1950 decline in foreign ownership of utilities was due to their nationalization in many provinces.

in Canada,<sup>13</sup> (and one fifth of the total capital including residences), while they account for more than three quarters of all IFDI. In contrast, note the low ratio of foreign control in the included private sector service activities in Graph 7. The difference between the foreign control in services and that in the “traded goods” sectors of the economy is so large that growth of the service sectors relative to the rest of the economy will naturally lead to a relative decline in the economy’s measured total foreign control.<sup>14</sup>

The estimates of IFDI according to the two sources are similar, while certainly not identical. Where substantial differences do exist is in the two sources’ estimates of total capital stocks, particularly the distribution across sectors. Note that the Calura data refers to market valuation, which tends to be closer to the calculated value of gross, rather than net capital. Beyond that, the ‘Other’ sector accounts for half of total capital in the Calura data, while that sector comprises three fourths of the total gross or net capital. That is the difference in the denominators referred to in the previous paragraph. The further detail on estimates of gross or net capital, and inclusion or not of residences, allows one to gauge the sensitivity of the above calculations to the chosen measure.

In juxtaposing this data we are not proposing a single best indicator of foreign ownership in Canada. For many purposes, the relevant analysis should be done on individual sectors, for which the data and the approach embodied in the Calura source is preferable. This would be the case for strategic analyses focusing on petroleum or high tech manufacturing industry. Moreover, inclusion of the residential sector clearly adds little to most analyses. Is there any use for an aggregate ratio for the entire economy? The appropriate level of aggregation is an old question in economics, which won’t get solved here. The IDP model clearly presumes a value to economy-wide measures. Moreover, the coverage of the Calura data evidently ignores certain high-tech service areas, suggesting that the broader measures have utility. It is, however, the case that the differences in foreign ownership by sectors leads us to downplay the finding mentioned earlier, of a century-long plateau in relative levels of IFDI.

Attention is also called to the different results in terms of timing of the IDP, from the Dunning/Narula Stage 2 to their Stage 3, according to these Graphs. When the indicator on the vertical axis is the stock of FDI per capita, the turning point occurs in the mid-1970s. However, with either FDI/GDP or FDI/K, the turning point is one or more decades earlier. The importance of the latter finding lies in its implication for our task of attempting to explain the shift. Basically, the earlier turning point occurs before the most obviously nationalistic policies, and

---

<sup>13</sup> Contrast Marr and Paterson (1980, 297), “It is obvious that when foreigners control such a large proportion of domestic industry their actions may affect real-capital formation profoundly.”

<sup>14</sup> Thus Globerman (1985, 187) “The degree of foreign ownership and control of economic activity in Canada is substantially higher than in any other industrialized country” may need revisiting.

therefore places more responsibility for the change in net OFDI on domestic entrepreneurs and tariff reduction than government restrictions.

Moreover, the decomposition of net FDI, using either FDI/GDP or FDI/K suggests the following sequence of reductions; a relative fall in IFDI starting in the late 1960s or early 1970s, followed by a rise in OFDI during the late 1970s and beyond. This also contrasts with the message using per capita measures, as IFDI/capita has barely declined, so that reliance on this indicator would place all the weight on OFDI for the shift from Stage 2 into Stage 3 in the IDP, which, we believe, is misleading. Furthermore, the differences in timing hints at the need for separate explanations for the changes in IFDI and OFDI.

Finally, a further suggestion from these graphs is that the fraction of foreign ownership of Canada's capital may indeed have been highest before the beginning of the twentieth century. As a description of a settler economy this might not surprise us, but it does clash with certain alarmist views of foreign control that proliferated in Canada in the 1960s and subsequently. It is important that this result is suggested by both indicators, FDI/GDP and FDI/K, as the capital stock estimates become rough approximations before WWI.

## **IFDI**

Britain and the United States have always been the most important investors in Canada. It is well known that Canada was Britain's second most important pre-World War I area of foreign investment, after the United States. Another familiar fact is the dominance of railroads in the sectoral distribution of British capital in Canada, as indeed in the U.S. Many are also aware that British direct investment in Canada, in areas outside of railroads, was a small fraction of total foreign investment, as was also the case for British investment in the United States, where railroads dominated even more. With particular regard to pre-WWI FDI into Canada, that from Britain was smaller than that from the United States. Paterson (1976, 49) calculates nominal British direct investment into Canada in 1914 at \$281 million—with paid-in capital at \$201 million, while Lewis (1938) cites estimates of U.S. FDI into Canada for that year which total \$550 million (again excluding railroads).

The period during and immediately after the Great War saw a great increase in U.S. FDI, while that from Britain basically stagnated. Thus, according to the earliest official data, the U.S. accounted for almost eighty percent of inward FDI in Canada in 1926. That ratio was maintained for about five decades, falling thereafter to a level of about sixty percent at the end of the century. Manufacturing was the major sector of growth of U.S. FDI. The dominance of U.S. over British investment in Canada has been a favorite example cited by those who believe that pre-WWI British entrepreneurs failed.

The dominance of manufacturing in the sectoral distribution of IFDI in Canada is illustrated in Table 2. The petroleum industry received considerable funds during the 1950s. That Table's data on direct investment in the financial sector also reveals an increase after about 1980. The relative decline of investment in the utilities sector after mid-century can also be noted.

What explains the evolution of IFDI in Canada? The dominance by U.S. investors, and the weakness of British investors may be important factors determining the geographical origin of IFDI, but they do not themselves explain the evolution of FDI into Canada. The literature emphasizes three factors; the tariff, direct government restrictions, and domestic entrepreneurial ability.

### **Government Policy**

Canada had already embarked on protectionist policies before the beginning of the twentieth century; the nationalist tariff of 1879 is usually cited as the definitive action. It is widely accepted that this resulted in the establishment of branches of US firms that otherwise might have exported their goods across the border. Naylor (1975 II, 70) provides this quote from a Canadian business group in 1891: “The market is reserved for Canadian manufacturers. The way for our Yankee friends to obtain a percentage of the Canadian trade is to establish their works in Canada.” Beyond this, two comments are in order. Tariff reductions under the GATT/WTO, and more recently under the Canada-U.S. Free trade agreement—extended under NAFTA, have removed most of that incentive, which should lead to a reduction of FDI in Canada. A further detail about protectionism is that one of the attractions for U.S. investors in Canada, even before World War I, was to use the country as an export platform for provisioning various parts of the British Empire.

The period after World War II witnessed an acceleration of direct investment by U.S. firms. As was indicated in Graph 2, this was the only period when FDI accounted for over half of total foreign investment. It will be recalled that this inflow was of such a magnitude that the Canadian monetary authorities felt compelled to allow their currency to float, leading the Canadian dollar to being worth more than one U.S. dollar during the 1950s. As described by LeDuc and Murray (1989), there subsequently arose policy initiatives to restrict foreign investment. Those authors document the shift in Canadian public opinion during the 1960s and 1970s, being careful to note that it is difficult to attribute causality between the economic changes and the evolution public opinion.<sup>15</sup> Moreover, any full explanation of the motives for these changes in economic policy would have to place them in their broader *zeitgeist*, a task that is beyond our means here. The key landmark in the new orientation was the 1973 Foreign Investment Review Act, which created an Agency to review proposed inward foreign investment projects. There was a clear mandate to restrict FDI. After not much more than a decade, the FIRA was replaced by the Investment Canada Act, whose mandate was nearly the opposite of the previous one, corresponding to Prime Minister Mulroney’s famous declaration, “Canada is open for business again.”

What was the impact of FIRA? At the time, most economists and others disposed towards *laissez faire* policies had been quite concerned about its restrictive effects. The majority of studies have since then taken the position that it had a smaller impact. The actual fraction of FDI applications that were rejected was not large, although other investors may have been discouraged from

---

<sup>15</sup> Those shifts in public opinion resisted the sharp pens of two of Canada’s outstanding expatriate economists in those pre-Nobel days, with Viner writing on *Canada and Its Giant Neighbour*, and H.G. Johnson describing *The Canadian Quandary*.

applying. In particular, Globerman and Shapiro (1999) argue that FIRA had a negligible effect on either inward or outward FDI.<sup>16</sup> One fact that supports that position, and of importance for our purposes, is that the acceleration of outward FDI from Canada was beginning then.

Although FIRA is the obvious candidate for a discussion of government policy hostile to inward FDI, it was by no means the only non-tariff governmental action affecting FDI. Another major landmark was the Auto Pact of 1965. Before World War I Canada had become one of the first countries to receive direct investment by the U.S. automobile manufacturing companies, and over many years their Canadian operations had grown and flourished. Under the Auto Pact, the major (U.S.) automobile manufacturers were allowed to continue cross-country trading virtually tariff free, in exchange for an agreement to maintain balanced trade in automobiles and components. On the one hand, this averted a growing nationalistic tide in Canada that was critical of the low level of Canadian-owned production in the sector, and advocated higher tariffs. At the same time, it committed the firms to continue to invest and produce in Canada, even if economies of scale and tariff reductions might have motivated consolidation of activities in the U.S. Although the Auto Pact was certainly not a complete victory for either free trade or for unrestricted foreign investment, at the time it was evaluated as providing a minimally compromised pathway towards strengthening those positions, particularly in terms of Canada's relations with its southern neighbor. With the more recent growth in Canada of the production of firms headquartered in Japan and other Asian countries, the Auto Pact has become somewhat obsolete, in political as much as economic terms.

Another area in which specific governmental controls were notable was petroleum. The "modern" period of petroleum began in Canada in the early 1950s, when the American company Exxon discovered oil in Alberta. The industry grew rapidly, with foreign control above seventy percent until the mid 1970s. Although not a member of OPEC, Canada of course benefitted from the price rises of the 1970s, as a net exporter of petroleum products. Petro-Canada was formed in 1976, as a national oil company that, as described by Fossum (1997), was to act as a catalyst for national development as well as a window on the petroleum industry, while not being a forerunner of nationalization of foreign-owned enterprises. The combination of high prices and nationalistic feelings eventually produced a New Energy Policy in 1980. However, lack of a clear mandate and rationale, together with changes in the international oil market, and shifts in domestic and international politics shifts, reversed that enthusiasm. The NEP expired with the election of the Conservatives in 1984, and the privatization of Petro-Canada began in 1990, with several stages of sales of stock-foreign ownership was limited to twenty five percent (Fossum 1997, 264).

At no time did Petro-Canada account for a large fraction of the industry. Fossum (1997, 157) reports the assets of Petro-Canada in 1987 as \$7 billion; the *CIIP* places all government

---

<sup>16</sup> This paper estimated equations of IFDI and OFDI for the years 1950-1995, where the effect of FIRA is inferred from a dummy variable for the period during which it was operational. This is evidently a crude measure; the paper contains references to other articles which attribute relatively small negative impacts to FIRA on IFDI.

investment in the petroleum and natural gas industry for that year at \$8 billion, while the total amount invested in the sector was \$75 billion. More generally, the total value of the sector's assets grew four times during the 1970s, while the part corresponding to foreign ownership doubled. Because it started off from a low amount, the rate of growth of domestic assets was much higher; more pertinent is that the value of assets controlled by foreigners grew \$C13 billion, while that controlled domestically grew \$20 billion, of which that controlled by the private sector was \$17 billion. For the period 1980-1987, the *CIIIP* indicates that FDI in the sector increased from \$22 to \$30 billion, while Canadian owned investments grew from \$23 to \$45 billion. From this brief survey we note a correspondence between the growing radicalization of the Canadian government's policy and the relative decline of foreign ownership and control, even if the lack of precise measures of government disincentives preclude hard conclusions as to the relative role of Canadian entrepreneurship versus government policy in the explanation of that decline.

## **OFDI**

The best introduction to analysis of Canadian OFDI is Globerman (1994). Another source, useful for its literature review as well as its focus on regional issues, is Meyer and Green (1996).

We saw above that Canada's OFDI became appreciable in the 1980s. The United States was the host for 53 % of Canadian OFDI in 1998, down somewhat from a peak in 1985, while Europe's share had risen to almost 20 %. At the end of the century about one third of that OFDI was in finance and insurance. The distribution of Canadian FDI in the U.S. was more diversified than that in other host countries. On the basis of sectoral data, Chow (1994) concludes that the dominant type of investment was horizontal. These investments are rather concentrated, with 93% of the assets held by 15% of the enterprises. Finally, about 20% of the OFDI was accounted for by enterprises controlled by non-residents, some of whom are in fact Canadians living elsewhere. This was down from a peak of 37% in 1969 (Chow, 1994).

Data on the sectoral evolution of Canadian OFDI are presented in Table 3. The major changes over the century were: the decline of OFDI in railways, the large but unstable share accounted for by energy and mining, and the end of century acceleration, dominated by what is classified as direct investment by finance and insurance companies. Rao et al. (1994, 67) state that the "increased outward orientation is pervasive across all major Canadian industries." Those authors present a list of the "push and pull factors" determining this growth which includes: an increased outward-orientation of Canadian firms; relatively faster growth of real aggregate demand in Canada *vis à vis* other countries; large investment-savings imbalances, changes in the relative profitability position of various locations, variations in exchange rates and unit labour costs; increased use of non-tariff barriers; and procedural protection in the United States and Europe 1992 (Rao et al. 1994, 73). Neither Chow nor Rao et al. attempt a prioritization of the factors leading to this growth, and obviously the necessary quantification for such an exercise would be difficult. Government policies are typically given precedence in the case studies of individual sectors.

The growth of overseas banking is treated by Darroch (1992) who mentions (p.153) “the relatively early international activities of the banks,” and “opportunities in international and domestic market environments fostered by Canadian public policy.” One result of the latter was a small number of relatively large banks, and a permissive regulatory environment that resulted in no failures during the 1930s Depression. Furthermore, “[w]hile Canadian bankers were encouraged by regulators to be international, US bankers were restricted.” (p. 175) The country’s banks were thus well positioned to participate in the international growth of “wholesale banking” in the 1960s and 1970s, especially in the context of the eurocurrency markets. Deregulation of the domestic financial markets in the 1980s is seen as helping the banks *vis à vis* other domestic financial institutions, in a context in which increased investment by foreign banks has not been overwhelming.

Mining and forestry are two natural resource based sectors in which Canada is a net outward investor. These are the areas where most commentators acknowledge the development of the organizational advantages of many Canadian firms in these sectors, along what we could call standard IDP lines. Note that overseas investment by the mining industry has risen in absolute amounts, even while it has fallen as a fraction of total OFDI. The petroleum sector, in contrast, is one in which the country is a net recipient of direct investment. Accompanying the significant growth of domestic ownership of this sector during the 1970s was an increase of its outward investment by about \$5 billion. It was noted in an earlier section that the period of growth of domestic investment in the petroleum sector was also one of diminished growth of foreign investment, suggesting a mixed evaluation of the standard IDP story dominated by entrepreneurial growth.

The manufacturing sector accounted for about half of reported OFDI during the twentieth century. The published data can be read as exaggerating the country’s relative abilities in manufacturing, due to the presence of processing activities in mining and wood processing. Another sub-sector in which there is clearly a Canadian advantage has been beverages—especially beer and liquors.<sup>17</sup>

A much earlier experience with outward investment by Canadians is the early twentieth century activities in public utilities, discussed in Armstrong and Nelles (1988), as well as Viner (1975, 89-94). The geographical area most affected was Latin America. As those authors point out, the Canadian contribution was essentially entrepreneurial; most of the capital was raised elsewhere. This case, which was important in the development of several countries, does not fit conveniently into our conceptual categorization of either FI and FDI. Moreover, these enterprises are one step away from being Free Standing Companies, because the funding comes from other than the directors’ home countries. The example becomes folkloric when note is taken of the amount of frauds, although a comparative perspective might reduce this image as well. Another aspect of

---

<sup>17</sup> A dominant firm in the latter sector was Seagram. During the writing of this paper that firm merged with a French firm. In the accompanying news coverage, this author was to learn that the attraction of Seagram was its entertainment holdings, and that the media treated the firm as being only nominally controlled from Canada.

Canadian overseas investments mentioned by Viner (1975) is the appreciable quantity of overseas (mostly US) securities purchased by Canadian banks and insurance companies. As noted earlier, some of the investments by banks involved what should be classified as direct investment.

### **ORGANIZATIONAL ADVANTAGES: TECHNOLOGICAL CHANGE**

Technological change is one of the major bases for organizational advantages of multinational firms. Thus we are led to ask to what extent, if any, the shift in Canada's net investment position can be attributed to improvements in her technological position. Recall from the earlier discussion of the timing of the shifts in Canada's economy from the Dunning/Narula Stage 2 to their Stage 3, that this occurred in the 1970s when using as our indicator the value of per capita FDI, but the shift happened in the beginning of the 1960s when measured by FDI/GDP or FDI/K. Moreover, the later two indicators suggested that the relative fall in IFDI occurred during the 1960s through the mid 1970s, and was followed by a rise in OFDI during the late 1970s and beyond. It is, of course, the case that technological change is presumed to affect in a similar manner the organizational advantages of both domestic outward investors and the local firms that compete with inward foreign investors.

With regard to technology, many believe that Canada has indeed progressed relative to other countries, although starting from a lower initial level in the post WWII era. It has been notoriously difficult in the literature to find empirical correlates of technology, or as in this case, relative technological competitiveness. The post-1965 records of a pair of weak indicators are presented in Graph 8. Research and Development (R&D) as a percentage of GDP starts to rise slightly in Canada compared to five other countries (France, Germany, Japan, UK, and US) in the 1970s, and that relative level accelerates in the 1990s. One thing that happens here is that all these countries started to spend more on R&D, so that Canada's relative position did not improve much. The other indicator is external patent applications, thought to reflect the technological sophistication of the home country. In this case, Canada's relative position deteriorates during the 1970s, and then stagnates during the 1980s.<sup>18</sup> This indicator also improves in the 1990s, which is also rather late to explain the change in Canada's net OFDI position, which began one or two decades before.

The limitations of these statistics are quite evident. There may be differences in effectiveness of the R&D funds spent by the public and private sectors. Companies may well "import" (purchase) their technology, instead of developing it themselves. These data do not differentiate by sectors, which is a factor the FDI data, or trade data more generally, reveals to be quite important. Similar doubts exist with regard to using patenting as an indicator of technological development, although the recent work of Rafiquzzaman and Whewell (1998) certainly reaffirms the conventional wisdom about Canada's catching up with the other large OECD countries in this

---

<sup>18</sup> There was a suspicious doubling of the value of the Canadian data between 1988 and 1989; the subsequent continued increase at lower rates does appear credible.

area. Sceptics will further point out that this burst of effort in the generation of technology seems to have coincided with a decline in innovation and total factor productivity in Canada.

Several of Canada's most important sectors of outward investment are not, in themselves, the high tech parts of today's economies—compare the raw material processing activities to information technology and bio-technology. Northern Telecom is an often-mentioned counterexample of successful outward FDI by a Canadian firm in a technologically demanding field. Nevertheless, it is appropriate to characterize the Canada's outward investments as having close to best practice levels of technology in sectors which are not as demanding of new technology.

It may be a fair generalization to say that Canadian economists are not enthusiastic about the prospect of their government embarking on an “industrial policy” to improve technological advantages, especially in the contexts of trade or investment. Warda (1999) notes that the Canadian government—provincial as well as federal—currently provides tax incentives for R&D that are the highest of the eleven OECD countries studied. Debates on this policy issue are certain to continue. From our perspective, this review of the data suggests that the transition from stage 2 into stages 3 and 4 cannot be attributed to economy-wide technological improvements relative to Canada's competitors elsewhere.

### **Free Standing Companies**

The literature on Free Standing Companies (FSCs) leads us to expect a decline in this type of British investment in the period after World War I, and perhaps even at least a relative decline in the period immediately before it. As introduced by Wilkins (1988), the concept of FSC refers to a type of foreign direct investment quite common in the pre-WWI period. These firms were initially set up in the host country, and went back to the home country for financing. One of the contributions of this new investment paradigm was to have identified a type of FDI which previous authors had labeled portfolio investment, and was also quite distinct from the ‘classic’ or ‘American model’ of FDI, which it is now argued was more a post WWI or even mid-twentieth century phenomenon. This sketchy description hints at several characteristics of FSCs which we will argue are relevant for an analysis about the decline of British FDI in a country such as Canada. With the development of more effective local sources of financing (such as banks, insurance companies, stock markets), the local entrepreneurs have less need for British (or other overseas) funds. The FSCs were concentrated in risky sectors (e.g. mining, land companies), which inevitably had higher failure rates, and were less often established in sectors such as manufacturing, where the use of trademarks and patents is a characteristic of business. Finally the evolution of more effective organizational structures eventually allowed more effective control from home, as these firms became more like the modern multinational. Although discussion continues on the explanations for, and implications of the phenomena (see Wilkins and Schröter 1998), there does seem to be widespread acceptance of Wilkins's assertion that FSCs were a sizeable fraction of British FDI, so that we can look to apply the insights from this literature to the situation in Canada.

The major works on turn of the century investment in Canada, such as Paterson (1976) and Naylor (1975), were written before the FSC concept was introduced, so that we are forced to infer applications. For example, Paterson's description of the weakness of British firms, their low profitability, and sectoral concentration, coincides with what the FSC model leads us to expect. Similarly, Wilkins's allusion to the "...domestication of free-standing companies (the elimination of the British headquarters)" (in Wilkins and Schröter 1998, 23) as usually occurring quite rapidly in developed countries, corresponds to other evidence we have for Canada.<sup>19</sup>

One of the contributions of the FSC model is to argue that Canada's experience with British FDI was part of a broad pattern, as indeed was the subsequent dominance by US firms, specializing in different sectors and utilizing different organizational structures. On a more abstract plain, we can broaden the analysis and link it to the Dunning OLI/IDP tradition, by identifying FSCs as having initially possessed certain organizational advantages, such as access to capital, or greater willingness to invest in certain sectors. There was a decline in that advantage, caused by the strengthening of Canada's financial markets, which was well underway at the end of the nineteenth century.

## COMPARISONS WITH OTHER COUNTRIES

A short overview of the recent experiences in other countries with the IDP is provided by Table 4, which uses as an indicator the values of the ratio FDI/GDP. The phenomenon popularly known as globalization is reflected in the post-1980 increases in both inward and outward investment, characteristic of both developed and developing countries. Canada's level of IFDI in 1980 was the highest of the OECD countries, and indeed higher than most third world countries, as well. Of the other OECD countries, there are several, such as the United States, Japan, and Germany, which traditionally have had relatively low levels of both IFDI/GDP and OFDI/GDP, and a positive net outward position, at least for the years covered in the table. Other countries with higher levels of IFDI/GDP, such the U.K., Netherlands, and Switzerland, had even higher levels of OFDI/GDP—in part these countries are receiving investment funds from elsewhere, and channeling them into locally registered multinational firms. Australia and South Africa are similar to Canada in that they had relatively large levels of IFDI/GDP, and their OFDI/GDP grew

---

<sup>19</sup> Paterson (1976, Table 3.3) indicates an absolute decline in the nominal value of nominal or paid up British FDI in Canada, between 1900 and 1905, and a recovery thereafter. He also reports a similar pattern in the number of firms. Unfortunately, there is not much analysis in this process of the relative weight of strengthened Canadian entrepreneurship versus other factors. Paterson's total in 1900 was actually higher than those calculated from Stone or Davis-Gallman, yet by 1913 these latter were much higher. One interpretation of this would be that lots of the firms included in the Stone and Davis-Gallman totals failed and/or were absorbed by Canadian enterprises, so that they were not included by Paterson. The first decade of the century is certainly known as a period of mergers. It should also be admitted that there is a significant literature on the performance of Canadian financial markets in the pre-war period, which I have only begun to look at. For example, Mole (1993) is not optimistic about the impact of financial innovation on domestic capital formation.

during the period; their cases will be discussed in more detail below. Of the other European countries, Norway and Spain started out as net importers of IFDI, and have experienced significant increases in OFDI/GDP, with the former country in fact passing into a positive net FDI/GDP. Finally, one could mention countries like Ireland and Greece, where the reaction to liberalization has been an acceleration of IFDI, without a corresponding response in OFDI.

### **Australia**

An obvious candidate for comparison is Australia, because of its strong historical and political similarities to Canada.<sup>20</sup> With regard to economic factors, Australia has also been a major capital importer, used tariffs to encourage industrialization, and has been attractive to foreign investors interested in the extraction of raw materials.<sup>21</sup> In both countries there was a surge in IFDI during the 1950s and 1960s, particularly in manufacturing. Foreign ownership and control of manufacturing and mining in Australia was slightly lower than in Canada in the 1970s (FIRA, 1979; Anderson, 1983), while in both countries foreign ownership was low in the various service areas. Both countries flirted with restrictions on incoming FDI for a time during the 1970s.<sup>22</sup> One contrast in the pre-World War I experience is that most of the railroad construction in Australia was financed by public sector funds. The government, in turn, borrowed abroad, so the essential difference was the Australian authorities acting as guarantor of railroad bonds. The data on foreign investment and the capital stock for the first half of the century in Australia are, unfortunately, rather more scarce than that of Canada.

The Australian data is depicted in Graphs 9 and 10. Although the per capita levels of foreign investment and inward FDI were also quite high in Australia, their levels as fractions of GDP were also similar to those of Canada. That being said, there is a major difference in terms of the IDP. Australia is still a net importer of FDI, and during the last years of the century, the country's net position actually became more negative, as inward FDI into Australia soared since the early 1980s. This happened even as outward investment began to grow, at about the same time as that occurred in Canada. The increase in the stock of OFDI has been nearly ten per cent of GDP, or a bit over two percent of the total capital stock, which are roughly half the corresponding increases in Canada.

---

<sup>20</sup> Another obvious candidate is New Zealand, but unfortunately I know nothing of this country's pre-1950 data availability. In the period after 1980, its IFDI/GDP accelerated from 11 to 49 percent, while outward investment grew from 2 to 9 percent.

<sup>21</sup> The United Kingdom and Japan have been more important sources of Australian IFDI than the United States.

<sup>22</sup> One might interpret these policies, as described in Dyster and Meredith (1990, 280-9), as classic tepid interventionism, which had the intended effect of reducing inflows in the 1970s. Within a short period, the Australian authorities backed away from these consequences, and returned to their more open position by the mid-1980s. Parallels with Canada include the names of the organizations; Australia's was the Foreign Investment Review Board.

The alternative lines IFDI/GDP (real), IFDI/GDP-I and IFDI/GDP-II in Graph 9 indicate three different measurements of that ratio, corresponding to corrections for inflation, which during the 1970s was larger in Australia than in Canada (or the US and UK). The Australian authorities revised their methodology for estimating the nominal value of inward investment in the early 1980s, incorporating a measure of market value, instead of historical cost.<sup>23</sup> These are indicated as IFDI-I and IFDI-II, respectively in the Graph, and it can be seen that the market value was essentially double the historical cost value in 1980. This author's calculations of a longer series of real IFDI, shown as IFDI/GDP-(real), suggests a larger increase in IFDI/GDP between 1950 and 1970, and a smaller decline afterwards. One implication from these calculations is that the government's efforts at restricting FDI during the 1970s did not have a major impact.

What would appear to be official estimates of the capital stock—reported by the OECD—begin only in 1966. Graph 10 shows that during the last third of the century foreign ownership of capital in Australia was at a level similar to that in Canada, and was declining until the resurgence of IFDI in the 1980s. The graph also includes observations for earlier years which, although derived in a different manner over four decades ago, also suggest a long term relative decline in foreign ownership during the first half of the century.

The sectoral distribution of investment is shown in Table 5. While the IFDI in manufacturing, mining, and petroleum was to be expected, it was somewhat surprising to see that services accounted for almost half of inward investment. The major sector of growth of inward FDI in Australia has been “finance, property and business services” which leaves us in doubt as to the ultimate sector of use. Explicit note should be taken of another pair of measurement issues. The Australian sources indicate that about half of foreign investment in Australia occurs through portfolio investment, apparently into the private sector.<sup>24</sup> Secondly, it appears that a significant fraction of these funds are being re-invested from Australia,<sup>25</sup> in which case their classification should be re-examined. It is in this regard that it is unfortunate that the studies of foreign ownership have not been updated, although it should be noted that this author has not had access to recent publications of the Australian Bureau of Statistics, such as *International investment position, Australia*.

---

<sup>23</sup> The Australian sources also report a sizeable amount of ‘borrowings’ as part of ‘direct investment’—and distinct from portfolio investment—into the country, equivalent to over twenty percent of direct equity in 1999. See the Reserve Bank of Australia's *Bulletin*, December 1999 p. S134. It would appear that what Mira Wilkins called the “American model” of FDI also does not translate directly to the Australian context.

<sup>24</sup> Dyster and Meredith (1990, 285) explain this as responding to the same factors that facilitated the expansion of debt in many other parts of the globe, as well as tax benefits in Australia for borrowing over equity financing.

<sup>25</sup> Bryan and Rafferty (1999, 50) cite a 1990 study of the Reserve Bank of Australia indicating that half of the private sector's foreign portfolio debt was re-invested abroad.

As indicated in the graphs, outward direct investment from Australia also accelerated since the 1980s, for which Dyster and Meredith (1990, 289) explicitly attribute a role to the relaxation of government rules on capital outflows, and even still existing exchange controls, during the 1980s. This investment went predominantly to developed countries, and as also shown in Table 5, finance was also an important sector. Indeed, as OFDI grew, that from the traditional sectors—mining and manufacturing—declined. There is minimal OFDI registered from Australian agriculture. Note that Dyster and Meredith explicitly attribute some of the growth of Australian OFDI to “a more mature Australian capitalism that could compete with the world’s major multinational corporations on a more equal basis” (p. 288), which supports the IDP approach.

Comparisons between Canada and Australia are always interesting. What stands out in this author’s mind is not merely the finding that Canada has proceeded farther along the IDP path than has Australia, but that both countries had re-situated themselves in the more global economy of the 1990s, with overseas financing assuming new role. It should certainly be argued that both Canada and Australia are both leaders and followers in the current process of redefinition of the global economy, both in terms of abandoning their nationalistic controls from the 1970s, subsequently expanding their OFDI.

### **The Union of South Africa**

That the Union of South Africa was another of the “regions of recent settlement” suggests another potential comparison. However the differences are more striking in this case. IFDI was more important in the early twentieth century South Africa than in Canada, and mining sector was the primary sector. As is argued in Twomey (2000), the control of the mines passed into South African hands as many of these firms’ owners and directors established residence in the African country, while others sold their shares to European settlers there,<sup>26</sup> a process which was essentially completed during the 1930s, so that South Africa entered the post WWII period with smaller levels of IFDI than Canada, and less IFDI in mining than in manufacturing. Furthermore, the country’s push for the development of manufacturing industry began later, and was essentially a post World War II phenomenon. As such, the tariff-jumping phase of its FDI experience became overshadowed by the political conflict over the apartheid regime. Table 4 also indicated that South Africa obtained a positive net position of FDI stocks during the 1980s. Although some of this was clearly an IDP-type response of South African entrepreneurs to their firms’ own organizational advantages—particularly in mining and related activities, it would appear that the sanctions also contributed to a reduction of inward investment during that period, and an artificially high level of outward investment that camouflaged capital flight.

### **Norway**

---

<sup>26</sup> The history of the evolution of Free Standing Companies is still being studied. One factor is the existence of a domestic financial market, which supplants the need for recurrence to the British financial markets. Another is the availability of qualified local managers and workers: “...the domestication of free-standing companies (the elimination of the British headquarters) usually came more rapidly in developed than in less developed countries.” (Wilkins 1998, 23).

Although the case of FDI in Norway is not thoroughly analyzed (in English!), it is intriguing to make some comparisons with the Canadian experience. Until the development of North Sea oil, there had been little investment in its primary sectors, and investment in fishing had been specifically prohibited (as an attempt to reserve local fishing stock for local fishers). Norway's economy—and its foreign investment—relate predominantly with the European Union, (of which Norway is not yet a member), although the United States is the largest single investing country.

The sectoral distribution of Norway's FDI is illustrated in Table 6. Agriculture and forestry have not been associated with significant amounts of inward or outward FDI. Curiously, the development of the petroleum industry was accompanied by relatively equal amounts of inward and outward investment, which is not a common experience. What is perhaps most remarkable is the size and parallel growth of inward and outward investment in the finance area. On a broader perspective, OECD (1995) points out that the rise of the petroleum industry has induced the "Dutch Disease" in Norway, reducing the role of manufacturing and raising the relative size of services in the domestic economy. That study, focusing primarily on IFDI, concludes that "FDI is relatively concentrated in some particular sectors," (p. 10) which is what the OLI perspective would lead us to expect. The *World Investment Directory Vol. III* presents the following sketchy information about the shares during 1981 of foreign affiliates in sales in Norway: primary sector 31 %, secondary sector 13%, and distributive trade 15%. What is lacking here is a disaggregation of the primary sector (agriculture, petroleum, forestry, etc.) and fuller information on other services.<sup>27</sup>

The review of FDI policy by the OECD (1995) reports that Norwegian policy towards FDI is non-discriminatory, although significant discretion is allowed the authorities in foreign investment approvals. One detailed survey of financial liberalization (Oxelheim 1996) describes a long term movement toward breaking down controls, which accelerated in the 1980s, while being temporarily derailed by balance of payments problems in 1990.

### **Newly Industrializing Countries**

The experiences of the newly industrializing countries may also be worth sketching briefly. In Table 4 we also saw hints that many developing countries share with Canada (and Australia and

---

<sup>27</sup> In terms of overall ownership, some extra calculations may be mentioned. The IFDI/GDP ratio for 1990 in Canada was 20%, for Norway it was 10%, and for Australia it was 25%. The ratio of IFDI/K, where K is net, non-residential capital, was 14.5% in Canada, 4.2% in Norway, and 13.4% in Australia. So the ratio between Canada and Norway of foreign ownership was twice according to the first indicator, and more than three times, according to the second. The explanation is evidently the difference in the capital output ratio, which was 1.3 in Canada, and 2.4 in Norway, for this specification of capital. Australia's K/O was 1.9, explaining the shift in ranking when the denominator is changed. Such a large difference in K/O would seem difficult to accept, (suggesting that the IFDI/GDP ratio may give a better approximation of overall foreign ownership) but it is the case that the King and Levine (1994) estimates of capital output ratios in 1985 for Canada, Norway and Australia were 2.3, 3.1 and 2.7, which leads us towards accepting large differences in capital output ratios.

South Africa) an attraction for FDI of their raw materials.<sup>28</sup> Chile and Malaysia are among the few developing countries where OFDI has risen at the end of the twentieth century, accompanying the adoption of policies more friendly toward FDI. We see that they have also experienced an acceleration of their inward investment during the same period, which recalls the experience of Australia more than that of Canada. The net effect has tended towards an increase in the negative FDI position in Chile and Malaysia.

There are two aspects of the situations of (South) Korea and Taiwan which should be highlighted. First of all, it is not surprising that there has been relatively small amounts of inward FDI; these areas have few natural resources, and their governments are widely viewed as having followed nationalistic policies which would have restricted inward FDI. More importantly, however, both Korea and Taiwan have expanded their outward investments, and had achieved positive net positions in FDI stocks as the century ended, i.e. passed into the Narula/Dunning Stage 4. In this regard their experience is obviously different from that of virtually all other third world countries. Indeed, phenomena such as this have been rendering the term Third World obsolete. The contrast between the high levels of IFDI in resource rich Canada and Australia, versus the low levels in Korea and Taiwan, also reinforces the IDP model described by those authors.

## SUMMARY

The major conclusions can now be summarized. The Canadian case does exemplify the investment development path. Inward foreign investment grew relative to the rest of the economy before 1900, and remained relatively stable for a century. Outward investment has always been present, but only during the last two decades has its growth been large relative to macroeconomic aggregates. In terms of dating the phases of the IDP in Canada, the selection of which variable to deflate the FDI data on the vertical axis, population, GDP or capital stock, was shown to be important, specifically as use of the latter two pushed back in time the point where the economy shifted into the Dunning/Narula stage 3. The Canadian data allow a comparison between indirect estimates of foreign ownership and direct observations. The surprising result was that aggregate trends are strongly effected by compositional factors, because so few sectors of the economy had significant amounts of FDI.

The explanation of the magnitude and timing of the IDP cycle in Canada encounters unsurmountable difficulties in measuring the presumably important causative variables. During most of its history Canada has welcomed foreign investment, which was indeed attracted by the country's abundant natural resources and highly protected market. We reviewed the arguments that FIRA and the NEP did not have significant impacts on inward FDI, which contradicts some of our own recollections of those events. Reductions in tariffs and other aspects of globalization may easily have been more important in stimulating both inward and outward FDI after the mid-1980s. The relative decline in inward FDI preceded by a decade or two the increase in outward

---

<sup>28</sup> Another attraction for FDI has been protectionist policies. These factors are placed in a broader third world historical context in Twomey (2000).

FDI, suggesting—but not requiring—that the two phenomena in fact responded to different causes. The importance of OFDI in finance re-enforced that belief. Although many commentators accept that Canada's technological and entrepreneurial levels have improved relative to other OECD countries, which would justify an interpretation of the changed IDP position as responding to improvements in the country's organizational advantages, our own efforts at substantiating that hypothesis empirically were not successful.

Comparisons were drawn between the Canadian case and other settler colonies—Australia and South Africa, with Norway as the closest European case, and with Taiwan and Korea. It was shown that IFDI was higher in Canada and Australia than with the last three countries. Curiously, recent trend in Australia has been towards an increase in IFDI. The IDP pattern in Taiwan and Korea has been one of less IFDI relative to the macroeconomic aggregates, and the achievement of a positive IDP position sooner than would have been predicted by a mechanistic identification of GDP/capita and technological competitiveness.

### **Is the IDP a Useful Concept?**

It should be clear that the author believes the IDP to provide a useful conceptual canvas on which to portray different countries' experiences. For example, Dunning and Narula (1996) suggested that the cycle had altered, becoming shorter chronologically, with a smaller vertical distance. They provide a credible explanation for that finding, and in general one welcomes the flexibility of their simple model. This paper has presented a description of the Canadian experience with the IDP, and attempted to illustrate and explain how the shape of the IDP path has differed across countries.

Beyond this descriptive function, we can further ask, does the IDP provide other benefits? It is not normative, in the sense of providing guidance about government policy. It is true that one might hope that, by providing an economic explanation about cycles of FDI, it will displace political or especially populist stories about these phenomena. But if we are looking for answers to the question of how an entity such as a transnational firm will function in markets, or respond to government interventions in markets, it should not surprise us that the IDP—and the OLI—are capable of providing little help, where the starting point for the explanation of the multinational firm is the existence of some sort of market imperfection or failure.

One limitation of the IDP results from the success of its subject. More specifically, how firms are engaging across borders is evolving quite rapidly. The specific example is alliance capitalism, and a useful case is Alan Rugman's criticism of business guru Michael Porter's report *Canada at the Crossroads: The Reality of a New Competitive Environment*. Rugman implicitly criticizes Porter for sticking with "the American model" of FDI. "Porter's view that multinationals can only succeed with a strong home country base may still be true for the U.S., but it is at least 30 years out of date for Canada." (Rugman (1992, 59). Accepting Rugman's point that how firms relate across geographic borders is changing, leads us to conclude that any currently available measure of FDI, such as FDI/capita, or FDI/GDP, etc., is flawed in a time series analysis. The theoretically correct measure would be some sort of payment to capital—human as well as financial—and little progress has been made along these lines.

## Appendix What was the value of Canadian fixed capital in 1900?

One of the messages from Graph 5, was that the level of foreign ownership (through FDI only—ignoring all railroads) was virtually as high in 1900 as at any other time during the entire century, and was declining before WWI. Given the importance of such an assertion, it may be useful to indicate the degree of uncertainty of the estimate of fixed capital in 1900. There are several methods of estimation. The simplest would be to apply a capital output ratio to the GDP datum of Urquhart (1993). The latter is \$ 872 (all dollar figures are millions). The K/O for 1936 using *FCFS* range from 5.5 for gross capital to 3.3 for net capital—involving a faster depreciation—averaging the estimates for real and nominal, and always including residences. Combining these we arrive at a figure for gross capital of \$ 4,800. Of course, assuming that K/O's are constant essentially assumes away the need of estimates for K, for cases like the present where we have a good estimate of GDP, and we can use Graph 4. Nevertheless, this procedure has known, but familiar limits. Secondly, there are two estimates by informed contemporary observers. Viner (1975, 300) cites a *Cost of Living Report* which provides an admitted incomplete listing, totaling \$3,111. Mulhall (1896) gives a total for Canadian wealth for a not well specified year which we might take to be 1894, which equaled \$ 3,757 (at \$C4.86/£), after taking away land. Adjusting Mulhall's total upwards for the period 1895-1900 using the corresponding investment data in Urquhart (1993, 16) would increase it to \$ 4,477. Further fiddling might subtract 'merchandise', (i.e., inventories?) worth \$ 502 and perhaps also livestock and furniture, leaving us with a range of from \$ 2,990 to \$ 4,477, depending on coverage.

Turning to the annual investment series in Urquhart (1993, 16), its items from 1870 to 1900 sum to \$ 2,792 including housing and government. Such totals are often adjusted for inflation, depreciation, and some approximation is needed for start of period capital—this last factor again can be approximated using an assumed capital output ratio and the 1870 income. Taking all three into consideration (initial K/O of 4, annual depreciation of 1%) brings our amount of capital in 1900 to \$ 3,422. Finally, we can look at the figures on capital from the various censuses or annual tabulations, which around 1900 included agriculture (excluding land), manufacturing, mining, railroads, tramways, canals, utilities, and telephones. Interpolating between censuses, where necessary, leads to a 1900 total of \$ 1,905 for many sectors, but excluding at least housing and the government. In 1936, these two sectors accounted for forty percent of the capital stock; making the appropriate adjustment takes this estimate for 1900 to a total of \$ 3,220.

The census data evidently overlap with the estimates of Mulhall and Viner, although the three sources provide us with different coverage. In our calculations in the Graph 5, we use the data generated from the Urquhart series on investment. The two series, Urquhart investment and census interpolation, yield nearly identical growth paths; index numbers, taking their respective 1926 values to be 100, for 1900 and 1913 are 15, 46 and 17, 47 respectively.

## Notes to the Graphs.

Graph 1 was photocopied from Narula (1996, 22 and 24) and Dunning and Narula (1996, 2).

Graph 2 *Sources*: 1926-1996, inward and outward foreign investment taken as total foreign liabilities and total foreign assets respectively, and inward and outward foreign direct investment from various issues of Statistics Canada, *Canada's international investment position*. Inward foreign investment 1900-1926 from *Historical Statistics of Canada* 2<sup>nd</sup> edition, series G190. Outward foreign investment, 1900-1913 from Viner (1975, 94). Inward foreign direct investment 1895-1926 estimated by summing extrapolations for Great Britain, from Paterson (1976, 94); United States from Lewis (1938)—using non-railroad investments, and other countries extrapolating backwards from the 1926 total in *CIIP*.

The various foreign investment data were deflated by Canada's GDP deflator, from Urquhart (1986, 30) and the *Canadian Economic Observer* 1991/92.

Population from *Historical Statistics of Canada* 2<sup>nd</sup> edition, series A1, and various *International Financial Statistics Yearbook*, merging in 1970.

Graph 3. Same as Graph 2.

Graph 4. Inward and outward direct investment as in Graph 2. The real IFDI series was calculated in two sections: from 1890 to 1926, and from 1926 on. In each case, the nominal value for the first year was converted into real terms by dividing by the price index for that year. Subsequent years added on to the previous year the real value of the IFDI inflow, while deducting three percent of the previous stock for depreciation. There was a ten percent difference between the totals for 1926. Nominal and real GDP from the *Canadian Economic Observer* 1991/92, and from Urquhart (1986).

Graph 5. Real and nominal capital stock, 1926-1995 from various issues of Statistics Canada, *Fixed capital flows and stocks*, using the data on gross stocks, updated using OECD *Flows and Stocks of Fixed Capital*. The values for residences for 1926-1935 (and 1996-1998) were estimated assuming that they maintained the reported ratio for 1936 (and 1995) to total non-residential capital. For the period before 1926, the total capital stock was estimated by summing the investment data from 1870 on, as reported in Urquhart (1993, 16), adding an initial total estimated by applying an assumed capital output ratio of 4 to the GDP of Urquhart (1993), and subtracting one percent each year for depreciation.

Note: In *FCFS 1961-1994*, slightly different assumptions were used for the calculations, and the data was merged by this author for the year 1980. Restricting the data to the homogeneous official data for period 1935-1980, or to the estimates of real non-residential capital from 1926 to 1998 maintains the text's conclusions about trends and relative size for either total capital or non-residential capital.

Graph 6. Using data from Graphs 3, 4 and 5.

Graph 7. Statistics Canada, *Canada's international investment position*.

Graph 8. Author's calculations, using various OECD publications. The denominator is the arithmetic average of the G-5 countries. For R&D/GDP, 1967-1975 interpolated from the graph in the OECD *Science Resources Newsletter* winter, 1977/78; 1975-97, *Industry and Technology*, 1995. For External Patent Applications: 1965-82, *Science and Technology Indicators* 1987; 1982-89, various *Science and Technology Indicators*; 1990-96, *Main Science and Technology Indicators 1999*.

Graph 9. FDI: 1900 and 1914, derived from estimates graciously provided by Lance Davis; 1929, summing UK (business) investment, from Bank of England (1950) and U.S. direct investment, from Lewis (1938); 1947, Wheelwright (1963); 1960-1981 for IFDI-I from *World Investment Report Volume III*; 1980-1996 (for IFDI-II) from various *Year Book Australia*. IFDI-real was calculated by dividing the 1947 IFDI datum by that year's price index, and then for each successive year adding to the previous year's stock the real value of the increase in IFDI, subtracting 3 percent for depreciation. OFDI from Krause (1983) who reports data from official sources.  
Real and nominal GDP from the appendix tables of Maddock and McLean (?) until 1990, after which the *International Financial Statistics Yearbook*, 1998.

Graph 10. IFDI and OFDI as above. The capital stock for 1900-1947 from Garland and Goldsmith (1959, 351), adjusting their estimates to our reference years, and restricting inclusion to fixed capital, including livestock, but omitting inventories, coin, and consumer durables. Capital for 1966-1995 from OECD *Flow and stocks of Fixed Capital*, including residential capital.

## Bibliography

- Anderson, David L. (1983) *Foreign Investment Control in the Mining Sector: Comparisons of Australian and Canadian Experience*, Canberra: Centre for Resource and Environmental Studies, Australian National University.
- Armstrong, C. and Nelles, H.V. (1988) *Southern Exposure: Canadian promoters in Latin America and the Caribbean*, Toronto: University of Toronto Press.
- Australian Bureau of Statistics (1989) *Foreign Investment Australia 1988-89*, Canberra: Government Publishing Service.
- Bank of England (1950) *United Kingdom Overseas Investments 1938 to 1948*, London: East and Blades, Ltd. Subsequently published annually until 1959.
- *Board of Trade Journal*.
- Bennett, D.C. and Sharpe, K.E. (1985) *Transnational Corporations Versus the State: The Political Economy of the Mexican Auto Industry*, Princeton: Princeton University Press.
- Bergsten, C. F., et al. (1978) *American Multinationals and American Interests*, Washington, D.C.: The Brookings Institution.
- Bryan, Dick and Michael Rafferty (1999) *The Global Economy in Australia: Global integration and national economic policy*, St. Leonards, NSW: Allen and Unwin.
- Buckley, K. (1955) *Capital Formation in Canada 1896-1930* Toronto: University of Toronto Press.
- Bureau of Industry Economics (1993) *Multinationals and Governments: Issues and Implications for Australia*, Research Report No. 49, Canberra: Australian Government Publishing Service.
- Butlin, N. G. (1962) *Australian Domestic Product, Investment and Foreign Borrowing 1861-1938/39*, Cambridge: Cambridge University Press.
- Chapman, S. (1998) "British Free-Standing Companies and Investment Groups in India and the Far East," in M. Wilkins and H. Schröter (eds.) *The Free-Standing Company in the World Economy 1830-1996*, Oxford: Oxford University Press.
- Chow, Franklin (1994) "Recent trends in Canadian direct investment abroad: the rise of Canadian multinationals," in Steven Globerman (ed.) (1994) *Canadian-Based Multinationals*, Calgary: University of Calgary Press.
- Constantine, S. (1984) *The making of British colonial development policy 1914-1940*, London: Frank Cass.
- Corley, T. A. B. (1994) "Britain's Overseas Investments in 1914 Revisited," *Business History* 36, 1: 71-88.
- Dales, J. H. (1986) "Comment" [on Urquhart's "New Estimates of Gross National Product, Canada, 1870-1926"] in S.L. Engerman and R.E. Gallman (eds) *Long Term Factors in American Economic Growth*, Chicago: University of Chicago Press.
- Darroch, James L. (1992) "Global Competitiveness and Public Policy: The Case of Canadian Multinational Banks," *Business History* 34:3, 153-175.
- Davis, Lance E. and Robert E. Gallman (1994) "Domestic Savings, International Capital Flows, and the Evolution of Domestic Capital Markets: The Canadian Experience" unpublished paper.
- Davis, L.E. and Huttenback, R.A. (1986) *Mammon and the pursuit of Empire: The political economy of British imperialism, 1860-1912*, Cambridge: Cambridge University Press.

- de Jager, B. L. (1973) "The fixed capital stock and capital output ratio of South Africa from 1946 to 1972," South African Reserve Bank *Quarterly Bulletin*, June:17-29.
- Deane, P. (1948) *The measurement of colonial national incomes*, Occasional Papers No. 12: National Institute of Economic and Social Research. Cambridge University Press.
- Dickens, P.D. (1931) "A New Estimate of American Investments Abroad," United States Department of Commerce *Trade Information Bulletin* No. 767 reprinted by Arno Press (1976) as part of *Estimates of United States Direct Foreign Investment, 1929-43 and 1947*, New York: Arno Press.
- 1938. "American Direct Investments in Foreign Countries 1936," United States Department of Commerce *Bulletin* reprinted by Arno Press (1976) as part of *Estimates of United States Direct Foreign Investment, 1929-43 and 1947*, New York: Arno Press.
- Dunning, J.H. (1981) "Explaining the International Direct Investment Position of Countries: Towards a Dynamic or Developmental Approach," *Weltwirtschaftliches Archiv* Heft 1 Band 117, pp. 30-64.
- (1983) "Changes in the level and structure of international production: the last one hundred years," in M. Casson (ed.) *The Growth of International Business*, London: George Allen & Unwin.
- and Cantwell, J. (1987) *IRM Directory of Statistics of International Investment and Production*, Houndmills: Macmillan.
- and John R. Dilyard (1999) "Towards a general paradigm of foreign direct and portfolio investment," *Transnational Corporations* 8:1 1-52.
- and Rajneesh Narula (1996) *Foreign Direct Investment and Governments: Catalysts for economic restructuring*, London: Routledge.
- Dyster, Barrie and David Meredith (1990) *Australia in the international economy in the twentieth century* Cambridge: Cambridge University Press.
- Edelstein, M. (1982) *Overseas Investment in the Age of High Imperialism*, New York: Columbia University Press.
- Feinstein, C.H. (1988) "Sources and Methods of Estimation for Domestic Reproducible Fixed Assets and Works in Progress, Overseas Assets, and Land," in C. H. Feinstein and S. Pollard, (eds) *Studies in Capital Formation in the United Kingdom 1750-1920*, Oxford: Clarendon Press.
- (1990) "Britain's overseas investments in 1913," *Economic History Review* 2nd ser. 43, 2: 288-95.
- Ferrier, R. W. (1982) *The History of the British Petroleum Company*, Volume 1. Cambridge: Cambridge University Press.
- Fishlow, A. (1966) "Productivity and Technological Change in the Railroad Sector, 1840-1910," in *Output, Employment, and Productivity in the United States After 1800*, Studies in Income and Wealth Volume 30, New York: Columbia University Press.
- Foreign Investment Review Agency, Research and Analysis Branch (1970) "A comparison of foreign investment controls in Canada and Australia," research paper published by FIRA.
- Fossum, John E. (1997) *Oil, the State, and Federalism: The Rise and Demise of Petro-Canada as a Statist Impulse*, Toronto: University of Toronto Press.
- Garland, J.M. and Goldsmith, R.W. (1957) "The National Wealth of Australia," in *Income and Wealth* 8: 323-64.

- Globerman, Steven (1985) "Canada," in John H. Dunning (ed.) *Multinational enterprises, economic structure and international competitiveness*, Chichester: John Wiley & Sons.
- Globerman, Steven (ed.) (1994) *Canadian-Based Multinationals*, Calgary: University of Calgary Press.
- \_\_\_\_\_ and Daniel M. Shapiro (1999) "The impact of government policies on foreign direct investment: The Canadian experience," *Journal of International Business Studies* 30: 3, pp. 513-532.
- King, R.G. and Levine, R. (1994) "Capital Fundamentalism, Economic Development, and Economic Growth," *Carnegie-Rochester Conference Series on Public Policy* 40: 259-92.
- Krause, Lawrence B. (1984) "Australia's Comparative Advantage in International Trade," in Richard E. Caves and Lawrence B. Krause (eds.) *The Australian Economy: A view from the North*, Washington, D.C.: the Brookings Institution.
- LeDuc, Lawrence and J. Alex Murray (1989) "Open for Business? Foreign Investment and Trade Issues in Canada," in Harold D. Clarke et al. (eds.) *Economic Decline and Political Change: Canada, Great Britain, the United States*, Pittsburgh: University of Pittsburgh Press.
- Lewis, Cleona (1938) *America's Stake in International Investments* Washington, D.C.: The Brookings Institution.
- Maddock, Rodney and Ian W. McLean (1987) *The Australian economy in the long run* Cambridge: Cambridge University Press.
- Markusen, James R. and Anthony J. Venables (1998) "Multinational firms and the new trade theory," *Journal of International Economics* 46:2 183-203.
- Marr, William L and Donald G. Paterson (1980) *Canada: An Economic History*, Toronto: Gage Publishing.
- Marshall, Herbert et al. (1936) *Canadian-American Industry: A Study in International Investment*, New Haven: Yale University Press.
- McFetridge, Donald G. (1991) *Foreign investment, technology and economic growth*, Calgary: University of Calgary Press.
- (1994) "Canadian Foreign Direct Investment, R&D and technology transfer," in Steven Globerman (ed.) (1994) *Canadian-Based Multinationals*, Calgary: University of Calgary Press.
- Meyer, Stephen P. and Milford B. Green (1996) "Foreign direct investment from Canada: An overview," *Canadian Geographer* 40: 3, 219-237.
- Mole, D. (1993) "Financial Development and Capital Formation," in M.H. Watkins and H.M. Grant (eds.) *Canadian Economic History: Classic and Contemporary Approaches*, Ottawa: Carleton University Press.
- Mulhall, Michael G. (1896) *Industries and Wealth of Nations* London: Longmans, Green, and Co.
- Narula, R. and J.H. Dunning (1997) "Explaining international R&D alliances and the role of governments," Maastricht, MERIT working paper 97001.
- Naylor, R. T. (1975) *The History of Canadian Business 1867-1914*, two volumes, Toronto James Lorimer & Company.
- OECD (1995) *OECD Reviews of Foreign Direct Investment: Norway* Paris: OECD.
- Oxelheim, Lars (1996) *Financial Markets in Transition: Globalization, Investment and Economic Growth* London: Routledge.

- Paterson, D.G. (1976) *British Direct Investment in Canada, 1890-1914*, Toronto: University of Toronto Press.
- Rafiqzaman, Mohammed and Lori Whewell (1998) "Recent Jumps in Patenting Activities: Comparative Innovative Performance of Major Industrial Countries, Patterns and Explanations," Industry Canada Research Publications Program, Working Paper Number 27.
- Rao, Someshwar et al. (1994) "Canadian-based multinationals: an analysis of activities and performance," in Steven Globerman (ed.) (1994) *Canadian-Based Multinationals*, Calgary: University of Calgary Press.
- Rugman, Alan (1992) "Porter Takes the Wrong Turn," *Business Quarterly* [University of western Ontario] winter: 59-64.
- Statistics Canada (annual) *Canada's international investment position* Catalogue 67-202  
\_\_\_\_\_ (occasional) *Fixed capital flows and stocks* Catalogue 13-568.
- Stone, Irving (1999) *The Global Export of Capital from Great Britain: 1865-1914: A Statistical Survey*, Houndmills: MacMillan Press Ltd.
- Twomey, Michael J. (2000) *A Century of Foreign Investment in the Third World*, London: Routledge forthcoming late in the year.
- Urquhart, M.C. (1986) "New Estimates of Gross National Product, Canada, 1870-1926: Some Implications for Canadian Development," in S.L. Engerman and R. E. Gallman, (eds) *Long Term Factors in American Economic Growth*, Chicago: University of Chicago Press.
- Viner, Jacob (1975) [reprint of 1924] *Canada's Balance of International Indebtedness, 1900-1913* Toronto: McClelland and Stewart.
- Warda, Jacek (1999) "Measuring the Attractiveness of R&D Tax Incentives: Canada and Major Industrial Countries," Statistics Canada: Science, Innovation and Electronic Division, Report No. 10. Catalog number 88F0006XPB No. 10.
- Wheelwright, E.L. (1963) "Overseas Investment in Australia," in A. Hunter (ed.) *The Economics of Australian Industry*, Melbourne: Melbourne University Press.
- Wilkins, Mira and H. Schröter (eds.) (1998) *The Free-Standing Company in the World Economy 1830-1996*, Oxford: Oxford University Press.

**Table 1. IFDI, the Capital Stock, and Ownership Ratios. Billion current C\$, and percentages.**

*Calura Data*

	IFDI		Total	Percent
	Ownership	Control	Capital	Foreign
				Control
Total	134	97	411	24
Manufacturing	47	50	102	49
Mining, Petrol. & Gas	41	35	102	35
Other	46	12	208	6

*CIIP&FCFS*

	IFDI	Total		IFDI÷	IFDI÷
		Gross	Net	Gross	Net
Total	87	1741	776	5	11
Manufacturing	37	176	46	21	81
Mining, Petrol. & Gas	25	126	43	20	57
Other	25	1440	687	2	4

Sources: Author's calculations, based on *CIIP* and *FCFS*. All data in the top half of the table come from Table 75 of *CIIP Historical Statistics 1926 to 1992*. The IFDI data in the second set of numbers come from Table 30 of *CIIP Historical Statistics 1926 to 1992*, while the data on gross and net capital come from *FCFS 1961-1994*.

Note: Capital stock includes residential capital. In Canada, the gross value of residences in 1985 was C\$588 billion, or half the value of non-residential capital in 1985. This is slightly above the average for seven other countries in OECD *Flows and stocks of fixed capital*. The concept of net capital reported in this table is that of "geometric depreciation;" using a "straight line depreciation" the 1985 estimate for total non-residential capital was C\$684, and using the "delayed depreciation" it was C\$894; these alternative measures are not provided for residential capital. As discussed in the text, the *CIIP* data refer to non-financial enterprises, and the "capital employed" would seem to be something similar to market value, i.e. close to, but nevertheless distinct from the concept used in *FCFS*. The major sector in which there was direct investment, but not control, was utilities.

**Table 2. Sectoral Distribution of IFDI in Canada, 1926-1990. (Percentages)**

Year	1926	1930	1939	1955	1970	1980	1990
Manufacturing	53	45	51	46	42	41	45
Petroleum	..	6	..	22	24	26	17
Mining and Smelting	9	9	10	11	12	8	4
Utilities	15	19	17	4	2	1	1
Merchandising	8	7	7	7	6	8	7
Financial	12	13	12	9	11	12	21
Other	3	3	2	2	3	4	4

Source: Author's calculations based on *CIIP Historical Statistics 1926 to 1992*, Table 30.

Note: Petroleum was not consistently listed separately until 1953.

**Table 3. Distribution of Canadian Outward Foreign Direct Investment, 1920-1998**

Year	1920	1938	1950	1960	1970	1980	1990	1990	1998
Total direct investment	100	100	100	100	100	100	100	100	100
Manufacturing: Total	38	42	61	56	52	44	45		
Beverages	15	17	30	23	15	9	7		
Non-ferrous metals	12	12	12	13	14	15	11		
Wood & paper products	4	4	7	7	8	8	12	4	3
Iron and products	5	6	7	8	10	6	5		
Chemicals industries	1	1	1	1	2	3	7		
Miscellaneous mfg.	1	2	3	3	4	3	3		
Merchandising	1	1	1	4	4	4	3		
Mining and smelting	22	20	9	11	6	10	7		
Petroleum and natural gas	n.a.	n.a.	n.a.	11	8	21	7		
Railways	31	29	25	11	5	2	1		
Other Utilities	7	6	3	4	15	3	1		
Financial	0	1	0	1	7	14	29	29	33
Other enterprises	1	0	1	2	3	2	7		
Machinery & Transport									
Equipment								3	3
Services & Retailing								8	11
Other								34	27
Addendum: Energy and									
Metallic Minerals	34	32	22	35	28	45	25	21	23

Source: Statistics Canada, *Canada's international investment position: Historical statistics 1926-1992*, and 1998.

Note: There was a change in the classification scheme around 1990. For financial services the change was not significant, for wood and paper products it was large in a relative, but not in an absolute sense. The estimates for energy and metallic minerals for the period 1920-1990 are the sums of the totals from the earlier classifications, for petroleum and natural gas, mining and smelting, and non-ferrous metals manufacturing; this appears to correspond fairly well to the newer total.

**Table 4. Ratios of Inward and Outward Investment to GDP, 1980-1997.**

	1980	1990	1997		1980	1990	1997		1980	1990	1997
World				Western Europe				Developing Countries			
IFDI/GDP	5	9	12	IFDI/GDP	6	11	15	IFDI/GDP	6	11	17
OFDI/GDP	5	8	12	OFDI/GDP	7	12	20	OFDI/GDP	1	2	6
Canada				Australia				South Africa			
IFDI/GDP	21	20	22	IFDI/GDP	9	25	26	IFDI/GDP	21	9	14
OFDI/GDP	9	15	23	OFDI/GDP	2	11	14	OFDI/GDP	7	14	21
USA				UK				Sweden			
IFDI/GDP	3	7	8	IFDI/GDP	12	22	22	IFDI/GDP	3	5	19
OFDI/GDP	8	8	11	OFDI/GDP	15	24	29	OFDI/GDP	3	21	35
Spain				Norway				Chile			
IFDI/GDP	2	13	19	IFDI/GDP	11	11	14	IFDI/GDP	3	33	33
OFDI/GDP	1	3	9	OFDI/GDP	1	9	20	OFDI/GDP	0	1	8
Korea				Taiwan				Malaysia			
IFDI/GDP	2	2	4	IFDI/GDP	6	6	7	IFDI/GDP	21	24	38
OFDI/GDP	0	1	4	OFDI/GDP	0	8	12	OFDI/GDP	2	6	13

Source: *World Investment Report 1999*, Annex Table B.6.

**Table 5. Australia: IFDI and OFDI, Total and Sectoral Distribution. 1970-1991**

	Inward FDI				Outward FDI				
	1974	1980	1991	1996	1970	1980	1991	1996	
Total 1990 prices (A\$bill.)	\$25	\$23	\$96	\$136	\$3	\$4	\$35	\$52	
Distribution (%)									
Primary	25	22	15	14	Primary	34	20	5	9
Mining		13	7		Mining		19	5	9
Petroleum		7	7		Petroleum				
Secondary	34	31	29	30	Secondary	38	33	29	52
Tertiary	41	45	54	45	Tertiary	28	45	55	38
Distribution		25	15	13	Distribution		15	6	4
Finance and Insurance		17	36	25	Finance and Insurance		25	43	27

Source: Author's calculations. FDI for 1971-1991 from *World Investment Directory Vol. 3*; 1996 from *OECD International Direct Investment Yearbook, 1998*. Deflated by the GDP deflator, from *International Financial Statistics Yearbook, 1998*.

Note: Empty spaces mean that the item was not reported, not necessarily that it was zero. Not all the sub-sectors are itemized here.

**Table 6. Norway: Inward and Outward FDI Stocks, Total and Sectoral Disaggregation**

	Inward FDI					Outward FDI				
	1970	1980	1988a	1988b	1995	1970	1980	1988a	1988b	1995
Total Billion Nor. Kroner in 1990 prices	K 6	K 7	K 18	K 62	K 117	K 3	K 5	K 20	K 28	K 132
Distribution (%)										
Primary	1	1	13	47	39	Primary	2	12	17	21
Petroleum		1	13	47	39	Petroleum	2	12	17	20
Secondary	58	40	29	12	11	Secondary	31	40	34	47
Tertiary	40	59	58	41	49	Tertiary	69	57	55	37
Distribution		44	21	16	20	Distribution	5	2	3	5
Finance and Insurance		8	31	21	16	Finance and Insurance	38	41	21	10

Sources: Author's calculations, for FDI: 1970-1988a *World Investment Directory Vol. 3*, 1988b-1995 OECD *International Direct Investment Yearbook 1998*. Values deflated by GDP deflator, from *International Financial Statistics Yearbook, 1998*.

Note: The dramatically different totals for IFDI in 1988 reflect a more thorough canvassing in the later column.

Figure 2 Graph 1. Three Versions of the Investment Development Path, according to Dunning and Narula.

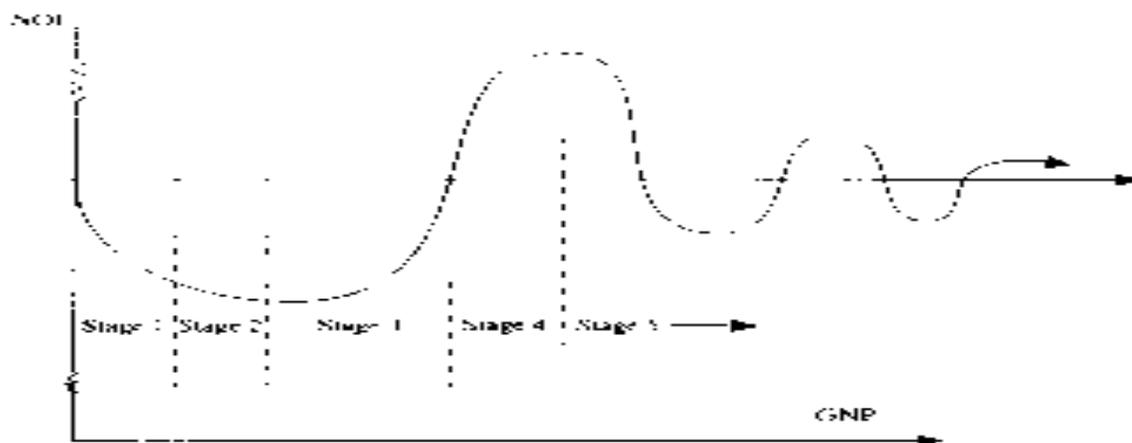


Figure 2.2 The pattern of the investment development path  
 Note: not drawn in scale; for illustrative purposes only.

Source: Narula (1996, 225)

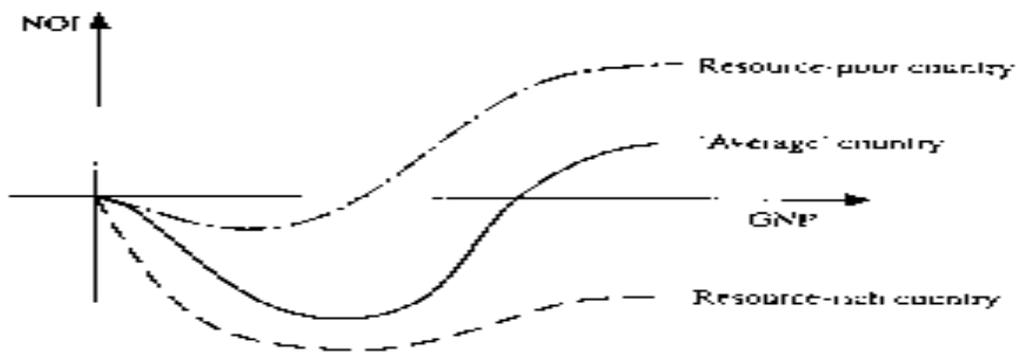


Figure 2.3 Examples of variances in individual IDPs

Source: Narula (1996, 23)

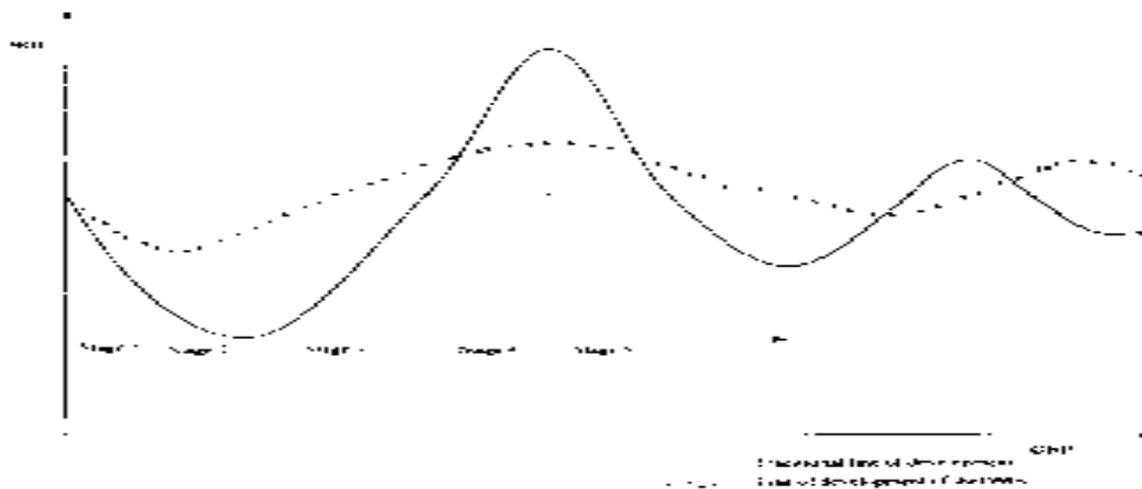
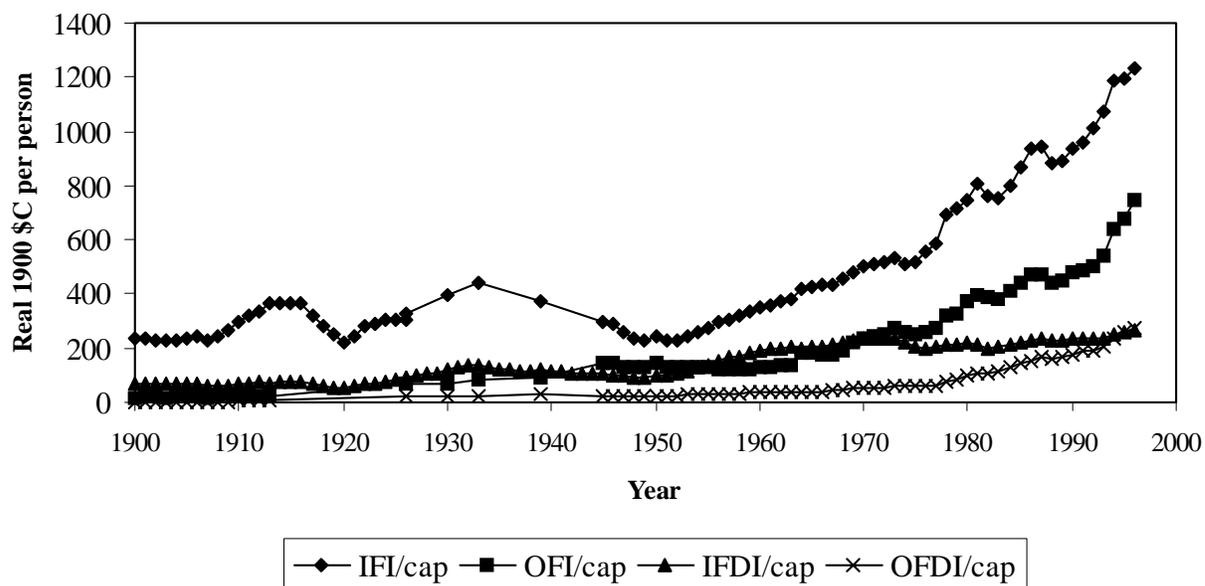
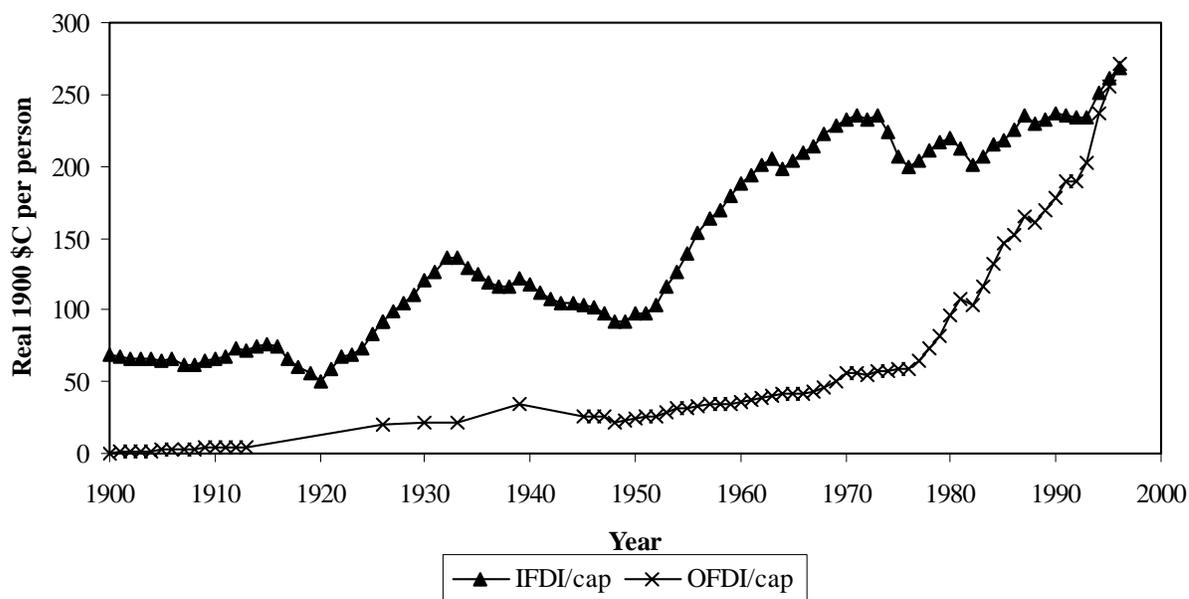


Figure 2.4 The pattern of the investment development path  
 Note: not drawn to scale; for illustrative purposes only.

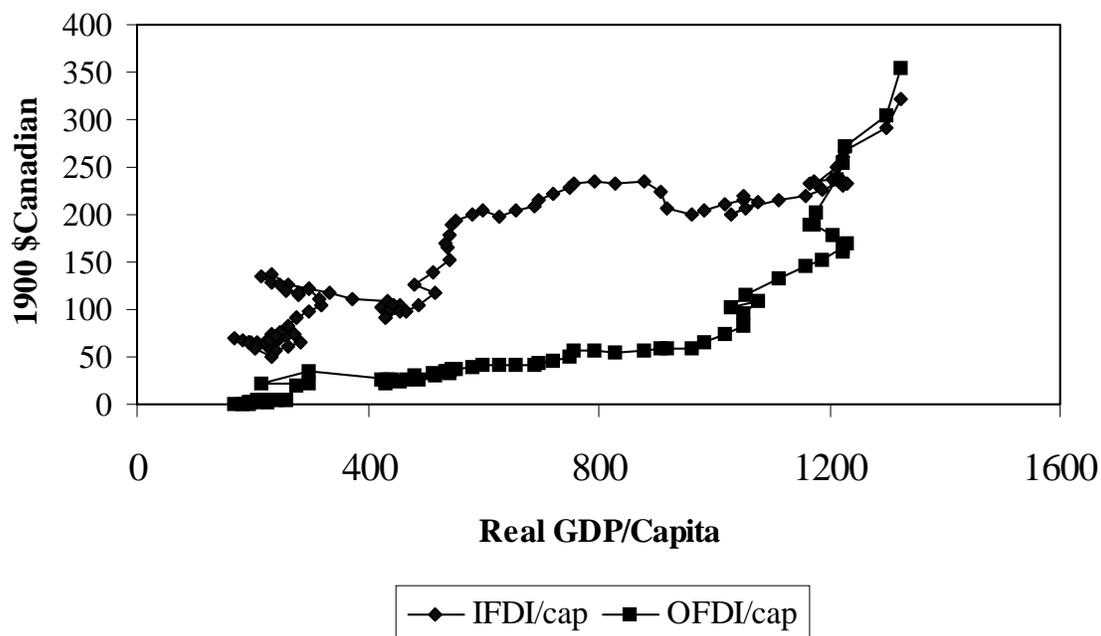
**Graph 2. Canada: Per Capita Levels of Real  
Inward and Outward FI and FDI**



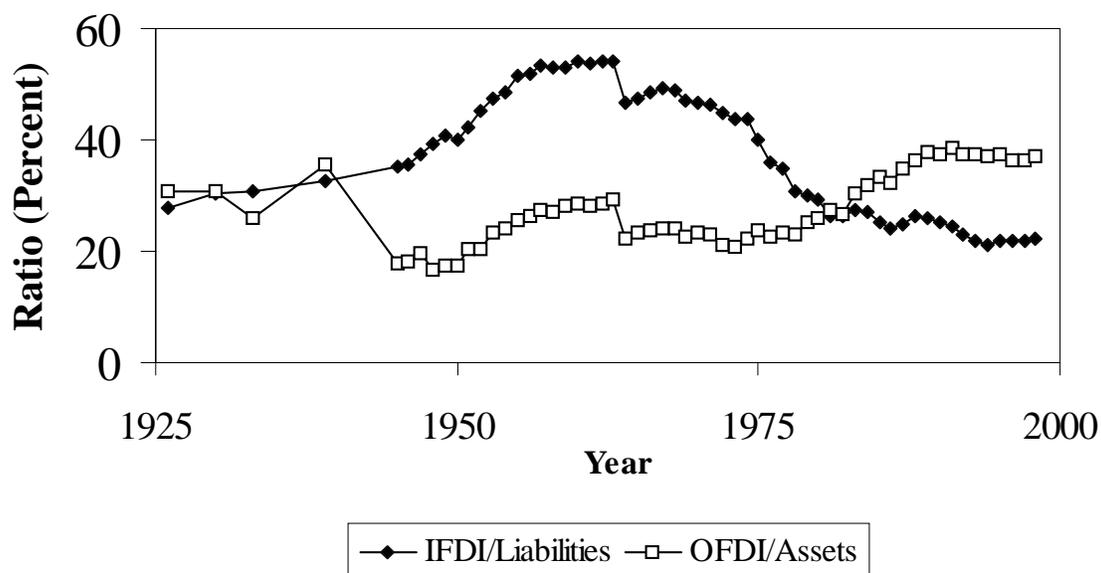
**Graph 3a. Canada: Per Capita Levels of Real  
Inward and Outward FI and FDI**



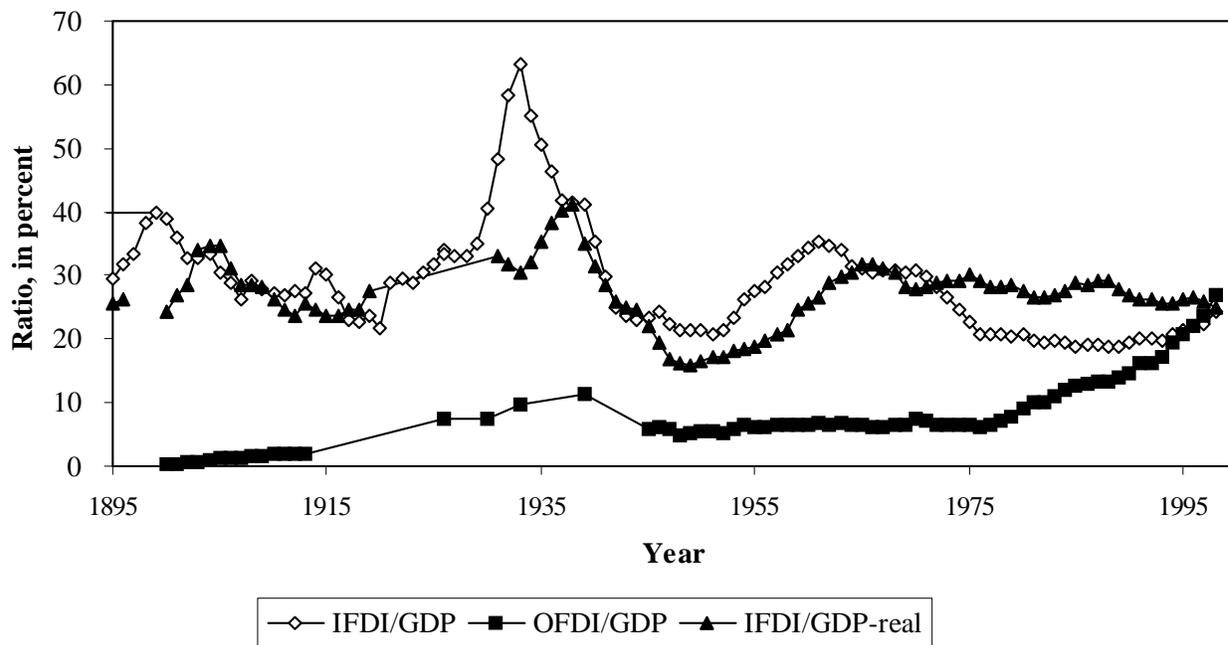
**Graph 3b. Canada: IFDI/Capita and OFDI/Capita**



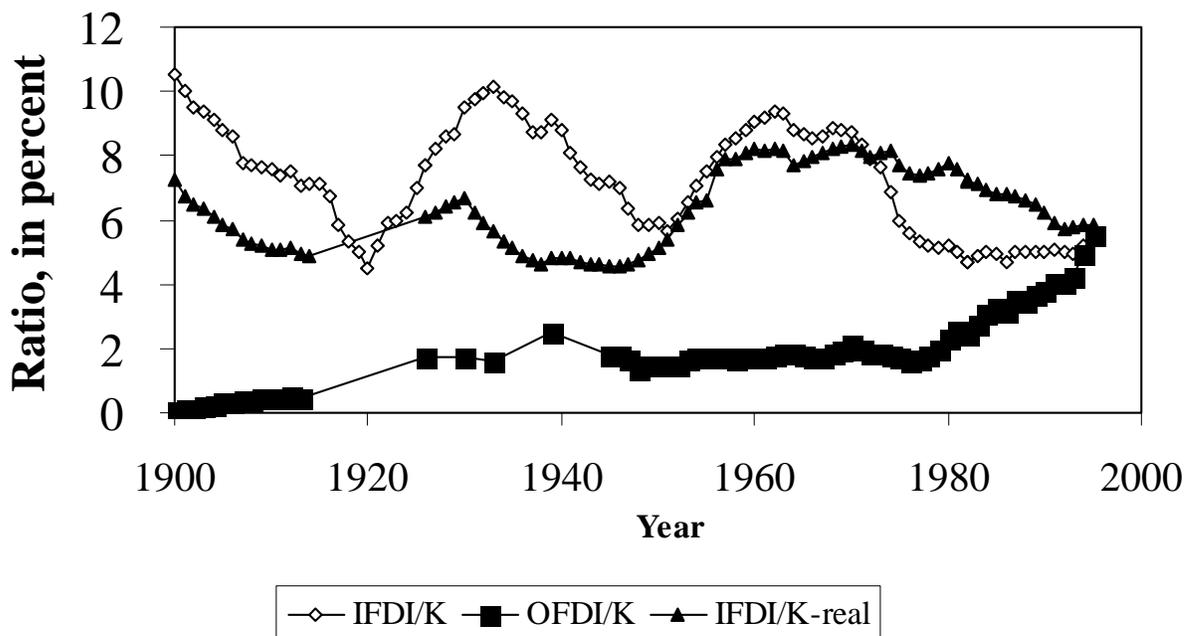
**Graph 3c. Share of FDI in Canada's Total Inward and Outward International Positions**



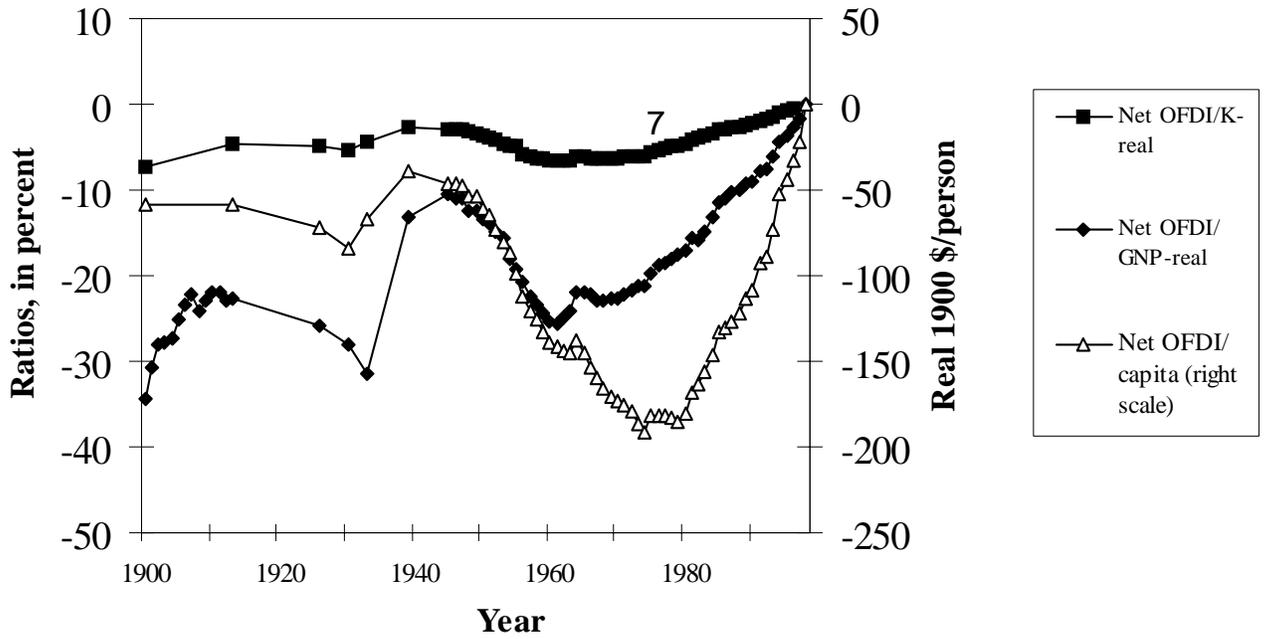
**Graph 4. Canada: FDI/GDP, Twentieth Century**



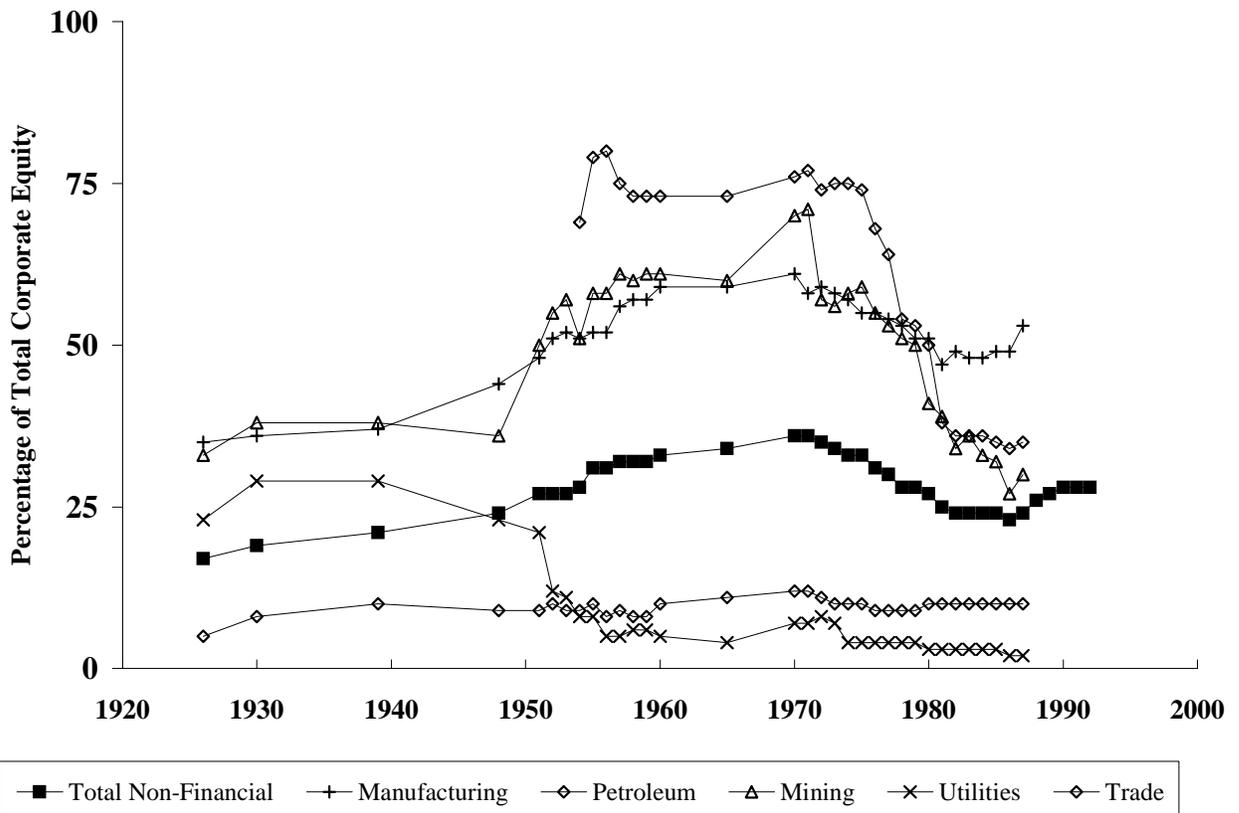
**Graph 5. Canada: FDI/K, Twentieth Century**



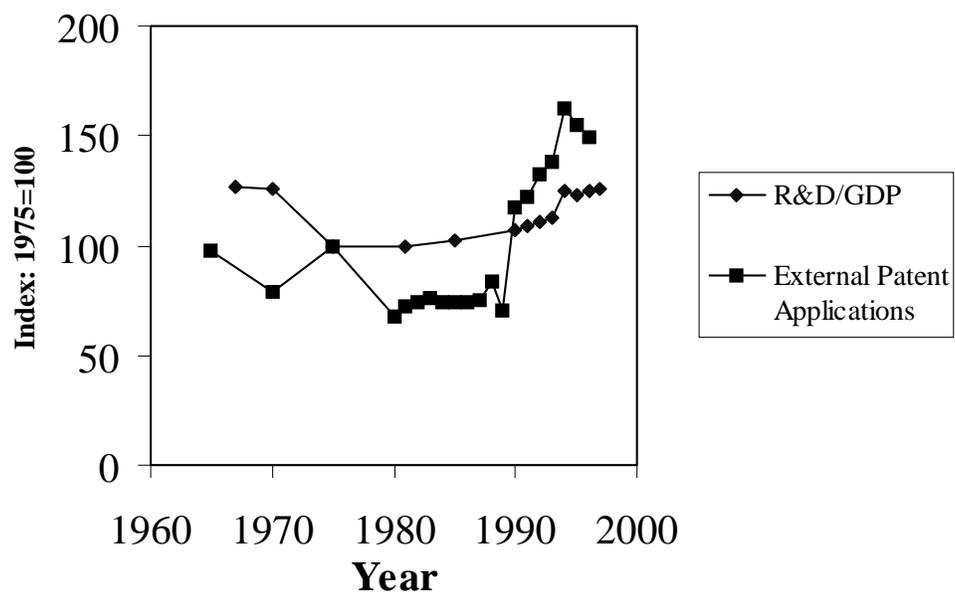
**Graph 6. Canada: Measures of Net Outward FDI**



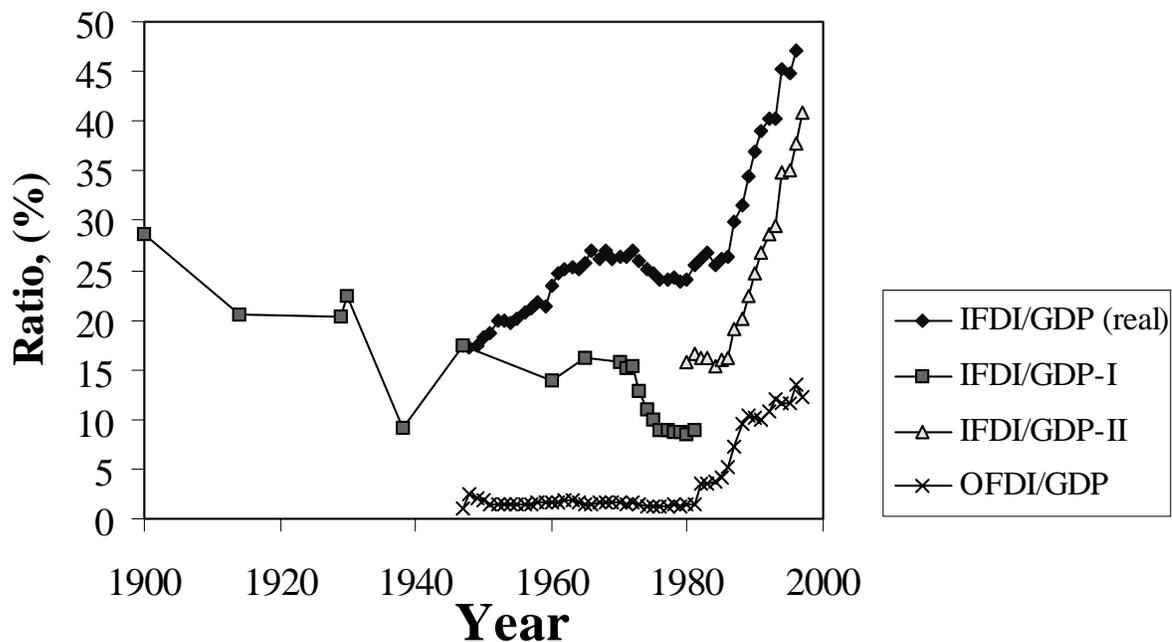
**Graph 7. Canada: Foreign Control of Enterprises, by Sectors**



**Graph 8 Indicators of Relative Technological Effort: Canada/G-5**



### Graph 9. Australia: FDI/GDP



### Graph 10. Australia: FDI/K

