

# CANADIAN FOREIGN DIRECT INVESTMENT, THE NORTH AMERICAN FREE TRADE AGREEMENT AND THE PITTSBURGH REGIONAL ECONOMY

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***Abstract** - This article provides an analysis of the impact of Canadian foreign direct investment on the Pittsburgh regional economy. We focus on the specific behavior of Canadian multinational firms in Southwestern Pennsylvania, the influence of the Canada/U.S. Free Trade Agreement and the North American Free Trade Agreement on their actions, the economic dynamics of the Pittsburgh region, and the policy implications of our analysis for state and local decision makers. In general, Canadian FDI has had only a modest impact on the regional economy, and NAFTA may have discouraged further investment in production facilities in the area.*

***Key-words** - FOREIGN DIRECT INVESTMENT, PENNSYLVANIA, CANADA, NAFTA, REGIONAL ECONOMIES, REGIONAL DEVELOPMENT POLICY.*

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## 1. INTRODUCTION

The study presented in this article provides an analysis of the impact of Canadian foreign direct investment (FDI) on the Pittsburgh regional economy. These micro- and meso-economic relationships are contextualized by globalization of the world economy, represented by the changing economic geography of industrial production and trade (Berry, Conkling and Ray, 1997), and its legal and institutional regime established through the General Agreement on Tariffs and Trade (GATT) and the recently created World Trade Organization (WTO). Another important trend, and one that may reshape economic forces in different, continental patterns, is the multinational regionalism inherent in the two free trade agreements signed between the United States and Canada, which went into effect in 1989 and 1993 respectively: the Canada-U.S. Free Trade Agreement (FTA), and the North American Free Trade Agreement (NAFTA), which also includes Mexico (Doran and Drischler, eds., 1996; Morici, 1996; Mitchell-Weaver, 1993). Other important background factors include the macro-economic health of the Canadian and American national economies, the outward bound investment strategies of Canadian corporations (Meyer and Green, 1996; Rugman, 1987 and 1990), and the regional economic location, structure and performance of metropolitan Pittsburgh. Here we will focus on the specific behavior of Canadian multinational firms in Southwestern Pennsylvania, the influence of the FTA and NAFTA on their actions, the dynamics of the Pittsburgh regional economy, and the policy implications of our analysis for state and local decision makers.

Between 1970 and 1990 the Pittsburgh region lost over 158,200 manufacturing jobs, 52 percent of all jobs in secondary industry. Most of this loss had already taken place by 1986, with the almost total collapse of the area's regional industrial complex based on ferro- and non-ferro-metals, chemicals and glass (Ahlbrandt and Weaver, 1987; Hoern, 1988; Mitchell-Weaver, 1992). From the mid-1980s Pittsburgh has followed an economic development strategy of building public-private partnerships to promote the growth of advanced-technology industries (City of Pittsburgh, et al., 1985; Lee and Weis, 1984). The results of this approach have been ambiguous, with high-tech firm counts in Southwestern Pennsylvania varying in the mid-1990s (depending on the operational definition) between 500 and 2,400, and a high-end jobs estimate of 84,000 (PHTC and SPIRC, 1994; Regional Revitalization Initiative 1994; Rigopoulou and Mitchell-Weaver, 1996). There were still approximately 4,000 manufacturing firms in the region in 1992-93 –many of them smaller, privately-owned businesses producing diversified products in small lots for new markets—employing around 170,000 people, which accounted for 16 to 17 percent of the

labor force (Florida et al., 1992; Rigopoulou and Mitchell-Weaver, 1996).

In 1997 the six-county region's employment retention was "two steps up, 1 1/2 steps back", with major announcements of 800 new jobs coming into the region (Dick's Clothing and Sporting Goods and Toyo Tanso Specialty Materials) and 750 jobs lost (LTV's Hazelwood coke plant closure) (Pgh. Post-Gazette, 19-II-98A). Overall, the region gained only 5,200 jobs in 1997, recording a 4.7 percent jobless rate in December compared with 4.8 for Pennsylvania and 4.7 percent for the U.S. as a whole. The annual jobless rate was the best this decade (Pgh. P-G, 3-II-98). This performance was described as "sluggish" by one local newspaper (Pgh. Tribune-Review, 3-II-98). The president of Penn's Southwest Association (a creation of the Allegheny Conference on Community Development in 1972; see, Ahlbrandt and Weaver, 1987) reported that the economic growth rate in the Pittsburgh area was 4 percent, only one-half the 8 percent national rate, with Pittsburgh-area competitors growing even faster (Pgh. T-R, 12-II-98A).

The growing number of foreign-based firms in the Pittsburgh region enabled two new offices focusing on foreign-based businesses and organizations to open in 1995. The Pittsburgh region has benefited from economic development policies aimed at attracting multinational enterprises (MNEs), like major new investments by Sony in the old Volkswagen plant at New Stanton, and most recently the Marcegaglia Group of Italy –through its Pennsylvania subsidiary, Damascus-Bishop Tube Co.– has finalized a deal to purchase 31 acres of USX Corporation's old "Homestead Works," initially spending \$27 million, developing 350,000 square feet of manufacturing space (for specialty tubes and pipes), and creating up to 300 new jobs (Pgh. T-R, 16-II-98; Pgh. P-G, 19-II-98B). MNEs from Germany, England, Japan and Canada are the largest foreign direct investors in both Pennsylvania and the Pittsburgh region. Attraction of most such firms has been done by Penn's Southwest, the Allegheny County Commission and Economic Development Office, and newer organizations like the Pittsburgh Regional Alliance (PRA) (see Background section below) and its recently formed off-shoot, the Regional Marketing Coalition (RMC). The Pennsylvania Department of Commerce has also been an important actor in this field (Pgh. T-R, 26-XI-97; Pgh. T-R, 12-II-98B).

Unfortunately, in Pittsburgh as elsewhere in the United States, technical understanding of FDI is limited and is not usually an important input into regional economic development policy making. At the same time, attracting FDI has become a preferred strategy among U.S. economic development planners since the late 1980s. An empirical study of Canadian direct investment in the Pittsburgh regional economy can aid economic development efforts in a number of ways. First, we have constructed a database, with a count of firms, company names,

addresses, phone numbers, contact people, product lines, parent companies and forms of ownership. We have used a survey protocol for in-depth interviews with cooperating firms to determine, second, why they located in Southwestern Pennsylvania, and, third, what their impact on the region has been. Our survey obtained a wide range of information for a small group of Canadian MNEs (see Survey Methodology section below) on investments, products, value added, employment, average wages, input-output relations, other contact networks, and reasons for locational decisions. We believe public-policy efforts in the region can be aided through better comprehension of the economic and social impacts of FDI, more focused recruitment efforts, constructing related policies in areas such as labor market and infrastructure needs, industrial targeting, and understanding the cultural intangibles that find their way into Canadian firms' location decisions.

What sorts of locations are likely to attract Canadian direct investment to Pittsburgh? Our findings suggest that informed public choices can be made between various development initiatives, based on their likelihood of attracting Canadian FDI. Because of the industrial specializations and locational choices of existing firms from North of the Border in Pittsburgh, for instance, Toronto-based MNEs are a good target for promoting the Regional Industrial Development Corporation of Southwestern Pennsylvania's (RIDC's) seventh and latest project, Meadow Ridge Business Park, to be built on an 108-acre site near Interstate 79, targeting companies in light manufacturing and applied technology industries. Located at Mt. Morris in Greene County, a small village just north of the West Virginia state line, the facility enjoys a \$500,000 Infrastructure Development Grant, a \$530,000 low-interest loan from the Pennsylvania Industrial Development Authority (PIDA), another \$712,000 PIDA loan to the Park's first tenant (a company with 23 employees from Morgantown, WV that manufactures hydraulic and structural components for the mining industry), and a Greene County revenue bond for \$850,000 to finance basic infrastructure: access road, water and sewage (Pgh. P-G, 20-II-98).

On the other hand, "Tech World", an envisioned 1,000-acre high-tech park southeast of the Pittsburgh International Airport on the proposed six-mile, four-lane "Findlay Connector", supported by the conflict-ridden Southwestern Pennsylvania Regional Planning Commission (SPRPC), hopes to attract international giants like nearby Bayer Corporation, with its 1,800 employees (Pgh. T-R, 17-XII-97; Pgh. P-G, 22-II-98). Canadian MNEs with Toronto home offices are unlikely applicants for such a site, with their parent companies 6.5 hours away via I-79-Q.E. Way, or an hour's travel by air. The importance of location within the institutional network-space of Central Canada is probably imperative for Canadian MNEs' headquarters functions. And it is certainly much more important than Pittsburgh's notably cheaper land costs, or potentially quicker

access to the U.S. Northeast/midwest markets. More of these kinds of generalizations come in the last section of the article dealing with policy implications.

## 2. BACKGROUND

Before getting into more detail about the project itself, it is useful to explain the deeper conceptual motivations for our work; what Michael Storper (1997) has called recently "the evolution of regional specificities". This is an evolutionary process inside a particular region, in which assets become specific and relational to one another, creating unique localization patterns. Pittsburgh's dependence on steel and related industrial sectors created an industrial geography that grew along its waterways and formed a tightly-knit pattern of industrial specialization and social and labor relations. The profound socioeconomic displacements suffered in Pittsburgh during the 1980s caused an entire territorial economy, with its regional paysage, its physical plant, its technology, its production and social relations, its civic culture and its major political institutions simply to disappear in the matter of less than a decade. A long history of lived experience, in North American terms, almost a hundred and fifty years, suddenly became an anachronism. Individuals, communities and social guidance institutions were at a loss how to react to such a catastrophe. The Allegheny Conference on Community Development (ACCD) –Pittsburgh's first and most celebrated public-private partnership, founded by Richard King Mellon and Pittsburgh's mayor, David Lawrence, in 1943– set up study committees and new leadership organizations, starting in 1981 (see, Weaver, ed., 1987). But the Conference was unable to mobilize corporate resources, as it had in the past, to confront the uncountable problems caused by the collapse. After all, it was the ACCD's traditional corporate sponsors that had made the business decisions which wrecked Pittsburgh's prosperity. It was unreasonable to think that US Steel, Alcoa, Pittsburgh Plate Glass, Pittsburgh Paints and Westinghouse, just to name a few Pittsburgh-based industrial behemoths, would pour in the necessary resources to save the city and region they were abandoning. And they didn't. (Westinghouse has been the latest to pull up stakes and leave.)

Instead, what was offered up in the quasi-public planning process was a no-pain strategy –no pain for the ACCD or its sponsors– of developing a new "high-tech" industrial base centered on biomedical technology, computer industries and industrial robotics. The necessary new public-private partnerships (PPPs) were created, a little money was donated, university-connected high-tech industrial parks were planned and built (with public money), and high-tech business incubators were set up (also with public money) (see Ahlbrandt and Weaver, 1987). How many ex-steel workers, or their children' were ever going to work in such places though? Or become advanced-technology entrepreneurs? Where was

the venture capital going to come from? Looking back to the introductory section of this article, where it shows that there are still twice as many manufacturing jobs in Pittsburgh as the most optimistic estimates of high-tech positions, suggests a simple and straightforward answer to such vital questions. The new PPPs are basically impotent, they have no money. Population loss continued non-stop until 1995, with the region losing another 5.3 percent of its remaining population between 1990 and 1996 (Pgh. P-G, 14-XII-97). In 1996 there were fewer babies born than in any year in the last forty years, and there were 502 more deaths than births in the region's core, Allegheny County (Pgh. T-R, 20-XII-97). Job creation has been the worst in a broad multistate area. Lower than Buffalo, New York and Cleveland, Columbus and Cincinnati in Ohio; well below the national average, as we observed earlier. Pittsburgh's supposedly "bad labor climate" is a national byword (Pgh. P-G, 10-XII-97).

The undeniably poor showing of Pittsburgh's economic development efforts for the last ten years has given many responsible public figures reason to stop and rethink the problem. New groups have been formed, like the Pittsburgh Regional Alliance mentioned above, to combine the efforts of RIDC and three other major economic development agencies, Penn's Southwest, the Greater Pittsburgh Chamber of Commerce and the World Trade Center, Pittsburgh (Pgh P-G., 20-II-98). The Regional Marketing Coalition –a PR agency for the region, to attract inbound risk capital– is a spinoff of the PRA (Pgh. T-R, 26-XI-97). New reports have come out. Consultants have been hired to tell officials the region's infrastructure, especially the roads and bridges, are worn out, public decision making is much too slow and confusing, and the state of Pennsylvania's business climate ranks nearly dead last in the country (Pgh. T-R, 17-XII-97; Pgh. P-G, 17-XII-97; Pgh. T-R, 15-XII-97A; Pgh. T-R, 15-XII-97B). And since Pittsburgh and U.S.-based capital appears unattracted by Southwestern Pennsylvania, the new focus seems increasingly to be on finding foreign businesses that can be enticed to invest in the area, like the above-mentioned Italian steel group moving into the Homestead Works. What suggests a priori, however, that foreign firms, especially Canadian FDI, should be any more interested in Pittsburgh than domestic ones? What reasonable expectations are there that a strategy of foreign smokestack chasing will work out any better than a non-capitalized high-tech development program? Some tentative perspectives on these key questions can be put forward by a brief consideration of the North American Free Trade Agreement, the World Trade Organization, created by the Uruguay Round of GATT, and the known behavior of Canadian FDI.

Structural adjustment in Pittsburgh is, of course, an integral part of major shifts in world economic patterns that have become evident since at least the

1970s. Manufacturing has spread out across the globe, to Japan and the NIEs (the Newly Industrializing Economies), then Southeast Asia (ASEAN) and the more developed Latin American countries, and now to China and India. Many countries in these areas are fully industrialized, integrated into the international trading system, and their leading economic sector is manufacturing for export (i.e., export-lead growth) (see Krugman, 1992, 1995a). In a world dominated by the economic liberalization and free trade principles of the so called "Washington Consensus" (see Krugman, 1995b), they have become mighty competitors for markets in the wealthy old industrialized countries of North America and Europe. The East Asia economic crisis, which surfaced in July 1997 with devaluation of the Thai baht, is not only a matter of shaky currency and financial institutions. It provides proof that in many industrial sectors and market segments, at the global level, there are distinct signs of over-capacity and over-production. Much of this is the work of MNEs, which continually create new spatial divisions of labor to cut production costs and remain competitive. But increasingly, in an over-capacity situation, MNEs make their locational decisions on the basis of gaining market access, and, perhaps, for geopolitical reasons. For example, in 1995, 76 percent of U.S. manufacturing investments in favored locations abroad were in high-wage countries, led by Sweden. The runner up was Brazil, itself an industrialized country today with a booming domestic market, and probably the most important country in the Western-hemisphere U.S. sphere of influence. Third was Britain. And the reasons stated in a recent survey for these investment location choices were not access to cheap labor, but "(companies) are chiefly interested in establishing positions in large and prosperous markets with world-class production standards" (Pgh. P-G, 21-VIII-96).

But why all this concern about market access, especially in a world trading regime tending everyday toward greater liberalization? The answers may come from the higher realms of international political economy. As we have already mentioned, one trend in world trade is indeed toward a global free market. But another institutional development in international commerce is far less certain in its overall objectives or outcomes: the proliferation of regional trading blocs. From Central America to the Andes, the Southern Cone of Africa, and various parts of East and Southeast Asia (inside the territory of ASEAN) there are new or expanded multinational trading groups being formed every few months. They can run the gamut from simple free trade areas to would-be political federations (see Mitchell-Weaver and Bremm, 1993). In this article we focus attention on the most important of these for both Canadian MNEs and the economic health of Pittsburgh: NAFTA.

During the Trudeau governments of the 1970s and early '80s, Canadian

trade, investment and regional development policies were influenced by varying degrees of economic nationalism. Under a minority Liberal government reliant on the support of the socialist New Democratic Party (NDP), first, in 1974, the Foreign Investment Review Agency (FIRA) was created to insure that inbound FDI was of "significant benefit to Canada". Then the next year, PetroCanada was created and a National Energy Policy (NEP) was articulated with the same ends in view. As part of an historical swing between east-west nation building and north-south continentalism, a "Third Option" was adopted as Canada's grand economic strategy. It was meant to strengthen ties with the (then) European Economic Community and/or the Pacific Basin, lessening economic dependence on the United States. FIRA and the NEP brought strong political pressures from Washington, and neither West Germany nor Japan proved willing to make serious investment or trade commitments which would fulfill the Third Option's vision. Free of the NDP alliance, in September 1983 a federal policy paper officially acknowledged that the Pacific Basin economic option had failed and declared a shift in focus to closer economic ties with the United States (Department of External Affairs, 1983a; 1983b). The paper referred to the need for sectoral free-trade arrangements similar to the 1965 North American Auto Pact. Ottawa's new continentalist initiative led the way five years later to the Canada/U.S. Free Trade Agreement. Both the final Trudeau and Progressive Conservative Mulroney governments wanted to protect Canada's economic access and market share in its most important trading partner, the U.S., which was becoming increasingly protectionist under global industrial restructuring (see Weaver and Richards, 1985; Mitchell-Weaver, 1993).

Much has been written about the FTA in Canada. American lack of interest in the original 1989 agreement changed to a brief flurry of publishing activity with the inclusion of Mexico to form NAFTA in 1993. Most of this work focused on the macro-economic level of national and international impacts and policy, although some current affairs-type books reported on sectoral and regional concerns during the NAFTA debate (see Hufbauer and Schott, 1992; Weintraub et al. eds., 1991). There has been one comprehensive effort that we know of to compare the space economy and regional economic consequences of NAFTA in member countries (Mitchell-Weaver, ed., 1993). All three North American countries were covered (Deitrick, 1993; Marchildon, 1993; Tamayo-Flores, 1993), but these articles were written before the implementation of NAFTA and were forced to rely on secondary data, much of it of a macro-economic nature. The prime emphasis, as might be expected, was on trade not investment. If regional trading blocs do in fact promote free trade, then MNEs would appear to have no cause for worry about market access. But this does not seem to be the typical corporate reaction, as companies scramble to substitute investment in host countries for trade.

It is extremely difficult to say anything consequential about the regional development implications of the North American Free Trade Agreement only five years after its initiation. Special problems such as agriculture and labor-intensive consumption goods producers in various areas can be easily identified, but the wholesale use of unprotected migrant labor in these industries makes their case of questionable significance to North American regions in general. Computable general equilibrium (CGE) models constructed by economists suggest widely different outcomes for NAFTA, depending on the assumptions adopted by the modelers (see for instance, U.S. Congressional Budget Office, 1993; Stanford, 1993; Bachrach and Mizrahi, 1992; Lustig, Bosworth and Lawrence, eds., 1992; and U.S. International Trade Commission, 1992).

This makes it very hard to predict the movement of high-skill manufacturing and service jobs from one place to another as a result of the agreement. Most analysts agree that lower-skill employment will probably move south from Canada and the United States to Mexico, but job growth in the northern countries in response to increased Mexican demand for industrial commodities and high-technology services is an open question. Critics argue that NAFTA is really about capital flows and the property rights of MNEs (Robinson, 1993; Spriggs, 1993). But this is of limited significance in and of itself without a serious review of existing global trends in the ever-changing spatial division of labor, and very importantly, a thorough consideration of evolving production technologies (i.e., automation). The impact of worldwide economic cyclical trends and national monetary policies are also of the utmost moment, when trying to learn from the FTA/NAFTA experience (Morici, 1996). Progress reports by the Clinton administration in the U.S. last year caused endless controversy, depending whether they focused on exports versus jobs, wages or living standards (Pgh. T-R, 11-VII-97; Business Week, 19-V-97).

Nevertheless, Canadian trade policy continues to support several related basic GATT/WTO and NAFTA-related goals:

1. promoting continuous improvements in quality and precision, and expansion of the coverage, of international rules governing trade and investment;
2. seeking guaranteed access to the U.S. and other foreign markets, while welcoming increased competition at home; and
3. ensuring that Canada can continue to fully exploit its ability to govern at home (Fried, 1997, 2).

Today most Canadian imports and exports are no longer subject to tariff and –increasingly– non-tariff barriers. And in addition, "(a)n independent study by the consulting firm KPMG Canada has found that the overall costs of doing business in Canada are lower than in the United States and five leading European countries (Canadian Embassy, 1997). Though puzzlingly, Canadian productivity has fallen to 68 percent of U.S. levels (Morici, 1996). With these paradoxes, North American integration seems to be moving apace (Alper and Loucky, 1996). And like in Europe, foreign direct investment is a key to continental economic integration (Yannopoulos, 1990; Doran and Drischler, eds., 1996).

So what do we know at this point about NAFTA and regional development in "high-business-cost" Pittsburgh? The honest response is not much. Early empirical analyses, like those at the national scale, are ambiguous (Pgh. P-G, 11-VI-97). Whether there is a dominant trend of Canadian firms moving to the U.S., or Pittsburgh-based firms expanding in Canada, is simply unknown. As MacPherson and McConnell (1990) observed at the beginning of the decade, no level of government on either side of the 49th Parallel has a systematic tracking system for cross-border FDI. What can we find out about why Canadian firms invest below the border, and more particularly, why do they come to Southwestern Pennsylvania?

From a Canadian perspective, Allen Rugman has identified six major determinants of FDI by MNEs:

1. The desire to overcome tariff and other barriers to trade,
2. Exploitation of monopolistic advantages such as the area of technology, management or research,
3. Large market size in the host economy, which may allow a firm to enjoy economies of scale and to engage in horizontal integration,
4. Lower costs of production abroad, for example, low labour costs or lower borrowing costs,
5. Possible tax avoidance by manipulation of profits between subsidiaries and by use of transfer pricing,
6. Management reasons such as prestige and empire building (Rugman, 1980, cited in Meyer and Green, 1996).

During the 1980s and 1990s, the favored location for Canadian FDI has been the United States, and for over a decade direct investment in the United States has risen to remarkable levels, today equaling about two-thirds of U.S. investment

in Canada. Or stated another way, on a per capita basis, Canadians invest seven times as much in the United States as Americans do in Canada (Deitrick and Mitchell-Weaver, 1997). Rather than the often feared American economic takeover of Canada, the pattern of the last ten to fifteen years has been one of North American integration (National, 1996), including some rather spectacular Canadian acquisitions, such as Canadian National Railways purchase of Illinois Central railroad in a \$2.4 billion cash-and-stock deal in February 1998 (Pgh. T-R, 11-II-98).

Most studies of Canadian FDI have focused on the U.S. and have used company questionnaires, as we have done in our analysis. "Likely because of data limitations, most of these 'company-profile' approaches have frequently depended on a small sample of large conglomerates to represent total Canadian multinational behaviour" (Meyer and Green, 1996). That is indeed the case for our Pittsburgh study. Looking at the United States as a whole, Drennen (1997) found that at the state level, using size of Canadian investment measured by value added, that Canadian FDI was associated with size of the state market (in value added), border versus nonborder status (not significant at the .10 level, however), and negatively with four or more years of higher education. Percentage of state workforce unionized seemed unimportant, as did most other state socioeconomic characteristics. Her adjusted R-squared explained 48 percent of the variation in Canadian FDI between 36 American states. Fifty-nine percent of Canadian investment was in the manufacturing sector, spread broadly across 19 two-digit SIC codes, and accounted for 1,257 establishments and 226,449 jobs in 1996.

In a survey-based analysis of 58 Canadian-controlled firms in Western New York State, MacPherson and McConnell (1990), found that Canadian FDI was not driven by the trade and investment provisions of the Canada/U.S. FTA. But:

Rather, Canadian companies have been attracted by a combination of competitive factor costs, locational advantage (proximity to U.S. regional markets), and accessibility to parent corporations in central Canada. In addition, Canadian direct investment has been accompanied by cross-border flows of technology, information, merchandise, and management expertise. These flows are distinctly two-way in focus, providing both southern Ontario and the study region with significant commercial benefits, and suggesting the existence of strong economic synergy within the cross-border region (p. iv).

Factor costs in Western New York were found to be significantly lower than those in Toronto or Southern Ontario, especially labor, land rents and corporate tax (p. 3). All but two of the firms had their parent headquarters in Southern Ontario (n = 50 in metropolitan Toronto) (p. 7). Over 50 percent of American subsidiary

managers in the MacPherson and McConnell survey ranked the following locational factors as "important" or "very important":

- the close proximity of the study area to metropolitan Toronto;
- the desire of the parent corporation to expand outside the Canadian domestic market;
- the importance to the parent of having a physical presence inside the United States;
- the proximity to existing transportation facilities inside the United States;
- the need to be centrally located with respect to the establishment's principal market area;
- the availability of important labor supply (p. 7).

Three other important firm characteristics reported were that most preferred greenfields sites to acquisitions, manufacturing companies (41 percent of sample) tended to grow much larger after initial establishment than service firms, and –as in Drennen's (1997) state-level study– manufacturing firms were spread rather evenly across ten of the possible twenty two-digit SIC categories (p. 9). These were mostly in unionized, moderate-pay, low-tech, consumer goods industries: food, furniture, printing and publishing, rubber and plastics, metal fabricating, electrical equipment, leather, primary metals, industrial machinery, and apparel (pp. 8-9).

Western New York is very much like Southwestern Pennsylvania. There is a measurable movement of FDI into the Pittsburgh region, led by companies from Germany and Britain. But would they have invested in the U.S. in any case, to reap the significantly lower-than-EU production costs, or are they investing before the protectionist NAFTA barn door swings closed? More to the point, will MNEs from Southern Ontario find long-term reasons to invest in Southwestern Pennsylvania? Shouldn't their Canadian plants be protected not only by NAFTA, but also by the Uruguay Round of GATT and the WTO, meant to further liberalize world trade and adjudicate international trade disputes, as Jonathan Fried, Canada's NAFTA Coordinator in the Department of Foreign Affairs and International Trade, observed above for Canadian trade policy goals?

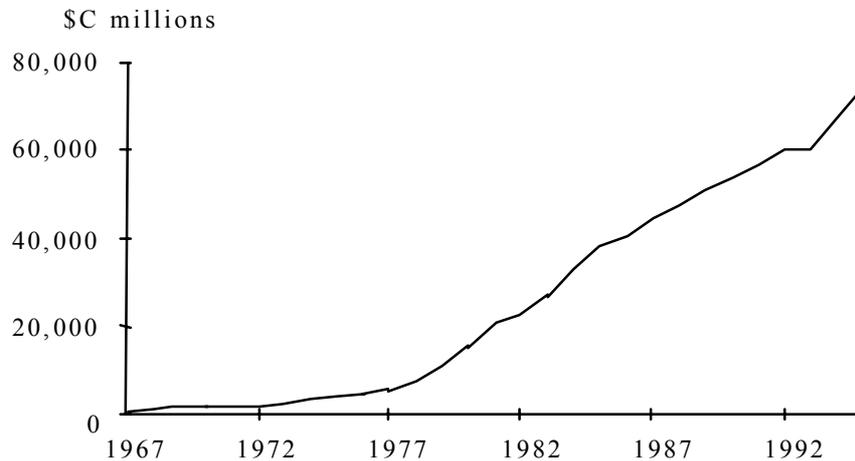
If the rules of NAFTA and the Uruguay Round and WTO prevail, would-be foreign investors in Pittsburgh would come either to cut transport costs for finished products, lower production costs, or because of profits to be gained from acquiring Pittsburgh based production assets. If trading-bloc and bilateral disputes get out of hand, and the WTO proves powerless to enforce its decisions on important world

actors, foreign firms may be drawn to the Pittsburgh region to avoid various types of economic sanctions, either based on the rules of the North American Free Trade Agreement or because of actions taken by the U.S. President, the U.S. Trade Representative, the U.S. Department of Commerce, or the U.S. Congress; such as the Helms-Burton Act which irritates Canadians so. The question reemerges, however, why should foreign firms, especially Canadian firms, choose to invest in Pittsburgh, rather than, say, New York, Ohio or Alabama? And if they do come to Southwestern Pennsylvania, what will be their socioeconomic impact on the region? We will now provide some empirically-based answers to these questions.

### **3. SURVEY METHODOLOGY**

Our study began as part of a broader inquiry investigating the impacts and location decisions of FDI on the Pittsburgh region (Allegheny, Beaver, Butler, Fayette, Washington, and Westmoreland counties). This included analysis of German, U.K., Japanese, and Canadian investment in the region. Unfortunately, no one reliable source of foreign direct investment is available in the U.S. and research must use multiple sources to ascertain the foreign-owned establishments (MacPherson and McConnell, 1990). We assembled our database of foreign investors in the Pittsburgh region from different sources and cross tabulated the results. These included: business directories (Levine, 1995), local economic development organizations, including Penn's Southwest Association (1996) and the Urban Redevelopment Authority of Pittsburgh, Commonwealth of Pennsylvania Department of Commerce, foreign chambers of commerce and trade organizations (American Council on Germany, 1996; British-American Chamber, 1995; German-American Chamber, 1994; SPRDC, 1992), the government of Canada (Canada Trade Office, 1996), and U.S. Department of Commerce. From these sources, we developed a data base of 185 firms located in the Pittsburgh region in 1996 (88 German firms, 47 U.K. firms, 34 Japanese firms and 16 Canadian firms).

***Figure 1: Canadian Direct Investment in the U.S., 1967-1995***



Source: Statistics Canada, 1996.

Of the 185 firms in the database, we began with 16 Canadian-owned firms. Canadian firms were separated from the original study group for methodological reasons. The number of Canadian firms was too small to use statistical testing methods of difference. We also theorized that, since NAFTA, Canadian firms' incentives to invest in the U.S. may differ from European and Asian businesses wishing to establish a presence in North America, as we wrote at the end of the previous section. Canadian investment in the U.S. has continued to grow in the 1990s (see Figure 1). In 1989, the year the FTA went into effect, Canadians invested \$4.4 billion in the US, or 6.2 percent of total FDI to the U.S. By 1995, the figure increased to \$6.5 billion or 11.9 percent of the total (Fahim-Nader and Zeile, 1996). In the 1990s, the U.S. contained over half of Canada's foreign subsidiaries (Meyer and Green, 1996).

**Table 1: Canadian-owned Subsidiaries in the U.S., by U.S. State, 1990**

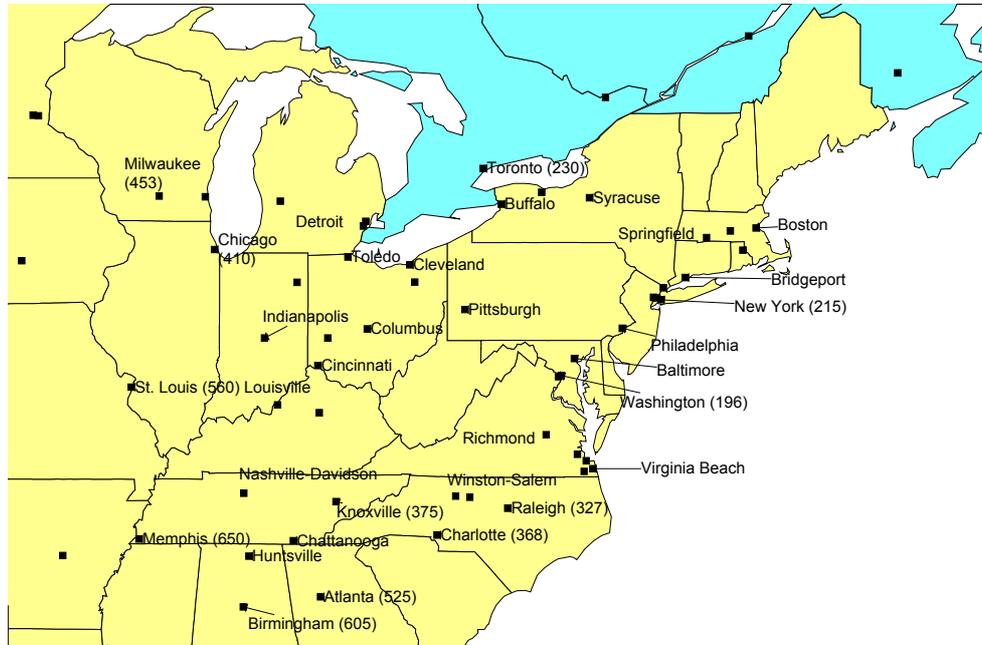
Ranking	State	Number of subsidiaries	Percent of total
1	New York	105	12.4
2	California	58	6.9
3	Illinois	44	5.2
4	Washington	40	4.7
5	Texas	38	4.5
	Florida	38	4.5
6	Massachusetts	32	3.8
	Michigan	32	3.8
7	Colorado	28	3.3

	Ohio	28	3.3
8	Minnesota	27	3.2
	Georgia	27	3.2
9	<b>Pennsylvania</b>	24	2.8
	Arizona	24	2.8
10	New Jersey	23	2.7

Source: Meyer and Green (1996). Total number of subsidiaries = 845.

Pennsylvania ranks ninth among the largest U.S. states receiving Canadian FDI. In 1990, Pennsylvania was the home to 24 Canadian subsidiaries or 2.8 percent of Canadian-owned firms in the US (Meyer and Green, 1996). Four states –New York, California, Texas and Florida– accounted for 28 percent of Canadian-owned firms in the U.S. (see Table 1). Viewing our data against Meyer and Green’s (1996), we concluded that perhaps at least half –or more– of the Canadian-owned subsidiaries in Pennsylvania were in the Pittsburgh region. Pittsburgh’s proximity to Southern Ontario and to major U.S. markets and its direct transport links to metropolitan Toronto should give Southwestern Pennsylvania a locational advantage over other metropolitan areas in the state. Like Western New York, the territorial economy of Pittsburgh and its regional localization patterns are closely related to Canada’s major economic access point and port of entry to the U.S. (see Figure 2).

**Figure 2: Location of Pittsburgh, Pennsylvania, and 500 mile radius**



From our list of Canadian firms, we then attempted to contact the 16 firms in our database to ascertain their status and actual presence in the region. Firms had to conform to two criteria: investment exceeded 10 percent of equity capital and the parent was physically located in Canada. We then investigated each firm to determine which ones had a physical presence in the region. Subsequent contacts and investigation revealed that two companies were sold and were no longer Canadian owned. Three other companies could not be located or no longer had a local listing and were discarded. Left with 11 firms in the study sample, we chose to conduct in-depth case study analyses of the firms' location and investment decisions rather than to use a scaled questionnaire. Of these eleven remaining firms, four firms would not participate in the study; these were primarily small (1-3 persons) sales office operations, leaving the study size of seven Canadian firms.

#### **4. PROFILE OF CANADIAN DIRECT INVESTMENT IN THE PITTSBURGH REGION**

Canadian FDI in the Pittsburgh region shares many similarities to research results obtained from Western New York (MacPherson and McConnell, 1990). Six of the seven companies in the study group were in the manufacturing sector (see

Table 2), with the remaining firm in financial services. This breakdown conforms to studies examining Canadian FDI nationally, with Canadian investment in the whole of the U.S. concentrated in manufacturing, primarily, and financial services (Drennen, 1997; Meyer and Green, 1996). Four of the six manufacturing companies operated a plant or plant and sales office within the region. The remaining firms in the study group consisted of sales or distribution offices only, with no production facilities. Although Canadian FDI in the U.S. usually contains a strong mining component, particularly in select regions, despite coal mining activities in southwestern Pennsylvania, the only Canadian investment in mining that we found was recently sold to an American enterprise.

**Table 2: Canadian Direct Foreign Investment Establishments in the Pittsburgh Region**

Case	Industry	Type of local operation	Year established in Pittsburgh
Firm 1	Manufacturing	Plant	1988
Firm 2	Manufacturing	Plant	1987
Firm 3	Manufacturing	Plant & sales office	1992
Firm 4	Manufacturing	Plant & sales office	1986
Firm 5	Financial services	Sales office	1990
Firm 6	Manufacturing	Distribution office	1937
Firm 7	Manufacturing	Sales office	1992

*Source: Authors' interviews.*

#### 4.1. Firms' Location Decisions and NAFTA

Most of the Canadian-based firms in the Pittsburgh region were new business establishments rather than acquisitions of or mergers with existing firms. Recent research on Canadian direct investment in the U.S. shows conflicting conclusions on types of Canadian direct investments. Meyer and Green (1996) found that acquisitions and mergers have been the most important form of Canadian FDI generally, while MacPherson and McConnell (1990) found new business formation the main form of Canadian direct investment in Western New York. The firms in our study conform to the New York case results. Of our seven firms, five represented new business establishments and only two were set up by acquiring an existing company.

This research began with a set of questions about what NAFTA's influence would be on FDI in the region. Pittsburgh has a strategic location for access to the U.S. market. It is within a 500 mile radius of over half the U.S. population and well over 50 percent of the Canadian population (KPMG, 1991). Furthermore, 67

percent of total U.S. manufacturing output is located within this radius. It is also rated as a low-cost international business center (Mukherjee, 1997), which, like Western New York, has significant cost advantages over Southern Ontario and metropolitan Toronto. Despite Canada's cost advantage compared to world cities (Friedmann and Wolff, 1982), for light manufacturing activities, at least, nearby U.S. regions, such as Southwestern Pennsylvania, offer production cost advantages over Canada's core region.

Our study shows that a majority of Canadian investments in Pittsburgh were made before the 1989 FTA. Thus the presence of the FTA did not increase Canadian investment in Southwestern Pennsylvania. As we had speculated in the Background discussion, Canadian direct investment decisions may have changed with decreases in trade barriers. This presents a conflicting set of considerations. On the one hand, Pittsburgh's lower production costs compared to Canada's core region made it a nearby production alternative, with good access to the U.S. market, when there were barriers to trade. However, under NAFTA, Canadian production has guaranteed access to the U.S. market. Firms may not need a nearby U.S. production facility anymore, and they can optimize the internal scale economies of their Canadian plants.

We conclude that NAFTA's influence on Canadian direct investment in the Pittsburgh region has been modest, at best, to date, for existing firms. Only one firm stated that NAFTA had an effect on their Pittsburgh-based operations, allowing them to expand their local production as sales grew. NAFTA helped two other firms expand their North American sales, but it did not have a specific effect on their Pittsburgh-area operations. Of the remaining firms, NAFTA has not influenced either their production or sales plans in the Pittsburgh region in the near term.

Though NAFTA has not been drawing new Canadian firms to Pittsburgh, the region's location, transportation access and proximity to Canada are among the most important variables that had influenced existing firms' decisions. Owing to the small number of firms in the study, we can only summarize the reasons for the firms' location decision rather than test them statistically. The main reasons for companies decisions to locate in the Pittsburgh region include:

- Transportation access, including highway and airport access,
- Proximity to Canada,
- Availability of a suitable site or plant in which to set up a facility,
- Labor quality,
- Government incentives,

- Proximity to markets, and
- Proximity to suppliers.

#### **4.2. Incentives and Partnerships**

Much research has been conducted on the importance of financial, tax and other government incentives in a firm's decision to choose a new location. Although the results are mixed, depending on such factors as the size of the firm's investment, location preference, and so on, government policy can influence a firm's location decision (Marvel and Shkurti, 1993). Certain government assistance, such as highway or transportation improvements and education and training, are generally regarded as important by most (Glickman et al., 1989; Glickman and Woodward, 1989). Other incentives, such as tax abatements, industrial loans, grants and other forms of financial assistance, are rarely a central component of a firm's location decision, but can be influential later on in the decision making process (Glickman and Woodward, 1989).

Of the firms in this study, two cited government incentives as one of the reasons for their location decision; both were new businesses in the region. Both received low-interest industrial development loans, promoted by a local economic development group. Both firms also actively worked with a local economic development agency during their location decision process and have been involved in local business associations since establishing operations in the region. None of the other new business establishments located in the Pittsburgh region because of government incentives.

While all the firms participate in some sort of producer associations, we were interested in their activity with local economic development groups, such as chambers of commerce and development councils. As stated above, the two companies who worked with economic development recruiters before their location are active in local and regional business and economic development associations. Of the other new businesses started in the region, none participated in local associations. The remaining firm that does participate in local development organizations was the company that represented an acquisition of an existing firm. Only one firm had formal ties to a local university, outside of recruiting, and received technical assistance on standards from university faculty.

Ties from Canadian-owned firms to the local and regional public and nonprofit sectors vary. Companies that received recruiting assistance and publicly financed low-interest loans were far more likely to have other business association ties in their local area. Firms that received no government assistance also had few, if any connections, to economic development and business associations in the

region.

### **4.3. Employment**

We queried firms about their employment in the region, recruitment and types of workers employed. The firms averaged 112 employees, ranging from 2 to 285. The firms with production facilities averaged 188 employees. Thus most of the Canadian investment in manufacturing in the region represents medium-sized facilities, with over one hundred employees.

Of those four firms, three were unionized. Again, despite contradictory evidence in the literature on the effects of unionization and foreign firm recruitment, we found a strong union presence among manufacturers. Recent German automobile transplant operations have favored nonunion southern locations over locations in the industrial midwest. Research on the automobile transplants during the 1980s likewise remained divided on the issue of unionization and its effects on FDI. What has emerged is that some plants were unionized while others were not (Kenney and Florida, 1991 and 1992). Glickman et al. (1989) found that in the U.S. in the computer, semiconductor and auto parts industries, foreign companies rated the lack of unions higher among location factors than did domestic companies. Nonetheless, among the three industries, the relative importance of the union factor differed from among the most important to among the least important.

What is clear from the literature is that the role or importance of unions depend on factors that may not have been tested in the research. State-level survey data may cloud the importance or militancy of unions in any one metropolitan region over another. Location within an urban area may likewise cloud a tested union factor, with locations on the metropolitan edge or nearby rural locations being seen as less of a labor threat than other more urbanized locations. Though Pittsburgh is often portrayed by its growth coalition as suffering from its union image, three of four manufacturing firms in our study were unionized, and managers did not report this as a negative factor. The perception of the union factor may be stronger than the reality for foreign-owned companies used to dealing with unions in their home location. The three firms in this study that were startups in new locations, furthermore, were located along the fringes of the urbanized area, well away from the central city and nearest to major highways and airport access. Fitting well, as mentioned earlier, with RIDC's recent industrial park development strategy, but not attracted by regionally-specific localization patterns along the old Three Rivers industrial complex. Our results on

unionization, though, remain inconclusive; we do not have the negative cases of firms who decided not to locate in the region because of a union presence.

**Table 3: Average Hourly Manufacturing Wages, Case Firms  
Pittsburgh MSA, and Pennsylvania**

Case	Average Hourly Wage (\$)	Firm's wage as percent of	
		MSA	State
Firm 1	14.19	95.3	102.0
Firm 2	18.17	122.0	130.6
Firm 3	13.00	87.3	93.5
Firm 4	13.50	90.7	97.1
Mean	14.72	98.8	105.8
Pittsburgh MSA	14.89	100.0	107.0
Pennsylvania	13.91	93.4	100.0

*Source: Pennsylvania Department of Labor and Industry, December 1997; authors' interviews.*

Canadian firms in the Pittsburgh region generally pay at or near the prevailing manufacturing wage (see Table 3). Three firms paid below the metropolitan area's average manufacturing wage and one paid more. Taken together, we can conclude that the Canadian firms' pay rates for production workers conformed to the region's norm, and were slightly higher, on average, than the state rate.

Most firms reported no difficulty in recruiting production workers in their plants and tended to hire from the regional labor market. Only one firm reported using a local technical training school to find new employees. Recruitment for management and engineering personnel was regional and national in scope, and employers had a somewhat more difficult time recruiting those workers. Only one firm reported using a local university to recruit entry-level engineering workers.

#### **4.4. Regional linkages and spillovers**

In addition to the direct employment and investment impacts that FDI has on a regional economy, we hypothesized that additional investment in the region would result in indirect effects, as well. These are generally viewed through the linkages that firms form with other businesses in the local and regional economies. Foreign direct investment can create spillovers to the regional economy through local linkage formation in a number of ways, however. In our research we were concerned with three such effects of FDI: increased local linkage formation that can produce multiplier effects regionally, technology transfer and spillovers that

increase regional productivity, and impacts on labor skills.

The role of interfirm linkages in regional development dates back to 1950s development theory (Hirschman, 1958; Myrdal, 1957). Industrialization could proceed apace with the formation of backward and forward linkages from a new investment in the regional economy. The rise of regional linkages –increases in supplies and sales in the regional economy– would generate cumulative effects –multiplier effects– for the region. Researchers began studying the role of linkage formation from direct foreign investment in the 1970s and 1980s in the developed world, as multinational firms built production facilities around the globe and governments offered financial and other incentives to lure foreign investors (Britton, 1974; Scott, 1983). Results proved to be mixed, depending on the types of firms studied, the year of their investment, their size and location, and the temporal scope of the research. Linkage effects were limited when the investment was a simple assembly-type operation and the firm invested little beyond the plant itself. Extensive linkages were forged when firms increased their purchasing of local supplies, business services and attracted other suppliers to nearby locations (Deitrick, 1990).

For the Pittsburgh region, an example of the latter would include the Sony Technology Center in New Stanton, mentioned earlier. Sony employed 250 people when it began producing rear projection televisions in 1992; by 1997, Sony and its partner firms employed 2,000 people (McKay, 1997). In addition, the firm uses 800 suppliers from central and western Pennsylvania and, to date, has attracted one new Japanese supplier firm to the area. Sony's investment in the facility now totals \$500 million. The backward linkages the firm has forged, the continued new investment and expansion of the facility, and the attraction of new firms to the area implies that the firm has generated important multiplier effects.

Our Canadian firms varied in their purchasing and sales relations. First, we found intra-corporate linkages strong in only one of our firms. One hundred percent of the firm's output was sent to another firm operated by the parent company. Intra-corporate linkages represent between one-third and one-half of international business (Root, 1990). We would have expected intra-corporate arrangements to be more prevalent among our set of firms. External backward linkages should probably be characterized as moderate to low. Three firms purchased between 25 and 35 percent of their supplies in southwestern Pennsylvania, while the rest of Pennsylvania accounted for between 5 and 15 percent of supplies purchased. Supplying industries found locally included: glass, PVCs, metal pieces and miscellaneous parts.

All the firms in the set sold most of their output in the U.S. market. Only one firm mentioned that some of their output went to Canada, and this was as an input to another plant run by the parent company. Local and regional markets were important for four firms, whose location decision was based in part by the presence of the local market. Four firms also sold nationally and internationally, as well. It is difficult to draw conclusions from this set of firms. We can conclude that the local and regional market is only one part of a firm's interest in Southwestern Pennsylvania as a location. Clearly some Canadian firms have established operations here not based on the local or regional market per se, but on the access and proximity to other U.S. and Canadian markets. Whether these considerations will remain important in the post-NAFTA decision making environment is unclear.

None of our firms conducted research and development in their Pittsburgh area facility. We can conclude that these plants generally are production facilities only, with R&D retained in home operations in Canada. Thus we expect that few technological spillovers have occurred from these plants. Two plants have made process changes in their operations since establishing their facility and five firms also specified that they would be producing new product lines from their Pittsburgh operations. Thus these plants are used by the parent company to keep up with market changes and upgrade their facilities.

## **5. CONCLUSIONS AND POLICY IMPLICATIONS**

Despite decades-long increases in Canadian direct investment in the U.S. –and despite proximity to both the Southern Ontario business agglomeration and over half the U.S. market– the Pittsburgh region has not capitalized on its broad locational advantages to gain Canadian FDI. The region is home to approximately 185 German, U.K., Japanese and Canadian firms, but Canada remains the smallest foreign investor in both number and visibility in the region.

Our research on Canadian direct investment in the Pittsburgh region has reached a number of conclusions:

- None of the firms in our study located in Pittsburgh after the NAFTA agreement, though NAFTA has influenced some firms' production and sales activity,
- Pittsburgh has some important potential location advantages for Canadian firms seeking a U.S. base, including market access and proximity to Canada. The region has not capitalized on either in marketing itself, however,
- Most Canadian investments in the region are new business establishments, rather

than mergers or acquisitions. As elsewhere in the U.S., most are in light manufacturing. The region needs to develop and promote the kind of space and buildings that these operations prefer, in proximity to the I-79 corridor,

- Some Canadian firms benefited from low-interest industrial loans and these helped the firm to select the region. Such incentives need to be marketed in the way firms view location decisions, directly to the firm by the *region*, not by towns and counties (through, for instance, Penn's Southwest, the Pittsburgh Regional Alliance, and the Regional Marketing Coalition),
- Continued infrastructure improvements in the appropriate intra-regional setting aid in attracting FDI,
- Despite the ongoing public pillorying of the region's labor environment, most of our Canadian manufacturers were unionized. The firms paid at or slightly below the average manufacturing wage for the region. They employed mainly semi-skilled workers without a four-year university education, again conforming to the pattern of Canadian FDI in the U.S.

We believe public-policy efforts in the region can be aided through better comprehension of the probable economic and social impacts of Canadian FDI, more focused recruitment efforts, constructing related policies in areas such as labor market and infrastructure needs, industrial targeting, and understanding the cultural intangibles that find their way into Canadian firms' location decisions.

Pennsylvania Governor Tom Ridge's recent efforts to promote the state as a location for Canadian firms seems a first step in the right direction. The Pittsburgh region could begin to build on his lead and work to attract more new Canadian direct investment, like the Philip Services Corp. (Pgh. P-G, 7-II-98) which recently came to the area. Market access and proximity to Canada are two location factors that have drawn Canadian firms to Pittsburgh. But the region needs a more visible means for promoting Pittsburgh as a location to potential Canadian investors. A business association, such as the American Council on Germany and the British-American Chamber of Commerce, both of which have offices in Pittsburgh, could help serve this purpose. The region needs a more identifiable link with Canada. The German and British groups could serve as models for such an organization.

Our study suggests that the Pittsburgh Regional Alliance, the Pennsylvania Department of Commerce, and the Pennsylvania Industrial Development Authority could initiate a number of activities to help promote Canadian FDI, including:

- Creation of a mechanism for systematic tracking of cross-border economic

activity,

- Coordinated institutional support for a regional one-stop shop for economic development; i.e., one agency playing the lead role so investors may have a clear idea of where to go for information and assistance,
- Encouragement of a professional business association of Canadian investors, along the lines of the British-American Chamber of Commerce or the American Council on Germany,
- Providing available space and a standardized package of incentives for light manufacturers seeking I-79 transportation corridor access, fitting Pittsburgh's changing regional localization patterns to Canadian needs,
- Serious support –both logistic and financial– for further policy-oriented research in Southern Ontario and metropolitan Toronto to learn more about the headquarters' perspectives of Canadian MNEs, and
- Preparation and dissemination by the Regional Marketing Coalition of a carefully thought out "Pittsburgh Promotional Package" (bilingual English/French), aimed specifically at business leaders in Ontario and the rest of Central Canada.

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**LES INVESTISSEMENTS DIRECTS CANADIENS,  
L'ALENA ET L'ÉVOLUTION ÉCONOMIQUE DE LA RÉGION DE  
PITTSBURGH**

*Résumé* - Cet article analyse l'impact des investissements directs étrangers canadiens sur la situation économique de la région de Pittsburgh. Les auteurs étudient le comportement spécifique des entreprises multinationales canadiennes installées dans le sud-ouest de la Pennsylvanie, l'influence qu'exercent respectivement l'accord de libre-échange entre le Canada et les États-Unis et l'accord de libre-échange nord-américain sur les actions de ces entreprises, les dynamiques économiques propres à la région de Pittsburgh et les implications politiques de cette situation pour les responsables étatiques et locaux. D'une façon générale, les investissements directs étrangers canadiens n'ont eu qu'un impact limité sur l'économie régionale et l'ALENA a probablement découragé l'apport d'investissements supplémentaires.

**INVERSIÓN DIRECTA AXTRANJERA CANADIENSE, EL ACUERDO  
NORTE AMERICANO DE LIBRE COMERCIO Y LA ECONOMÍA  
REGIONAL DE PITTSBURGH**

*Resumen* - El artículo proporciona un análisis del impact de la inversion

*canadiense directa en la economía regional de Pittsburgh. Nos concentramos en el comportamiento específico de las firmas canadienses multinacionales en el suroeste de Pensilvania, la influencia del Acuerdo de Libre Comercio entre Canada y EE UU y el Acuerdo Norte Americano de Libre Comercio sobre los acciones de estas firmas, la dinámica económica de la región de Pittsburgh, y las implicaciones sobre acciones políticas de nuestro análisis para el estado y los gerentes locales. En general, las inversiones directas canadienses sólo han tenido un impacto modesto sobre la economía regional, y el NAFTA puede haber tenido una influencia negativa sobre inversiones adicionales en esta zona.*