
FOREIGN INVESTMENT, COMPETITIVENESS AND TRADE

Charles R. Handy and John A. Bamford

INTRODUCTION

Foreign direct investment (FDI) is increasing globally. FDI has become a key factor in the restructuring of the global economy as we enter the new millennium. Issues surrounding the linkages among trade, investment, competitiveness, economic growth, employment, and the business climate are increasingly becoming key aspects of government policy. This paper attempts to provide some background information on trends in FDI and its relationship to some of these issues and policy concerns, including the capability of our analytical tools to effectively deal with the policy aspects of these issues.

This paper starts with a review of global trends in aggregate FDI and trends in aggregate FDI within the NAFTA countries, followed by a review of trends in agri-food sector FDI within NAFTA. The second section presents information on the nature of investment attractiveness and reviews the factors that affect this. The third section of the paper presents some discussion of the linkages among FDI, competitiveness and trade, and identifies some of the related policy issues. The final section of the paper briefly discusses the need for policy analysis of the agri-food system and the gaps between this need for analysis and the capability of current analytical tools.

TRENDS IN FOREIGN DIRECT INVESTMENT

Global Trends

Facilitated by increased trade and investment liberalization, FDI has been growing faster than international trade (16.7 percent vs. 7.7 percent average annual growth from 1991 to 1997), reaching record highs in 1995, 1996 and again in 1997

(Table 1). This environment has also heightened competition among nations in attracting international investment. The ten largest host countries received about 65 percent of FDI inflows in 1995 while the smallest 100 recipient countries received only 1 percent. Developed countries accounted for 60 percent of world FDI inflows and 86 percent of world FDI outflows on average for the period 1995-1997.

Table 1: World FDI-Inflows and Exports

	1991	1992	1993	1994	1995	1996	1997
	(Billions of U.S. Dollars)						
FDI-Inflows	158.9	175.8	217.6	243.0	331.2	337.6	400.5
Exports	3418.0	3661.0	3651.8	4169.0	4969.0	5172.2	5333.1
FDI-Index	100	111	137	153	208	212	252
Export-Index	100	107	107	122	145	151	156

Source: World Investment Report. 1997,1998. UNCTAD, United Nations; and Monthly Bulletin of Statistics, Vol. LII No. 10-October 1998, United Nations.

Over the past 25 years there have been three global FDI-boom periods and two FDI-recession periods (Table 2). The world's largest 100 transnational corporations (excluding banking and financial institutions) with roughly \$US 1.4 trillion in assets abroad, account for about one third of global FDI stock, and are all based in developed countries (Table 3).

Table 2: Global Trends in FDI Flows – Developed, Developing Countries and the World

	Developed Countries		Developing Countries		The World	
	In	Out	In	Out	In	Out
	(Annual Averages in Billions of U.S. Dollars)					
FDI-boom periods						
1979-1981	36.8	55.8	16.3	1.3	53.2	57.1
1986-1990	131.8	163.5	26.3	11.7	158.9	175.1
1995-1997	213.3	316.4	128.1	52.0	356.4	369.9
FDI-recession periods						
1975-1977	14.6	27.3	6.5	0.4	21.1	27.8
1991-1992	117.2	184.7	45.6	15.0	166.3	199.8
FDI - Last 5 Years						
1993	138.9	205.8	72.5	34.9	217.6	240.9
1994	141.5	241.5	95.6	42.5	243.0	284.3
1995	211.5	306.5	105.5	45.6	331.2	352.5
1996	195.4	283.5	129.8	49.2	337.6	333.6
1997	233.1	359.2	148.9	61.1	400.5	423.7

Source: World Investment Report.1997, 1998. UNCTAD, United Nations.

Table 3: Global Trends in FDI Stocks – Developed Countries, Developing Countries and the World

Period	Developed Countries	Developing Countries	The World
	Billions of U.S. Dollars (% of World Shown in Brackets)		
1980	509.2 (97.1)	15.4 (2.9)	524.6
1985	659.4 (95.7)	29.5 (4.3)	688.9
1990	1,629.8 (95.6)	74.4 (4.4)	1,704.5
1995	2,557.4 (91.5)	233.9 (8.5)	2,793.5
1996	2,830.9 (90.9)	281.6 (9.1)	3,115.9
1997	3,192.5 (90.1)	342.2 (9.9)	3,541.4

Source: World Investment Report.1998. UNCTAD, United Nations.

Mergers and acquisitions are increasingly used as the central corporate strategy for establishing foreign firms abroad. Investment outflows to infrastructure from the major home countries have recently begun to increase, as capital raised from public sources is no longer sufficient to meet the financial requirements of infrastructure development. FDI inflows have recently surpassed official aid as the principal source of external financing in developing countries, driven largely by privatization deals, joint ventures and greenfield (new investment) projects in infrastructure and the manufacturing sectors. The current boom in FDI flows to developing countries reflects sustained economic growth and continuing liberalization and privatization in these countries. The trend in FDI inflows in developing economies, and, in particular, non-privatization inflows, is correlated with the growth in domestic output (GDP).

South, East and South-East Asia continue to be the largest host developing region, recently peaking at 63 percent of developing country inflows in 1995, then declining to 55 percent by 1997. China has been the largest developing-country recipient since 1992, receiving between 55 and 60 percent of the inflows to South, East and South-East Asia every year from 1993 to 1997. Investment flows into Latin America continue to be susceptible to special circumstances that are specific industry related or privatization induced, thus exhibiting wide year-to-year fluctuations and a generally “lumpy” pattern of investment. Notwithstanding significant changes in geographic patterns of FDI from south to north, Africa remains marginalized as a destination of FDI. Central and Eastern Europe FDI inflows have reached record levels, driven by waves of privatization and by economic recovery.

NAFTA Trends

The trends in NAFTA FDI outflows, inflows and exports follow the same pattern as world trends, with both FDI inflows and trade increasing over time, but at even greater growth rates. For example, FDI outflows grew at 21.8 percent annually on average for the period 1991-97, FDI inflows grew at 24.2 percent, and exports grew at 9.1 percent (Table 4).

The United States is the major host country for FDI inflows into the NAFTA region, accounting for about 80 percent. Mexico has consistently attracted a greater amount of FDI than Canada over the 1990s. While FDI inflows to the NAFTA region are growing in absolute terms (Table 4), its percentage of total World inflows declined from around 40 percent in the late 1980s to about 20 percent in the early 1990s, but has steadily recovered to 28 percent in 1997 (Table 5).

Table 4: NAFTA FDI Inflows, Outflows and Exports

	1991	1992	1993	1994	1995	1996	1997
	(Billions of U.S. Dollars)						
FDI Outflows	39.3	43.2	81.3	84.4	102.8	83.0	128.5
FDI Inflows	30.3	28.1	52.7	64.5	79.1	91.0	111.1
Exports	576.2	610.3	640.2	712.5	824.0	885.8	972.0
FDI-Index Out	100	110	207	215	262	211	327
FDI-Index In	100	93	174	213	261	300	367
Export-Index	100	106	111	124	143	154	169

Source: World Investment Report.1997, 1998. UNCTAD, United Nations; and Monthly Bulletin of Statistics, Vol. LII No. 10-October 1998, United Nations. (Mexico exports for last half of 1997 are estimated).

Table 5: NAFTA Trends in FDI Inflows

	Canada	USA	Mexico	NAFTA	World
	Billions of U.S. Dollars (% of World in Brackets)				
1985-1990	5.2	48.6	2.6	56.5 (39.8)	141.9
1991	2.7	22.8	4.8	30.3 (19.1)	158.9
1992	4.8	18.9	4.4	28.1 (16.0)	175.8
1993	4.8	43.5	4.4	52.7 (24.2)	217.6
1994	8.5	45.1	11.0	64.5 (26.5)	243.0
1995	10.8	58.8	9.5	79.1 (23.9)	331.2
1996	6.4	76.5	8.2	91.0 (27.0)	337.6
1997	8.2	90.7	12.1	111.1 (27.7)	400.5

Source: World Investment Report. 1997, 1998. UNCTAD, United Nations.

NAFTA countries enjoyed a significant share of FDI inflows as a result of merger and acquisition activities during the global restructuring period beginning in the mid-1980s and ending in the early 1990s. Increased flows of FDI to developing countries, beginning in the early 1990s, reduced the share of total FDI flowing to developed economies. As a result, NAFTA countries' share of global FDI flows has declined.

The United States currently provides about 90 percent of FDI outflows from the NAFTA countries, Canada about 10 percent, and Mexico less than 1 percent. Collectively, NAFTA FDI outflows accounted for from 25 to 30 percent of World FDI

outflows over the past 5 years (1993-97), an increase from the 20 percent level common for the period 1985 to 1992 (Table 6).

Table 6: NAFTA Trends in FDI Outflows

Period	Canada	USA	Mexico	NAFTA	World
	Billions of U.S. Dollars (% of World in Brackets)				
1985-1990	4.8	21.6	0.2	26.6 (17.1)	155.6
1991	5.7	33.5	0.2	39.3 (19.8)	198.1
1992	3.5	39.0	0.7	43.2 (21.5)	200.8
1993	5.9	74.8	0.6	81.3 (33.7)	240.9
1994	9.1	73.3	2.0	84.4 (29.7)	284.3
1995	11.2	92.1	- 0.5	102.8 (29.2)	352.5
1996	8.5	74.8	- 0.3	83.0 (24.9)	333.6
1997	13.0	114.5	1.0	128.5 (30.3)	423.7

Source: World Investment Report.1997, 1998. UNCTAD, United Nations.

Notwithstanding the 372 percent increase in NAFTA inward FDI stocks from 1980 to 1990, and a further 175 percent increase from 1990 to 1997, the NAFTA share of total World inward stocks dropped from around 30 percent in the 1980s to 27 percent in the 1990s (Table 7). Similarly, NAFTA outward FDI stocks increased 213 percent from 1980 to 1990 and a further 201 percent from 1990 to 1997, while NAFTA share of World outward FDI stocks declined from over 40 percent in the 1980s to 30 percent in the 1990s.

Average foreign direct investment relative to stocks is about 12 percent for NAFTA as a whole, for Mexico, the United States, and the World. For Canada, both inward and outward foreign direct investment as a percent of stocks, is lower by a third to a half this level (Table 8).

Agri-Food Trends

Foreign affiliate sales account for about 60 percent of total international commerce in processed food products. Exports account for about 30 percent. Sales through licenses and joint ventures account for the remaining 10 percent.

The world's top 100 food processing firms in 1998 ranged in size from Nestle (Swiss) with \$45 billion in food sales, to Barilla (Italy) with sales of \$1.9 billion. Of these 100 largest firms, 36 are European, 33 are headquartered in the United States, 17 are Japanese, 4 are Brazilian, and 3 each are Canadian and Mexican (Food Engineering International, p.37).

The Canadian food and beverage sector exhibited higher-than-average propensity to attract foreign direct investment over the past decade. This is evident from the increase in sector share of total FDI in Canada from 6.6 percent in 1985 to 9.5 percent in 1995, while FDI stocks in the food and beverage sector grew from \$6 billion to almost \$16 billion. Foreign-controlled firms accounted for 20 percent of

food and beverage sector assets in 1992, relatively high compared with other manufacturing industries. The U.S. food and beverage sector's share of total FDI is smaller than Canada's and fell slightly from 2.5 percent in 1987 to 2.2 percent in 1996. About 12 percent of the U.S. processed food sector is foreign owned.

Table 7: NAFTA Trends in FDI Stocks

Period	Canada	USA	Mexico	NAFTA	World
	Billions of U.S. Dollars (% of World in Brackets)				
Inward Stocks					
1980	54.2	83.0	8.1	145.3 (30.3)	480.0
1985	64.7	184.6	18.8	268.1 (35.4)	756.7
1990	113.1	394.9	32.5	540.5 (31.1)	1,736.3
1995	122.5	560.9	66.6	750.0 (27.4)	2,732.6
1996	128.9	630.0	74.7	833.6 (27.2)	3,065.3
1997	137.1	720.8	86.8	944.7 (27.3)	3,455.5
Outward Stocks					
1980	23.8	220.2	0.1	244.1 (46.5)	524.6
1985	43.1	251.0	0.5	294.6 (42.8)	688.9
1990	84.8	435.2	0.6	520.6 (30.5)	1,704.5
1995	117.6	714.6	2.6	834.8 (29.9)	2,793.5
1996	124.7	793.0	2.2	919.9 (29.5)	3,115.9
1997	137.7	907.5	3.3	1,048.5 (29.6)	3,541.4

Source: World Investment Report.1998. UNCTAD, United Nations.

Table 8: NAFTA FDI Flows as a Percent of FDI Stocks

	Region	1990	1995	1996	1997
	(%)				
NAFTA Inward – Flows/Stocks	Canada	7.0	8.8	5.0	6.0
	USA	12.1	10.5	12.1	12.6
	Mexico	7.7	14.3	11.0	13.9
	NAFTA	11.5	11.6	12.0	12.9
	World	11.7	12.1	11.0	11.6
NAFTA Outward – Flows/Stocks	Canada	5.5	9.5	6.8	9.4
	USA	6.3	12.9	9.4	12.6
	Mexico	16.7	-19.2	-13.6	30.3
	NAFTA	6.1	12.3	9.0	12.3
	World	14.1	12.6	10.7	12.0

Source: World Investment Report. 1998. UNCTAD, United Nations.

FDI is larger and growing faster than trade as a means of international commerce in the food industry for most developed countries. Foreign affiliate sales of food and beverage products in Canada and the United States are two to three times

greater than their firm's exports into these markets (Henderson et al, 1996). Data are available to analyze the relative size and growth of FDI and trade in the food and beverage sector between the United States and the World, Canada, and Mexico.

Sales by U.S.-owned affiliates in other countries are four times larger than U.S. processed food exports. Sales from U.S. affiliates abroad grew 7.9 percent annually during 1990-98 to \$140 billion. But U.S. exports also grew at an average rate of 5.7 percent per year. Thus, in the aggregate, FDI sales growth did not come at the expense of exports (Table 9).

U.S. inward FDI is also larger than processed food imports. Sales from foreign-owned affiliates in the United States grew at a 1.6 percent average annual rate from 1990 reaching \$53.4 billion in 1998. Imports have grown much faster than inward FDI, increasing at an average annual rate of 5.1 percent from 1990-98 (Table 10).

In terms of FDI and trade between the United States and its NAFTA partners, U.S. FDI sales in Canada are over twice as large as U.S. processed food exports to Canada, but both are growing rapidly. U.S. affiliate sales in Canada grew at an average annual rate of 3.9 percent from 1990-98. U.S. exports are growing even faster at 8.8 percent per year (Table 11).

Table 9: Sales of U.S. Affiliates Abroad vs. U.S. Processed Food Exports

	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(Billions of U.S. Dollars)								
Affiliates Sales	76.0	82.3	87.6	95.4	104.9	115.3	121.2	131.0	140.0
US Exports	18.9	20.3	22.8	23.4	26.2	29.4	30.1	31.3	29.4
Affiliate-Index	100	108	115	126	138	152	159	172	184
Exports-Index	100	107	121	124	139	156	159	166	156

Source: Exports from U.S. Census monthly trade data aggregated to annual, affiliate sales from U.S. Department of Commerce, Bureau of Economic Analysis. 1998. *U.S. Direct Investment Abroad: Operations of Parent Companies and Their Foreign Affiliates. October. Washington D.C.* Affiliate sales for 1997-98 are ERS estimates.

Sales by Canadian-owned affiliates in the United States have been more variable, but have still grown at an average rate of 3.3 percent from 1990 to 1998. U.S. imports from Canada grew at an annual average rate of 7.8 percent – slightly below the growth rate of U.S. exports. Growth in both FDI and trade between these two countries give strong evidence of a highly integrated and expanding regional market (Table 12).

As in Canada, U.S. FDI sales in Mexico are over twice as large as U.S. processed food exports to Mexico. Sales from U.S. affiliates in Mexico grew from \$3.2 billion in 1990 to an estimated \$6.6 billion in 1998 – an average of 9.5 percent per year. U.S. exports into Mexico grew at an average annual rate of 12.4 percent over this same period (Table 13).

Table 10: Processed Food Sales of Foreign-owned Affiliates in the United States vs. U.S. Imports of Processed Food

	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(Billions of U.S. Dollars)								
Affiliates Sales	47.1	47.7	46.8	46.8	48.9	51.1	49.6	52.0	53.4
US Imports	20.5	20.6	21.8	21.8	23.8	25.0	27.8	30.2	30.2
Affiliate-Index	100	101	99	99	104	108	105	110	113
Imports-Index	100	100	106	106	116	122	136	147	148

Source: Exports from U.S. Census monthly trade data aggregated to annual, affiliate sales from U.S. Department of Commerce, Bureau of Economic Analysis. 1998. *Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies*. July. Washington, DC.

Table 11: Processed Food Sales by U.S. Affiliates in Canada vs. U.S. Exports to Canada

	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(Billions of U.S. Dollars)								
Affiliates Sales	9.2	8.9	10.2	10.9	11.3	11.2	11.6	12.0	12.5
US Exports	2.7	3.1	3.3	3.6	4.0	4.2	4.6	5.0	5.3
Affiliate-Index	100	97	111	118	123	122	126	130	136
Exports-Index	100	115	122	133	148	156	170	185	196

Source: Exports from U.S. Census monthly trade data aggregated to annual, affiliate sales from U.S. Department of Commerce, Bureau of Economic Analysis. 1998. *U.S. Direct Investment Abroad: Operations of Parent Companies and Their Foreign Affiliates*. October. Washington D.C. Affiliate sales for 1997-98 are ERS estimates.

According to Mexican sources, from 1994 to 1997 about 40 percent of total FDI into Mexico's processed food industry came from the United States, Canada was second with 14 percent of the total, followed by the United Kingdom and the Netherlands. In recent developments, Corn Products Incorporated acquired the controlling interest of Arancia-CPC, Mexico's largest corn product processor. Currently, Smithfield Foods is negotiating to buy Grupo Alpro, Mexico's largest pork processor. Even with the strong FDI growth in Mexico, U.S. exports to Mexico have also grown by 12.4 percent annually. Following the sharp drop in 1995, after the peso devaluation, U.S. exports to Mexico have grown about 20 percent per year from 1996 to 1998.

In contrast with Canada, Mexico's FDI sales in the United States are smaller than its processed food exports to the United States. Processed food imports into the United States from Mexico grew from \$1 billion in 1990 to \$2.3 billion in 1998, an average growth rate of 9.6 percent. From almost zero in the early 1990s, Mexican-owned affiliate sales in the U.S. processed food sector increased from \$585 million in 1995 to \$664 million in 1996, and may be close to \$1 billion in 1998 (Table 14).

Table 12: Processed Food Sales by Canadian-Owned Affiliates in the U.S. vs. U.S. Imports from Canada

	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(Billions of U.S. Dollars)								
Affiliates Sales	5.8	5.6	5.1	5.3	6.7	6.5	6.8	7.2	7.5
US Imports	3.5	3.6	3.9	4.2	4.6	4.9	5.7	6.3	6.4
Affiliate-Index	100	97	88	91	116	112	117	124	129
Imports-Index	100	103	111	120	131	140	163	180	183

Source: Exports from U.S. Census monthly trade data aggregated to annual, affiliate sales from U.S. Department of Commerce, Bureau of Economic Analysis. 1998. *Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies*. July. Washington, DC. Affiliate sales for 1997-98 are ERS estimates.

Table 13: Processed Food Sales of U.S. Affiliates in Mexico vs. U.S. Exports to Mexico

	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(Billions of U.S. Dollars)								
Affiliates Sales	3.2	4.3	4.5	6.0	6.0	5.3	5.5	6.1	6.6
US Exports	1.1	1.6	2.0	2.0	2.4	1.7	2.1	2.4	2.9
Affiliate-Index	100	134	141	188	188	166	172	191	206
Exports-Index	100	145	182	182	218	155	191	218	255

Source: Exports from U.S. Census monthly trade data aggregated to annual, affiliate sales from U.S. Department of Commerce, Bureau of Economic Analysis. 1998. *U.S. Direct Investment Abroad: Operations of Parent Companies and Their Foreign Affiliates*. October. Washington D.C.

This represents an average annual growth rate of 17.2 percent from 1995 to 1998. Mexican investment in the U.S. food sector is lead by Grupo Industrial Bimbo, producing bakery products and tortillas, and by Gruma, a major corn miller and tortillas producer.

Multinational food companies establish affiliates in other countries primarily to serve customers in the host country. U.S.-owned foreign affiliates had sales of \$121 billion in 1996. Of those sales, 75.9 percent remained in the host country, while on average only 2.5 percent were exported to United States. The remaining 21.6 percent was exported from the host country to the rest-of-the-world (Table 15).

Table 14: Processed Food Sales by Mexican-owned Affiliates in the United States vs. U.S. Imports from Mexico

	1990	1991	1992	1993	1994	1995	1996	1997	1998
	(Billions of U.S. Dollars)								
Affiliates Sales	-	-	-	-	-	0.59	0.66	0.75	0.95
US Imports	1.08	1.03	1.04	1.14	1.29	1.60	1.80	2.08	2.24
Affiliate-Index	-	-	-	-	-	100	112	127	161
Imports-Index	100	95	96	106	119	148	167	193	208

Source: Exports from U.S. Census monthly trade data aggregated to annual, affiliate sales from U.S. Department of Commerce, Bureau of Economic Analysis. 1998. *Foreign Direct Investment in the United States: Operations of U.S. Affiliates of Foreign Companies*. July. Washington, DC.

Table 15: Distribution of Sales of U.S.-Owned Foreign Affiliates, 1996

US Affiliate Location	Total Affiliate Sales (Billions of U.S. \$)	Destination of Affiliate Sales		
		Host Country	Rest of the World	United States
The World	121.2	75.9	21.6	2.5
Canada	11.6	89.3	1.8	8.9
Mexico	5.5	94.9	2.1	3.0

Source: U.S. Department of Commerce, Bureau of Economic Analysis. 1998. *U.S. Direct Investment Abroad: Operations of Parent Companies and Their Foreign Affiliates*. October. Washington D.C.

With long common borders that facilitate truck and rail transport, one would expect U.S. affiliates in Canada and Mexico to ship a higher share of their sales to the United States than would be the case for all U.S. affiliates worldwide. However, to date, this is only true for Canada. In Canada, a relatively high-wage country, U.S. affiliates exported an average of 8.9 percent to the United States, with 89.3 percent remaining in the host country and only 1.8 percent exported to the ROW. Many U.S. affiliates in Canada have product mandates, often importing semi-processed ingredients from the United States, and then specializing in producing specific finished products for a large regional market such as the eastern United States/Canada. In contrast, U.S. affiliates in Mexico, a relatively low-wage country, exported an average of only 3.0 percent of their sales to the United States. Thus to date, most U.S. food firms have not established affiliates in Mexico as export platforms to the United States. While affiliates on average export only about 3 percent of their sales back to their home country, most trade between affiliates and the home country is intra-firm trade. World-wide, nearly 80 percent of U.S. trade with its affiliates (both imports and exports) is between the affiliates and their U.S. parents.

THE NATURE OF INVESTMENT ATTRACTIVENESS

The environment for FDI and trade has changed significantly since the mid-1980s. Technological and policy-related barriers to the movement of goods, services, capital, professional and skilled workers, and firms have been reduced substantially. At the same time, technological developments have greatly enhanced the ease with which goods, services, and intangible assets can be transported. In addition, the tasks related to organization and management of firms can be implemented over distances. Liberalization of rules and regulations governing trade, investment and technology flows has increased the degree to which new possibilities created by technology can be realized. These changes have led to a substantial increase in international production and trade and a substantial presence of foreign affiliates in the world economy today.

Shatz (1997) identifies two types of investors: (1) *market servers*, for whom the objective is to serve the market in the host country, and (2) *exporters*, for whom the objective is to establish an export platform from which to serve markets outside the

host country. These two types of investors have different criteria for making their investments. Broadly speaking, market servers look for large, fast-growing markets, while exporters look for low-cost production sites.

Market servers are typically more willing to compromise on some country characteristics, such as strength of contract enforcement, investment incentives, and labour costs, to get access to a large market, such as China, Brazil, India or Russia. Exporters, on the other hand, are typically less willing to compromise on issues affecting investor protections such as intellectual property rights, and are much more likely to be concerned about the overall competitiveness of the country being considered for investment.

The strategies of food manufacturers for accessing foreign markets were studied in detail in a joint study by Agriculture and Agri-Food Canada and the Economic Research Service of the USDA (Vaughan et al., 1994). In this study, interviews were conducted with senior officials of 17 multinational food manufacturing firms with operations in the United States and Canada. For 15 firms, foreign affiliates accounted for the highest proportion of sales outside the home country. All 17 firms supplied foreign markets with exports to some extent, but many used exports only if the foreign market were unable to support local production. Licensing accounted for a small share of the firms' sales.

The choice between foreign affiliates and other means of accessing a foreign market is influenced by several factors. These factors can be grouped into two types:

1. Factors affecting the feasibility of production outside the home market:

Firms consider several explicit costs when determining the feasibility of production in a market. These include: cost and availability of inputs (especially raw materials and labour), value of products relative to their delivery costs, infrastructure (transportation and storage), barriers to entry, tariffs and other government policies, ability to achieve economies of scale, and demand (size and potential for growth).

2. Factors affecting risk and control:

Firms may want to exercise control over the production and distribution of their products to maintain a consistent level of product quality, deliver their products in a timely manner, and respond quickly to consumer needs. However, firms must balance their desire for control with their exposure to the different financial risks associated with each strategy. The financial risks arise due to lack of knowledge or experience with the specific market tastes and preferences or marketing practices, the reaction of rival firms in a foreign market, the degree of economic and political instability in the market, insufficient infrastructure, and unreliable or poorly trained labour. Wholly-owned foreign affiliates offer the greatest control over production and distribution but expose the firm to the greatest financial risk. Exports offer control over production, but, in the absence of a distribution licensing agreement or joint venture, offer little control over the distribution process. Joint ventures represent the middle of the spectrum. As firm's knowledge increases over time, its perception of

risk changes, affecting the trade-off between risk and control, and, ultimately, the strategies selected. (Vaughan et al., 1994; Henderson et al., 1996)

Food manufacturers are often constrained to being more multi-domestic than global (Rama, 1991 as cited by Vaughan, 1995). The main reason for this is that consumer tastes and preferences, and the characteristics of food products are less standardized across regions than many other manufactured products, such as computers. In some cases, transportation costs relative to product value limit the distance over which food products can be economically transported. The ongoing need for food manufacturers to take local preferences into account requires some degree of decentralized, downstream, consumer-linked activity, such as marketing strategy, to take place within target markets. At the same time, competitive pressures are forcing multinational food firms to rationalize upstream activities, such as production and research, to lower their costs. Multinational food firms must trade off benefits from increased scale economies against added costs of delivery, in their decision process.

In general, multinational food firms prefer serving markets with affiliates rather than exports to obtain increased control over intangible assets, such as trademarks and proprietary technology. Local affiliates have a greater ability to maintain the quality and reputation of brand name products by ensuring superior customer service and timely delivery. In addition, food demand is often characterized by strong regional preferences. By producing in the host region and having full control over production and distribution, the firm is better equipped to tailor products to local tastes while avoiding potential local resistance to imports. These ownership benefits make exports less attractive and provide a strong motivation for foreign production. (Vaughan, 1995)

There appears to be a sequential relationship between FDI and trade in food and beverage manufacturing. First, domestic food products are exported. Then when product acceptance is demonstrated, market entry proceeds through licensing and strategic alliances for distribution. This stage is often followed by FDI (usually mergers and acquisitions) moving production into the market for better control. In this scenario, exports may shift from final products to intermediate products and/or services to support local production in the foreign market. Henderson et al. (1996) were unable to find a consistent relationship between FDI and trade in their review of the literature.

In recent years, there has been a significant trend toward rationalization of firms and plants on a regional basis. Trade liberalization and increasing competitive pressures are presumably encouraging food firms to increase specialization within geographic regions and invest in internationally cost-competitive plants. Food firms seem to be aiming to exploit economies of scale, become more efficient, and purchase inputs from the most cost-competitive source. Clearly, expansion beyond the domestic market allows firms to pursue growth opportunities unavailable in their domestic market. It also allows them to spread risk through geographic

diversification, and to fully exploit brand name products and technology-related intangible assets.

FDI responds to profit opportunities and costs within specific economic sectors in target countries. Hence, the business environment within a target country plays an important role in FDI decisions. In a survey conducted by the World Economic Forum (World Economic Forum, 1997) international executives identified, in rank order, the following top 5 factors in investment location decisions:

- size of national market of target country;
- expected growth in market size of target country;
- ability to repatriate capital and remit profits;
- productivity and work habits of workers; and
- infrastructure.

The Forum survey also showed that among the countries that offer large and growing markets, the factors which tend to determine which countries get the most FDI are:

- macroeconomic stability;
- regulatory regime;
- quality of infrastructure; and
- cost of labour.

Based on these results, it would appear that foreign investors do not seem to pay much attention to factors which used to be considered important, such as corporate tax rates and structure, tax holidays, cheap credit, subsidies and other types of investment incentives (Hu, 1997). It may be that such factors are more important at the municipal or other sub-state level in influencing the location or site-selection decision once the country for investment has been established.

For food industries, the following key factors in investment attractiveness were cited by interviewees in a recent study conducted for Agriculture and Agri-Food Canada (Deloitte and Touche, 1997):

- market size/market growth prospects;
- level of government intervention;
- administrative/regulatory burden for business;
- corporate and personal tax rates;
- environmental policies/regulations;
- political/economic/social stability;
- raw material availability;
- wage rates/unionization/labour costs and availability; and
- profit potential.

These factors are essentially the same as those identified by the World Economic Forum in their 1997 Executive Survey, and those identified by Vaughan et

al. in 1994. In particular, they are associated with the market serving investors criteria outlined by Shatz (1997).

Apparently different kinds of FDI respond to different kinds of considerations. There is general agreement on the factors that influence FDI, such as laws governing foreign investment, taxes, wages, potential market growth, corruption and other considerations that determine whether a business will earn profits, and whether profits will be enough to justify the risk. What is not clear is the relative weighting of these factors, and the degree to which these weightings may be unique to the specific investment situation, the country in question, and the firms involved.

INVESTMENT, COMPETITIVENESS AND TRADE

There are several areas in which investment plays a role in global competitiveness and trade when agriculture and the agri-food sector are expanded into the global market place. This section reviews four of those areas identified in a recent analysis by Agriculture and Agri-Food Canada (1998).

Supply Capability

In most economies, land for food production is a limited resource. Investment in research contributes to higher crop yields and improved quality. In developing economies, investment is required to develop and enhance crops appropriate to the natural resource base, and to develop and apply appropriate tools and techniques of production. Foreign direct investment in biotechnology companies is emerging as a significant factor in the global restructuring of the agriculture and agri-food sector. Intellectual property rights is a key policy issue. Exploiting proprietary research is one of the important factors underlying foreign direct investment as this is often best achieved through outright ownership of the production facilities exploiting the technology

Beyond the farm gate, increased processing capacity will require substantial investment in food and beverage manufacturing plants and equipment. The economic scale of food processing plants in many cases is world scale. World-scale facilities often require significant investment. Achieving world-scale production facilities may also lead to significant consolidation in some industries, possibly raising competition policy issues.

In developing economies the need for infrastructure to facilitate economic development is generally greater than government resources can effectively address. Foreign direct investment has become the principal external source of funding for infrastructure projects in many developing countries (Hu, 1997). This presents an interesting policy development; the private ownership of public resources. It may also present some competition policy issues in the area of access to markets or facilities.

Productivity Improvement

Supply chain management is also emerging as a significant factor in global competitiveness. In developed economies, with relatively well developed supporting industries, supply chain coordination is increasingly achieved through strategic alliances and a variety of contractual arrangements. However, in developing economies such coordination is often achieved through outright ownership and may involve considerable effort on the part of a manufacturer to finance and develop necessary infrastructure, train labour, provide technology and teach suppliers how to work more effectively with each other and with the company. The data on FDI suggest that it may be for these reasons, among others, that “greenfield” investment (i.e., investment in new facilities) appears to be greater in developing economies, while mergers and acquisitions continue to dominate foreign direct investment in developed economies. However, this observation has yet to be confirmed by analysis.

Sustained growth in global markets will require significant improvement in the rates of productivity growth along the agri-food chain from farm to fork. Based on some preliminary analysis looking at the Canadian agri-food sector, improvements of 300-400 percent in the traditional rates of productivity improvement may be required. (Agriculture and Agri-Food Canada, 1998).

Productivity improvement is also usually a function of the ratio of capital to labour. Increased capital requires investment. More sophisticated capital also requires more sophisticated, better educated labour. More productive labour usually earns higher wages and salaries. These observations are consistent with the analysis of investment and productivity carried out by Barber and Baldwin (1997).

The evidence presented in the previous section on NAFTA trends shows that U.S. owned affiliates in Canada export about eight percent of their sales to the United States whereas U.S. affiliates in Mexico and the rest of the world export only two to three percent of their sales back to the United States. This suggests that global competitiveness may not be about exploitation of low priced labour in developing economies. Rather, it may be that global competitiveness is driven by the effective use of productive, highly paid, sophisticated and well educated labour in conjunction with access to modern technology and equipment. This may be particularly true if value-added differentiated products are the focus rather than bulk commodities, which also appears to be a trend in international trade.

In the Canadian case, recent analysis of Canadian agri-food manufacturers using Census of Manufacturers data (Barber and Baldwin, 1997) shows that, compared with domestically-controlled establishments, foreign-controlled establishments are larger, account for an increasing share of total sector output, exhibit higher and increasing labour productivity, have greater capital intensity, employ an increasing share of the total sector labour force, have a higher-skilled labour force, pay higher wages, and have less volatility in employment over time.

Market Access/Market Development

FDI leads to greater integration with export markets through intra-firm trade and investment. Intra-firm trade reduces transaction costs with respect to trade. Intra-firm trade flows between parents and affiliates, and among affiliates, has increased in importance as multinational enterprises (MNEs) have established more integrated international production systems. Intermediate inputs are a growing element of intra-firm trade. In the United States, the share of exports to other foreign affiliates in intra-firm exports of foreign affiliates rose from 37 percent in 1977, to 53 percent in 1983, to 60 percent in 1993. A substantial proportion of Canada's trade in food and beverages is intra-firm as well. In the mid-1980s (before the major period of restructuring), foreign-controlled firms accounted for about 55 percent of total imports and 35 percent of these imports were received through intra-firm channels.

As globally positioned firms focus on better control of the supply chain to squeeze out costs, maintain product quality and exploit proprietary firm knowledge and expertise, access to their supply chains may become a more important issue for producers and service suppliers if they want to share fully in the expansion of global demand for agriculture and food products.

Investment and Trade

To the extent that FDI facilitates trade in goods and services, gains similar to those achieved from conventional integration through trade may be realized, including gains from rationalization and increased competition. Thus, international investment is a vehicle through which MNEs exploit benefits of specialization and economies of scale. To this extent, FDI should contribute to a superior allocation of world resources, and higher levels of total world production and international trade. FDI may also help countries to exploit their respective comparative advantages in serving export markets.

There are some growing concerns, particularly in western Europe, centered around the question of whether FDI outflows would reduce home country capital stocks, take away jobs and cause unemployment. The experience of the United States and Japan suggests that these concerns are not necessarily well founded. Both are dominant suppliers of FDI, and have the lowest rates of unemployment among the industrialized world. In recent periods, vigorous job creation in the United States followed massive outward foreign investment by U.S.-based MNEs. Certainly significant global mobility of capital does create pressure for domestic labour market reforms, and may expose countries with labour market rigidities to risks of high jobless rates. However, a causal relationship between strong FDI outflows and rising unemployment is difficult to establish (Hu, 1997, p. 38).

A related issue is whether global strategies of MNEs generate or displace home country exports. Henderson et al. (1996) note that anecdotal evidence from the U.S. food manufacturing sector provides support for both the displacement and creation of exports from FDI. One MNE strategy is to use exports to enter a foreign market, but eventually move to FDI. This strategy suggests that FDI displaces

exports. Alternatively, increased FDI may generate trade for several reasons. First, foreign affiliates may be highly specialized and may not be producing all of a firm's product line. Second, foreign affiliates may be engaged in activities that provide a much needed vertical linkage for the expansion of its export demand. Further, the presence of foreign affiliates may make it easier for the parent firm to respond to new export opportunities in neighboring regions or countries.

According to the World Investment Report (UNCTAD, United Nations, 1996), FDI, as the principal method of delivering goods and services to foreign markets, and the principal factor in the organization of international production, increasingly influences the size, direction and composition of world trade, as do FDI policies. In turn, trade and trade policies exert various influences on the size, direction and composition of FDI flows. While both trade and FDI impact growth and development independently, maximizing their combined contribution implies the need for an integrated approach to trade and investment policies.

Firms produce both goods and services, and most international transactions have significant intersectoral components. As well, many of the associated trade and investment effects of internationalization through trade are intersectoral in nature. This makes it increasingly difficult to isolate separate trade and investment effects associated with the internationalization sequence of a particular product, firm, industry or sector. What seems clear is that trade eventually leads to FDI, and, second, on balance, FDI leads to more trade. The result is an intensification of international economic interactions.

As firms move to establish globally integrated production systems, decisions to locate any part of the value-added chain are inherently made with a view to converting global inputs into outputs for global markets. FDI locations and trade flows are determined simultaneously. As a result, the issue is no longer whether trade leads to FDI or FDI to trade; whether FDI substitutes for trade or trade substitutes for FDI; or whether they complement each other. Rather, it is: how do firms access resources – wherever they are located – in the interest of organizing production as profitably as possible for the national, regional, or global markets they wish to serve? In short: where do firms locate their value-added activities? The decision about where to locate is simultaneously a decision about where to invest and from where to trade. It follows from this that what matters are the factors that make particular locations advantageous for particular activities, for both domestic and foreign investors. From a policy perspective, it means that national policies on FDI and trade need to be fully coordinated and consistent with each other. (World Investment Report, UNCTAD, United Nations, 1996)

For the food and beverage industries, it seems that interregional competition at the sub-national level (but including competition between regions located in different countries) is emerging as the focus of trade and development strategies of the future. International trade between countries (in the aggregate) is likely to become less relevant as a focus for strategy and analysis.

POLICY ISSUES AND ANALYTICAL CAPABILITIES

FDI and trade appear to be inextricably linked in what could be described as a symbiotic relationship. Growth in one usually leads to growth in the other. Decline in one can lead to decline in the other. Not only does FDI result in increased economic integration among national economies, but it is also a key factor in the increased consolidation, productivity improvement, and global competitiveness of industries, including agri-food industries. This, in turn, is forcing increased emphasis on agri-food system coordination all along the food chain from farm to fork.

Policy issues associated with FDI center on factors which affect the business climate, the ability of businesses to profitably succeed in the international marketplace, and in economic terms, overall market performance. These issues include:

- competition and investment policies;
- trade policy;
- intellectual property rights;
- environmental regulation and standards;
- labour regulation and standards;
- regulatory harmonization;
- education policy; and
- taxation policy.

These policy issues may have greater significance to post-farm gate segments of the agri-food system than to the farm level. Moreover, increasingly the post-farm gate segment of the agri-food system is exercising political and economic pressure to change these elements to improve the business climate for their benefit.

What affects one segment of the agri-food chain ultimately affects the whole chain. In the new market structures that exist, that reality is far more transparent than in the past. As a consequence, agricultural policy, food policy and more general economic policies are perceived to be linked more tightly than in days past. Policy analysis must increasingly take into account vertical impacts, along the chain, of policies that are targeted at one segment of the chain.

Policy tools and analysis in agriculture tend generally to focus on the primary sector. Macro models, by their very nature, focus on the economy as a whole. There is, therefore, a gap between the need for policy analysis along the agri-food chain and the capability of existing tools and models to effectively generate relevant policy information on these vertical interactions. In addition, the close coordination along a given agri-food chain may be unique to the players actively involved in that particular chain, their products, locations, and individual circumstances. Aggregate analysis at the level of the sector may become less and less relevant to understanding policy impacts on the system as a whole.

Policy decision-makers will increasingly require better information about the

impact of specific policy decisions on the trade-offs along the agri-food chain. Lobbyists will need to understand how policies focused on their segment of the food chain impact on other segments. Agricultural economists and policy advisors will have to expand the analytical capabilities of their tools and models to more effectively deal with these issues, or risk becoming increasingly irrelevant to policy issues of the day. This observation implies new responsibilities to applied economists, and it reinforces the relevance of the role and objectives that organizers set out for this workshop series.

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