Journal of Economic Integration
9(1), March 1994, 1-28

Economic Effects of the North American Free-Trade Area on Australia and New Zealand

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Abstract

The paper analyzes the effects of the North American Free-Trade (NAFTA) on Australia and New Zealand. Using a commodity matching technique, it identifies the industries that would be most affected by the preferential trading arrangement. Trade diversion obtains in a wide-range of disaggregated primary and manufactured commodity areas. Total trade diversion is estimated as a terms of trade effect. The effects of integration on trade in services and foreign investment flows are also evaluated.

I. Introduction

Regional integration in Europe is proceeding apace, with the twelve EC countries having achieved a unified market in 1993. At the same time, the U.S.-Canada Free-Trade Area is going through a ten-year transitional period, and negotiations with Mexico are underway to form a North American

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Free-Trade Area (NAFTA), encompassing the three countries. Each regional grouping, while it may be favorable to overall world welfare, would affect outsiders adversely by creating trade and investment diversion.[1] In a recent paper,[2] we investigated the effects of such regional groupings on ASEAN and Korea. This paper will assess the effects of NAFTA on Australia and New Zealand, employing similar methodology.

Both Australia and New Zealand have already been affected by the integration steps taken in Europe, the Common Agriculture Policy (CAP) of the EC being a case in point. Consisting of domestic price supports, import controls *via* the variable levy, and export subsidies, the CAP converted the EC from a net importer to a net exporter of food products, denying Australia and New Zealand important markets and affecting their terms of trade adversely. Australian and New Zealand terms of trade have experienced a significant decline since the implementation of the CAP in the 1960s and the accession of the United Kingdom in the mid-1970s. Grouping the two countries together and using 1980 as the base-index year (*i.e.*, 1980=100), the terms of trade deteriorated from 122 in 1960 and 125 in 1965 to 101 in 1976 and 85 in 1986.[3] In the summer of 1991, Australian wheat exporters to third markets (such as China) were caught in the cross-fire of a grain subsidy war between the EC and the United States.

EC discrimination is not confined to farm products, as the Common

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1. In creating a free-trade area, trade and investment diversion stem from the inherent preferential treatment accorded partner countries at the expense of third countries. Empirically, trade diversion is measured as the reduction in exports from third countries to the integrating area caused by the discrimination. It is a function of: (1) the extent to which commodity exports of, say, Australia, to an integrating country (*e.g.*, the United States) overlaps with that of a partner country (*e.g.*, Canada); (2) the degree of discrimination against outsiders in the "overlapping" or "matched" commodities; and (3) the price elasticity of import demand and elasticity of substitution between partner and non-partner exports. Investment diversion results from the redirection of domestic and foreign investment away from third countries toward the trading area. This effect would be most pronounced in industries sustaining extensive trade diversion.
2. Kreinin, Mordechai E. and Michael G. Plummer, "Effects of Economic Integration in Industrial Countries on ASEAN and the Asian NIEs," *World Development*, forthcoming 1992.
3. United Nations, *Monthly Bulletin of Statistics*, January 1984 and January 1991.

External Tariff caused some trade and, perhaps, investment diversion, and the EC 1992 program may affect adversely the export of services to Europe. Moreover, the recent (January 1994) "European Economic Area" (EEA) agreement between the EC and the European Free-Trade Association (EFTA), and the new association agreements being forged between the EC and several East European countries, could amplify these effects, especially if the agricultural sector is eventually included. Thus, the implications of NAFTA for Australia and New Zealand are super-imposed upon the discriminatory impact of European integration.

Raw materials play an important role in the exports of both Australia and New Zealand, and preferential treatment under NAFTA, which brings together two of the world's premier resource-rich economies, could potentially lead to further deterioration in terms of trade. Raw materials constitute 13 and 21 percent respectively of Australia and New Zealand's exports (1989)[4] — among the highest shares in the developed world. Australia is the third largest exporter of raw materials in the world behind the United States and Canada, and New Zealand is thirteenth.[5]

But in terms of future growth, NAFTA's effects on manufacturing and services are perhaps more important. Both countries have undergone significant restructuring since the mid-1980s, a result of policy changes designed to render their economies more efficient and competitive in the international marketplace. A new emphasis has been placed on non-traditional, "sunrise" industries, particularly in manufacturing and tradable services. These initiatives have included lower protection and extensive deregulation in such sensitive areas as banking and finance, certain aspects of the airline industry, and a range of value-added services in telecommunications (Australia).[6] Australia has even endeavored to promote its trade in services through export finance facilities under the Export Finance and Insurance Corporation. New Zealand also places great importance on service trade,

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4. GATT, *International Trade 1989-1990*, Volume II (Geneva: GATT, 1990); p. 42.
5. Ibid.
6. GATT, *Trade Policy Review: Australia* (Geneva: GATT, March 1990). In addition, Bell South (United States) and Cable & Wireless (United Kingdom) have purchased the Australian telecommunications satellite, "AUSSAT," and have been given permission to compete in the Australian market with domestic services.

not only in the traditionally large sectors of tourism and transport and storage, but increasingly in communication and insurance, which are projected to have among the highest export growth rates over the 1991-1995 period.[7] The importance attached to trade in services is underscored by the relevant provisions in the Australia-New Zealand free-trade accord.

Thus, the implications of NAFTA for Australia and New Zealand will be relevant to a wide range of economic sectors. These are treated quantitatively (where possible) and qualitatively (where necessary) in the present paper. Section II introduces the approach employed here, estimates the trade diversion effect, and assesses possible investment diversion. Section III summarizes the results of the paper and suggests possible options for Australia and New Zealand to mitigate the derisory effects of NAFTA.

II. Assessment of Trade and Investment Diversion

In the contemporary international economy, free-trade areas tend to go beyond the establishment of duty-free status for intra-regional trade. Because tariffs have become less important relative to non-tariff barriers (NTBs), such as quotas and voluntary export restraints, special arrangements are needed to deal with NTBs. While it is not yet clear how comprehensive the NAFTA pact will be, it may mirror the U.S.-Canada Free-Trade area, perhaps with some form of *decalage* privileges for Mexico.[8] For our present purpose, we assume that the arrangement will allow for comprehensive free-trade in NAFTA, including the eventual elimination of all tariff and non-tariff barriers on merchandise trade. Agreements on other areas currently being considered, such as trade in services and factor flows, are excluded from the present quantitative analysis.

How would such a free-trade affect Australia and New Zealand? With the United States, Canada and Mexico gaining unrestricted access to each

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7. New Zealand Institute of Economic Research, *Sectoral Projections* (Wellington: New Zealand Institute of Economic Research, September 1990), Tables 6 and 7.
8. *Decalage*, or "getting out of step," clauses refer to the allowance of certain contracting parties in a preferential trading area to have a longer transition process. This practice tends to be followed in the cases of trading areas that include countries at different levels of economic development.

other's markets, Australia and New Zealand will be at a relative competitive disadvantage in those export commodities that "overlap" the internal-source exports. The extent of this discrimination depends on the pre-integration levels of trade restrictions that the United States, Canada, and Mexico apply on a most-favored nation basis prior to the agreement. Hence, the values of trade in overlapping or "matched" commodities and the level of tariffs and nontariff barriers taken together would determine the extent of potential trade diversion.

A. Trade Diversion

We employ a disaggregative approach, based on the 4-digit SITC commodity categories in assessing the economic effects of NAFTA on Australia and New Zealand. For each commodity group, the exports of Australia-New Zealand to a NAFTA market (*e.g.* the United States) were matched with exports from a competing internal NAFTA source (Canada or Mexico). A minimum value cut-off point had to be imposed, in order to identify the most relevant categories. While there is no theoretical guideline to the selection of the cut-off value, we chose a low point in most cases, not only in order to be comprehensive, but also to capture growing industries that may be in the vanguard of future export growth. This is particularly important for Australia and New Zealand, each of which is undergoing vast structural changes which may lead to growth in non-traditional manufactured exports. Hence, for Australian exports and internal competition, the selected cut-off value in each commodity is $500,000. As New Zealand is a much smaller country, the minimum value for its exports and internal competition is set at $250,000. The most recent export data-set available for Australia is 1989 and for New Zealand it is 1990[9]. In order to conserve space, the tables below aggregate certain 4-digit categories into 3-digit (or even 2-digit) categories, whenever such aggregation in appropriate.[10]

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9. In some cases, comprehensive data were not available for Australia in 1989 (New Zealand in 1990); in such instances, 1988 (1989) data were used, as indicated in the tables to follow.
10. Detailed tables for all 4-digit SITC categories are available from the second author upon request.

Australian exports to the United States that compete directly with at least one internal source (Canada or Mexico) are shown in Table 1-A. For each matched 4-digit commodity group, the table shows the value of exports, the competing internal source(s), and the average U.S. most-favored nation tariff (or range of tariffs if the category was aggregated to a higher level).[11] In addition, the extent of non-tariff barrier (NTB) protection facing industrial-country exports is estimated using data compiled from a World Bank-UNCTAD study.[12] These NTBs are ranked in relative terms as being very high, high, average, low, very low, and zero, and apply to developed countries.[13] The chosen indices, not available for Canada and Mexico, were based on frequency ratios rather than coverage ratios.[14] This information was not available for Canada and Mexico. This approach enables us to identify the commodity categories that are likely to be impacted by NAFTA. The quantitative estimates are confined to the discriminatory impact of tariffs, and not of the NTBs, and as such represent a substantial understatement.

Tariff Effects: There is a large number and considerable variety of Australian exports to the United States that could be adversely affected by NAFTA (Table 1-A). Bovine meat is the largest Australian export in the data

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11. The average tariffs were calculated for each SITC grouping by converting the U.S. tariff code into its SITC equivalent. The same method was used in the case of the Canadian tariff. For sources used, please see the Appendix on data sources.
12. We are grateful to Mr. Sam Laird who made this information available to us.
13. In assessing the effects of U.S. NTBs, it is useful to distinguish between those applied to developed countries – which are relevant to the present analysis – and developing countries, as the frequency ratios differ.
14. Coverage ratios are problematic in that they gauge the importance of NTBs in direct proportion to import share, thereby suggesting an inherent bias. If an NTB in a certain commodity category is responsible for a small import share, the coverage ratio value would be low, when in fact it should be high. For example, the Japanese ban on rice imports would give zero weight to rice in calculating coverage ratios, thereby giving the impression that NTBs are not restrictive. Hence, if the coverage ratio is to be used, extreme care needs to be taken in treating the effects of NTBs. See, for example, Trefler, Daniel [1993], "Trade Liberalization and the Theory of Endogenous Protection: An Econometric Study of U.S. Import Policy," *Journal of Political Economy*, February, and Kreinin, Mordechai [1991], *International Economics: A Policy Approach*, Sixth Edition; pp.371-372.

Table 1
Discriminatory Effects of North American Integration on Australia

SITC	Description	1989[a] Australian Exports (US$m)	Internal Competition	Range of Average Tariff (%)	Nontariff Barriers
A. Australian Exports to the United States					
0111	Bovine meat	632.0	Canada/Mexico	7	High
0113	Pig meat	2.3	Canada	2	High
0116	Edible offal	4.6	Canada	5	High
0138	Prepared/processed meat	5.9	Canada	5	High
0222	Milk and cream, dry	3.9	Canada	2	High
0240	Cheese and curd	11.7	Canada	15	High
0311/13	Fish	101.1	Canada/Mexico	1	High
0320	Fish, *etc.*, tinned/prepared	1.5	Canada/Mexico	7	High
0470	Meal and flour	0.6	Canada/Mexico	10	High
0481	Breakfast food	1.7	Canada/Mexico	7	High
0484	Bread	1.0	Canada/Mexico	2	High
0488	Cereal	0.6	Canada/Mexico	9	High
0517	Nuts	10.3	Canada/Mexico	0	High
0519	Fresh fruit	1.1	Canada/Mexico	10	High
0520	Dried fruit	1.0	Canada/Mexico	10	High
0532	Preserved fruit	2.5	Mexico	12	High
0539	Fruit nuts	1.9	Canada/Mexico	13	High
0542	Dry vegetables	2.4	Canada/Mexico	0	High
0546	Vegetables, simply preserved	0.8	Canada/Mexico	14	High
0615	Molasses	9.5	Canada/Mexico	0	High
0620	Sugar	0.7	Canada/Mexico	10	High
0990	Food preparations	2.0	Canada/Mexico	7	High
1110/21	Beverages and wine	18.0	Canada/Mexico	10-13	High
2218	Oil seeds/nuts	1.5	Canada/Mexico	2	High
2433	Lumber	1.4	Canada/Mexico	0	Low
2664	Waste of synthetic fibers	0.7	Canada/Mexico	2	Low
2769	Crude minerals	1.4	Canada/Mexico	1	High
2813	Iron ore	2.3	Canada	0	High
283	Copper, nickel, lead, nonfer. ores	106.6	Canada/Mexico	0-1	High
2840	Nonferrous metal scraps	0.8	Canada/Mexico	0	High
2860	Uranium, *etc.*	30.9	Canada	0	High
2919	Animal materials	1.4	Canada/Mexico	1	Low
2925	Seeds	2.3	Canada/Mexico	0	Low
2927	Cut flowers	1.4	Canada/Mexico	5	Low
3214	Coal	2.1	Canada	0	Very high
3218	Coke of coal	42.8	Canada	0	Very high
3310	Crude petroleum	225.0	Canada/Mexico	0	Very high

Table 1 (continued)

SITC	Description	1989[a] Australian Exports (US$m)	Internal Competition	Range of Average Tariff (%)	Nontariff Barriers
3325	Lubricating oils, greases	4.1	Canada	6	Very high
4113	Animal oils, *etc.*	0.6	Canada	12	Very low
5143	Metal comp.	1.1	Canada/Mexico	2	Very low
5331	Coloring material	2.7	Canada/Mexico	4	Very low
5413	Antibiotics	1.6	Canada/Mexico	5	Very low
5417/19	Pharmaceuticals	9.0	Canada/Mexico	4-5	Very low
5511	Essential oils, resinoids	1.3	Canada/Mexico	2	Very low
5530	Perfume, cosmetics, *etc.*	1.7	Canada/Mexico	5	Very low
5812	Products of polymerizing, *etc.*	2.5	Canada/Mexico	4	Very low
5992	Pesticides, disinfectants	6.5	Canada/Mexico	5	Very low
5995	Starch	14.9	Canada/Mexico	4	Very low
5999	Chemical products	0.7	Canada/Mexico	5	Very low
6114	Leather, bovine, n.e.s., equine	5.9	Canada/Mexico	4	Zero
6130	Fur skins	1.0	Canada/Mexico	3	Zero
6291	Rubber tire, tubes	1.1	Canada/Mexico	3	Low
6299	Other rubber articles	1.4	Canada/Mexico	3	Low
6429	Paper articles	0.6	Canada/Mexico	4	Low
6532	Woven wool fabrics	1.0	Canada/Mexico	17	Average
6535	Woven synthetic fabrics	2.7	Canada/Mexico	16	Average
6569	Other textile products	5.7	Canada/Mexico	10	Average
6576	Carpets, etc., unknotted	0.9	Canada/Mexico	6	Average
6618	Mineral building products	4.1	Canada/Mexico	5	Low
6647	Safety glass	3.3	Canada/Mexico	3	Low
6648	Sheet glass	2.5	Canada/Mexico	4	Low
6649	Glass, n.e.s.	2.7	Canada/Mexico	3	Low
6672/73	Precious/semiprecious stones	13.4	Canada	0-9	Low
6714/15	Iron alloys	24.2	Canada/Mexico	4-6	Very high
6725/27	Iron/steel, blooms/coils	15.5	Canada/Mexico	4-5	Very high
6731	Iron/steel wire	3.4	Canada/Mexico	5	Very high
6732	Iron/steel bars	0.7	Canada/Mexico	5	Very high
6743/ 47/48	Iron and steel	83.0	Canada/Mexico	5-6	Very high
6770	Iron/steel wire, excl. w/rod	1.8	Canada/Mexico	5	Very high
6791	Iron cast	1.2	Canada/Mexico	2	Very high
6822	Copper, alloy	4.1	Canada/Mexico	1	Very low
6841/42	Aluminum alloys	26.7	Canada/Mexico	2-3	Very low
6861	Zinc alloys	60.7	Canada/Mexico	10	Very low
6871	Tin alloys	1.1	Canada/Mexico	0	Very low
6895	Base metals, n.e.s.	1.0	Canada/Mexico	4	Very low
6911	Structures parts, iron/steel	0.9	Canada/Mexico	4	Low

Table 1 (continued)

SITC	Description	1989[a] Australian Exports (US$m)	Internal Competition	Range of Average Tariff (%)	Nontariff Barriers
6942	Steel/copper nuts/bolts	1.9	Canada/Mexico	5	
6952	Tools	2.4	Canada/Mexico	5	Low
6960	Cutlery	0.9	Canada/Mexico	7	Low
6971	Domestic stoves ovens, *etc.*	2.3	Canada/Mexico	5	Low
6981	Locksmiths wares	2.6	Canada/Mexico	3	Low
6988/89	Misc. base metal products	2.0	Canada/Mexico	3	Low
7113	Steam engines, turbines	1.0	Canada/Mexico	6	Low
7114/15	Aircraft engines	19.2	Canada/Mexico	1-3	Low
7116	Gas turbines, non-aircraft	7.2	Canada/Mexico	3	Low
7118	Engines, n.e.s.	2.3	Canada/Mexico	2	Low
7121/22	Cultivating/harvesting machinery	7.9	Canada/Mexico	0-1	Low
7143/49	Statistical/office machines	62.3	Canada/Mexico	2-3	Low
7151	Machine tools for metal	3.1	Canada/Mexico	4	Low
7173	Sewing machines	0.6	Canada	2	Low
718	Machinery for special industries	24.2	Canada/Mexico	2-3	Low
719	Nonelectrical machinery	47.5	Canada/Mexico	1-5	Low
7221	Electric power machinery	0.9	Canada/Mexico	1	Low
7222	Switchgear, *etc.*	5.3	Canada/Mexico	3	Low
7231	Insulated wire/cable	0.9	Canada/Mexico	3	Low
7249	Telecommunication equipment	25.6	Canada/Mexico	3	Low
7250	Domestic electrical equipment	0.9	Canada/Mexico	3	Low
7261	Electro-medical equipment	2.4	Canada/Mexico	5	Low
7262	X-ray apparatus	0.8	Canada/Mexico	3	Low
7291	Batteries, accumulators	1.4	Canada/Mexico	3	Low
7293	Transistors, valves, *etc.*	3.5	Canada/Mexico	2	Low
7294	Automotive elec. equipment	1.4	Canada/Mexico	2	Low
7295	Elec. measuring control equipment	9.0	Canada/Mexico	3	Low
7299	Other electrical machinery	6.5	Canada/Mexico	3	Low
7316	Freight cars, not powered	1.1	Canada/Mexico	14	Low
7321	Passenger motor vehicles, excl. buses	2.7	Canada/Mexico	0	Low
7328	Motor vehicle parts, n.e.s.	41.5	Canada/Mexico	1	Low
7341/49	Aircraft and parts	199.1	Canada/Mexico	1-2	Low
7353	Ships and boats	21.0	Canada/Mexico	1	Low
8210	Furniture	1.8	Canada/Mexico	4	Low
8411	Textile clothes, not knit	8.4	Canada/Mexico	13	Average
8413	Leather clothes, accessories	0.6	Canada/Mexico	7	Average
8414	Clothing, accessories, knit	6.7	Canada/Mexico	17	Very low
8415	Headgear	1.8	Canada/Mexico	6	Low
8416	Rubber clothing, including gloves	1.3	Canada/Mexico	7	Low
8420	Fur	1.7	Mexico	7	Low

Table 1 (continued)

SITC	Description	1989[a] Australian Exports (US$m)	Internal Competition	Range of Average Tariff (%)	Nontariff Barriers
8510	Footwear	4.8	Canada/Mexico	17	Very low
8613-17	Medical instruments/equipment	15.4	Canada/Mexico	4-8	Low
8619	Measuring, controlling instruments	19.3	Canada/Mexico	3	Low
8624	Photo film	0.7	Canada/Mexico	3	Low
8630	Developed cinema film	1.5	Mexico	0	Low
8911	Sound recorders, phonographs, parts	1.4	Canada/Mexico	2	Low
8912	Sound recording tapes, discs	8.5	Canada/Mexico	3	Low
8921	Printed books, globes, *etc.*	4.9	Canada/Mexico	1	Low
8924	Picture postcards, *etc.*	0.5	Canada/Mexico	4	Low
8929	Printed matter, n.e.s.	3.7	Canada/Mexico	2	Low
8930	Plastic articles, n.e.s.	5.5	Canada/Mexico	4	Low
8942	Toys, indoor games	2.4	Canada/Mexico	6	Low
8944	Outdoor sporting goods	2.0	Canada/Mexico	4	Low
8960	Works of art, *etc.*	14.9	Canada/Mexico	0	Low
8971	Real jewelry, gold, silver	1.1	Canada/Mexico	7	Low
8996	Hearing aids, orthopedic aids	17.4	Canada	6	Low
8999	Other manufactured goods	2.2	Canada/Mexico	7	Low
9510	War firearms, ammunition	3.0	Canada/Mexico	4	Low
B. Australian Exports to Canada					
0111/ 12/16	Fresh meat	60.9	United States	0-1	
0138	Prepared/processed meat	2.5	United States	10	
0240	Cheese and curd	0.7	United States	2	
0511	Oranges, tangerines, *etc.*	0.8	United States	0	
0519/20	Fresh and dried fruit	14.5	U.S./Mexico	10-12	
0535	Fruit or vegetable juice	0.6	United States	5	
0539/42	Fruit nuts and dry vegetables	16.0	United States	9	
1110/21	Beverages and wine	7.5	United States	5-15	
2622	Wool, degreased	2.2	United States	0	
2831	Copper ores, concentrates	1.2	United States	0	
5331	Coloring material	1.9	United States	10	
5414/17	Veg, alkaloids/derivatives, medicaments	4.3	United States	9-10	
5995	Starch	0.7	United States	13	
6114	Leather, bovine, n.e.s., equine	2.6	United States	9	
6535	Woven synthetic fabrics	0.9	U.S./Mexico	29	
6652	Household, hotel, *etc.*, glass	0.5	United States	11	
6727/34 /43/48	Iron and steel	4.3	U.S./Mexico	7-8	
6952	Tools	1.4	United States	10	

Table 1 (continued)

SITC	Description	1989[a] Australian Exports (US$m)	Internal Competition	Range of Average Tariff (%)	Nontariff Barriers
6981	Locksmiths wares	0.8	United States	10	
7114/15	Aircraft/piston engines	9.9	U.S./Mexico	5-6	
7149	Office machines	1.5	U.S./Mexico	6	
7184/85	Mining machinery	2.3	United States	4-10	
7192	Pumps, centrifuges	1.2	United States	6	
7193	Mechanical handling equipment	1.4	United States	6	
7198	Other machines, nonelectrical	0.7	United States	8	
7199	Machine parts, accessories, n.e.s.	0.5	U.S./Mexico	7	
7249	Telecommunication equipment	1.6	United States	6	
7295	Elec. measuring control equipment	1.6	United States	5	
7328	Motor vehicle parts	1.7	U.S./Mexico	6	
7341/49	Aircraft parts, *etc.*	2.0	United States	0-6	
8414	Clothing, accessories, knit	0.8	U.S./Mexico	25	
8618	Meters, counters, nonelectrical	1.0	United States	6	
8619	Measuring, controlling instruments	2.0	U.S./Mexico	6	
8921	Printed books, globes, *etc.*	0.8	United States	1	
8929	Printed matter, n.e.s.	0.6	United States	5	
8930	Plastic articles, n.e.s.	1.2	United States	13	
8996	Hearing aids, orthopedic aids	0.5	United States	0	
C. Australian Exports to Mexico					
0222	Milk and cream, dry	1.1	U.S./Canada		
0410	Wheat, *etc.*, unmilled	5.1	U.S./Canada		
2218	Oil seeds/nuts	16.8	U.S./Canada		
2621	Wool greasy, fleece-washed	12.0	United States		
2834/39	Lead/nonferrous ores, concentrates	8.9[b]	United States		
3324/25	Fuel/lubricating oils, greases	7.9	United States		
7183	Food machinery, nondomestic	0.8	United States		
9310	Special transactions	6.8	U.S./Canada		

Note: a. In case where 1989 data were not available, 1988 data were used.

b. 1987 data.

set. It faces high levels of both tariff and NTB protection,[15] and competes directly with meat exported by Canada and Mexico. By contrast, aircraft

15. Under the U.S. Meat Import Law, Australia and New Zealand have had to restrict their exports to the United States under a voluntary restraint agreement for a variety of meat exports.

and parts constitute a large export category, but would face little discrimination in the U.S. market by virtue of low import barriers. Categories exceeding $100 million in value that confront high tariffs and/or high to NTBs, as well as competition from internal sources, include: fish, copper, and crude petroleum. Additional exports that could be severely affected are: cheese, nuts, molasses, beverages, metals, coal, medicaments, pesticides, textile products, precision stones, manganese, iron and steel products, zinc alloy, clothing and footwear, and medical instruments. An important category for Australian exports to the United States is wool, with a value exceeding $190 million (SITC 2621/22). However, because neither Canada nor Mexico competes with Australia in the U.S. market, wool is excluded.

Table 1-B provides similar information for the Canadian market, where the United States and Mexico are the competing internal sources. Canada constitutes a much less important market for Australia than does the United States. Canadian tariff barriers tend to be higher than their U.S. counterparts, but the lack of information on Canadian NTBs precludes any general comparative statements about market "openness." The most heavily impacted commodities are: meat, dried and preserved fruit, wine, medicaments, leather, iron and steel, tools, aircraft engines, office machines, telecommunications equipment, aircraft parts, and plastics. Australian wool exports face competition from the United States in the Canadian market, but the low tariff rate implies a small effect on trade.

Matched Australian exports to the Mexican market are shown in Table 1-C. That trade is relatively small, adding up to less than $50 million. Milk, wool, nonferrous ore concentrates, n.e.s., oil seed/nuts, and food machinery are the main affected commodity groups.

New Zealand's exports to NAFTA are dealt with in Table 2, where 2-A shows its "matched" exports to the United States. The most heavily impacted industries would be: meat, milk and cheese, fish, fresh and preserved fruit and vegetables, sheep skin, alcohols, wood yarn and fabrics, carpets, iron and steel, tools, clothing, and instruments. As was the case for Australia, New Zealand wool exports to the United States are important ($33 million), but because there is no internal competition in NAFTA and since U.S. protection is low, that sector would not be severely affected. In most of the affected industries, both Canada and Mexico compete with New Zealand

Table 2

Discriminatory Effects of North American Integration on New Zealand

SITC	Description	1990[a] New Zealand Exports (US$m)	Internal Competition	Range of Average Tariff (%)	Nontariff Barriers
A. New Zealand Exports to the United States					
0012	Sheep, lambs, goats	1.9	Canada	0	High
0015	Horses, asses, mules	2.0	Canada	2	High
0111/12/16/18	Meat	513.5	Canada/Mexico	5-7	High
0138	Prepared/processed meat	1.6	Canada	5	High
0221/22/23	Milk and cream	7.8	Canada	2	High
0240	Cheese and curd	36.4	Canada	15	High
0311/13	Fish	123.5	Canada/Mexico	1	High
0484	Bread	1.2	Canada/Mexico	0	High
0514	Apples, fresh	21.8	Canada	0	High
0519	Fresh fruit	54.3	Canada/Mexico	10	High
0535	Fruit or vegetable juice	3.1	Canada/Mexico	0	High
0536	Fruit, temporarily preserved	0.9	Canada/Mexico	10	High
0539	Fruit nuts	0.4	Canada/Mexico	13	High
0542	Dry vegetables	0.9	Canada/Mexico	0	High
0545	Other fresh vegetables	1.3	Canada/Mexico	14	High
0546	Vegetables, simply preserved	2.2	Canada/Mexico	12	High
0819	Food waste and feed	2.8	Canada/Mexico	10	High
1121	Wine of fresh grapes, *etc.*	0.5	Canada	10	High
1123	Beer, ale, stout, porter	6.4	Canada/Mexico	0	High
2117	Sheep skin, without wool	7.1	Canada	5	Low
2432	Lumber, shaped conifer	2.8	Canada/Mexico	2	Low
2621/22/23	Wool	33.1	(No internal)	0-6	Low
2911	Bones, Ivory, horns, *etc.*	4.1	Mexico	0	Low
2919	Animal materials	17.7	Canada/Mexico	1	Low
2925/26/27/29	Plants and flowers	8.2	Canada/Mexico	0-7	Low
5122/25/29	Organic chemicals	9.1	Canada/Mexico	6-8	Very low
5416	Glycosides, glands, sera	0.7	Canada/Mexico	3	Very low
5530	Perfume, cosmetics, *etc.*	0.3	Canada/Mexico	5	Very low
5811	Products of condensation, *etc.*	0.6	Canada/Mexico	4	Very low
5812	Products of polymerizing, *etc.*	0.9	Canada/Mexico	4	Very low
5995/96	Starch and chemicals	155.6	Canada/Mexico	4	Very low
6114	Leather, bovine, n.e.s., equine	1.3	Canada/Mexico	4	Zero
6119	Leather, n.e.s.	1.1	Canada/Mexico	4	Zero

Table 2 (continued)

SITC	Description	1990[a] New Zealand Exports (US$m)	Internal Competition	Range of Average Tariff (%)	Nontariff Barriers
6130	Fur skins	0.7	Canada/Mexico	3	Zero
6291	Rubber tire, tubes	1.3	Canada/Mexico	3	Low
6299	Other rubber articles, n.e.s.	1.4	Canada/Mexico	3	Low
6314	Improved reconstituted wood	0.4	Canada/Mexico	3	Low
6328	Other wood manufactures	0.3	Canada/Mexico	5	Low
6330	Cork manufactures	0.6	Canada	10	Low
6416	Fiberboard of wood, *etc.*	0.4	Canada/Mexico	2	Low
6419	Other paper, *etc.*	1.8	Canada/Mexico	2	Low
6512	Yarn of wood, animal hair	5.2	Canada	5	Low
6532	Woven wool fabrics	0.6	Canada/Mexico	17	Average
6576	Carpets, *etc.*, unknotted	2.3	Canada/Mexico	6	Average
6612	Cement	3.4	Canada/Mexico	0	Low
6618	Mineral building products	1.0	Canada/Mexico	5	Low
6647	Safety glass	4.9	Canada/Mexico	3	Low
6727	Iron/steel, rerolling coil	13.9	Canada/Mexico	4	Very high
6741/42 /43/48	Iron and steel	44.3	Canada/Mexico	4-6	Very high
6793	Iron/steel, rough forgings	0.5	Canada/Mexico	2	Very high
6821/22	Copper, unwrought/worked alloys	6.2	Canada/Mexico	1-4	Very low
6842	Aluminum, worked alloys	3.3	Canada/Mexico	3	Very low
6933	Wire fencing, gauze, *etc.*	0.9	Canada/Mexico	4	Low
6952	Tools	1.9	Canada/Mexico	5	Low
6960	Cutlery	0.3	Canada/Mexico	7	Low
6971	Domestic stoves, ovens, etc.	0.5	Canada/Mexico	5	Low
6972	Domestic utensils, base metal	0.7	Canada/Mexico	4	Low
6981/89	Metal wares	3.4	Canada/Mexico	3	Low
7114	Aircraft engines, including jet	3.4	Canada/Mexico	3	Low
7115	Piston engines, non-aircraft	0.9	Canada/Mexico	1	Low
7116	Gas turbines, non-aircraft	1.8	Canada/Mexico	2	Low
7121	Cultivating machinery	1.3	Canada/Mexico	0	Low
7122	Harvesting, *etc.*, machinery	0.4	Canada/Mexico	1	Low
7123	Dairy farm equipment	2.3	Canada	1	Low
7143/49	Statistical/office machines	9.0	Canada/Mexico	2-3	Low
7151	Machine tools for metal	2.3	Canada/Mexico	4	Low
7182	Printing and binding machinery	1.2	Canada/Mexico	3	Low
7184	Construction/mining machinery	0.3	Canada/Mexico	2	Low
7185	Crushing, *etc.*, glass machinery	2.2	Canada/Mexico	3	Low
7191	Heating/cooling equipment	0.6	Canada/Mexico	2	Low
7192	Pumps, centrifuges	2.4	Canada/Mexico	1	Low
7193	Mechanical handling equipment	4.2	Canada/Mexico	1	Low
7195	Powered tools	0.7	Canada/Mexico	3	Low

Table 2 (continued)

SITC	Description	1990[a] New Zealand Exports (US$m)	Internal Competition	Range of Average Tariff (%)	Nontariff Barriers
7196	Nonelectrical machinery, n.e.s.	1.7	Canada/Mexico	3	Low
7198	Other machines, nonelectrical	0.8	Canada/Mexico	5	Low
7199	Machine parts, accessories	1.8	Canada/Mexico	3	Low
7221	Electric power machinery	0.4	Canada/Mexico	1	Low
7222	Switchgear, *etc.*	0.3	Canada/Mexico	3	Low
7232	Electrical insulating equipment	0.3	Canada/Mexico	3	Low
7249	Telecommunication equipment	2.0	Canada/Mexico	3	Low
7250	Domestic electrical equipment	0.7	Canada/Mexico	3	Low
7295	Elec. measuring control equipment	0.5	Canada/Mexico	3	Low
7299	Other electrical machinery	4.0	Canada/Mexico	3	Low
7321/28	Motor vehicles	21.0	Canada/Mexico	0-1	Low
7341/49	Aircraft parts, *etc.*	18.0	Canada/Mexico	1-2	Low
7353	Ships and boats, non-war	2.5	Canada/Mexico	1	Low
8210	Furniture	2.3	Canada/Mexico	3	Low
8411	Textile clothes, not knit	0.9	Canada/Mexico	13	Low
8414	Clothing, accessories, knit	1.4	Canada/Mexico	17	Average
8420	Fur	2.7	Canada	7	Average
8510	Footwear	0.8	Canada/Mexico	17	Very low
8612	Spectacles and frames	0.5	Canada/Mexico	5	Low
8613	Optical instruments	0.3	Canada/Mexico	8	Low
8616/17/19	Professional instruments	8.7	Canada/Mexico	3-5	Low
8921	Printed books, globes, *etc.*	1.3	Canada/Mexico	1	Low
8924/29	Picture postcards, printed matter, n.e.s.	0.7	Canada/Mexico	2-4	Low
8930	Plastic articles, n.e.s.	4.6	Canada/Mexico	3	Low
8942	Toys, indoor games	0.6	Canada/Mexico	6	Low
8960	Works of art, *etc.*	0.6	Canada/Mexico	0	Low
8971	Real jewelry, gold, silver	0.5	Canada/Mexico	7	Low
8972	Imitation jewelry	0.5	Canada/Mexico	8	Low
8996	Hearing aids, orthopedic aids	0.4	Canada	6	Low
B. New Zealand Exports to Canada					
0111/12/16/18	Meat	90.1	United States	1	
0222/23	Milk, *etc.*	4.5	United States	10-17	
0240	Cheese and curd	3.0	United States	2	
0311/13	Fish	2.0	United States	0-3	
0535	Fruit or vegetable juice	1.1	United States	5	
0539	Fruit nuts	0.5	United States	9	
0545	Other fresh vegetables	0.5	United States	15	
1121	Wine of fresh grapes, *etc.*	0.3	United States	5	

Table 2 (continued)

SITC	Description	1990[a] New Zealand Exports (US$m)	Internal Competition	Range of Average Tariff (%)	Nontariff Barriers
1123	Beer, ale, stout, porter	0.3	U.S./Mexico	3	
2117/2622	Sheep and wool	3.8	United States	0	
2919	Animal materials	2.9	United States	1	
2927	Cut flowers	1.0	United States	15	
5416	Glycosides, glands, sera	0.3	United States	10	
5530	Perfume, cosmetics, *etc.*	0.4	United States	10	
5995	Starch	1.7	United States	13	
6119	Leather	2.2	United States	10	
6330	Cork manufactures	0.3	United States	0	
6512	Yarn of wool, animal hair	0.8	United States	13	
6576	Carpets, *etc.*, unknotted	1.4	United States	25	
6647	Safety glass	0.3	U.S./Mexico	15	
6727	Iron/steel, rerolling coil	1.6	United States	7	
6743/48/83	Iron and steel	6.7	United States	8-11	
6822/42	Copper, alloy; aluminum, worked alloys	2.8	U.S./Mexico	7-11	
6952	Tools	5.0	United States	10	
6989	Other base metals	0.8	United States	7	
7192	Pumps, centrifuges	0.5	United States	6	
7196	Nonelectrical machinery	0.3	United States	7	
7249	Telecommunication equipment	1.0	United States	6	
7299	Other electrical machinery	0.7	U.S./Mexico	8	
7328	Motor vehicle parts	0.5	U.S./Mexico	6	
7341/49/53	Aircraft and ships	14.5	United States	6-17	
8414	Clothing, accessories, knit	0.3	U.S./Mexico	25	
8420	Fur	0.3	United States	20	
8617	Medical instruments	0.3	United States	2	
8921	Printed books, globes, *etc.*	0.4	United States	1	
8930	Plastic articles, n.e.s.	0.8	United States	13	
C. New Zealand Exports to Mexico					
0112	Mutton, *etc.*, fresh, chilled, frozen	5.5	United States		
0222/23/30	Milk and cream, dry/fresh; butter	102.9	U.S./Canada		
2512	Mechanical wood pulp	0.4	United States		
2621/22	Wool	1.5	United States		
5995	Starch	6.6	United States		

Note: a. In cases where 1990 data were not available, 1989 data were used.

in the U.S. market – a counter-intuitive result given the different factor endowments of Mexico and New Zealand. With respect to New Zealand exports to Canada, Table 2-B shows that milk, fish, fruit and vegetables, cut flowers, starch, leather, carpets, iron and steel, copper and aluminum, tools, and aircraft and ships will be the most heavily affected categories. New Zealand exports to Mexico are heavily dominated by dairy products (milk, cream, and butter), but mutton, wool and starch would also be among the impacted commodities.

The following is a summary list of industries in Australia-New Zealand that are likely to be heavily impacted by the discriminatory effects of NAFTA:

Industries in Australia and New Zealand Heavily Impacted by NAFTA

Bovine meat	Medicaments
Dried and preserved fruits and vegetables	Leather
Fish	Pesticides
Cheese	Textiles and Clothing
Milk	Precious stones
Wood and yarn	Nonferrous ore concentrates
Carpets	Manganese
Oil seed/nuts	Iron and steel products
Sheepskin	Tools
Cut flowers	Zinc Alloy
Starch	Footwear
Wine	Medical Instruments
Copper	Food machinery
Petroleum	Aircraft parts/engines
Nuts	Office machines
Molasses	Telecommunications equipment
Beverages	Plastics
Metals	Instruments
Coal	Ships

Although the partial equilibrium approach adopted here is best suited for the identification of the heavily impacted industries, and the aggregated effects are best estimated by CGE models (discussed below), it is useful to use our data as well to assess the aggregate effect on trade. Because NTBs

cannot be quantified accurately, the answer must concentrate on the effect of tariff discrimination. Two approaches were employed, yielding roughly similar results in terms of dollar value. The first one assumes that Australia-New Zealand exporters to the United States would attempt to maintain their share of the market and would, therefore, absorb the new degree of discrimination and reduce their export price to the extent needed to remain competitive. Since the United States is a "large" country, we assume a two-thirds pass-through of the tariff,[16] so that the reduction in the Asian export price would be equal to two-thirds of the tariff. In other words, the cost of a discriminatory North American FTA (in the U.S. market) is quantified as a deterioration in Australia-New Zealand terms of trade by two-thirds of the U.S. tariff. In the case of exports to Canada and Mexico, a full pass-through is assumed, so the terms of trade effect equals the full tariff. Measured in this manner, the negative terms of trade effect on Australia is estimated at 2.4 percent, 4.5 percent, and 12.2 percent of bilateral exports to the United States, Canada, and Mexico,[17] respectively. The respective values for New Zealand exports are 4.1 percent, 4.5 percent, and 11.9 percent.[18]

An alternative approach is to apply elasticity coefficients to the price reduction engendered by the internal tariff cut, and multiply the results by Australia-New Zealand exports. A recent study of the elasticity of substitution between U.S. imports from Mexico, Canada, and the rest of the world (Reinert and Shields [1991]) for two- and three-digit commodity groups shows the overwhelming majority of the estimates cluster around 1, thereby confirming the estimates of the previous paragraph.

NTBs: One reason why the above quantitative estimates understate the expected trade diversion is that they only relate to tariff removal within the grouping. Since U.S. tariff rates are very low, except for occasional spikes, the main diversionary impact would come from removal of NTBs. It should

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16. For a review of the pass-through considerations, see Kreinin, Mordechai [1977], "Effect of Exchange Rate Changes on the Prices and Volumes of Trade," *IMF Staff Papers*, July, and the literature cited therein.
17. For Mexico, we used an average tariff of 12 percent.
18. These calculations exclude SITC 9 as this category represents a highly-specialized and diverse group, including zoo animals and firearms. These commodities were deemed less important for the present analysis.

be noted that the NTB estimates presented here are crude, as well as aggregative. As such, they conceal important distinctions between subproducts, and are unable to identify special bilateral relationships. For example, some of the U.S.-Canada trade disputes have been going on for years and will continue to do so. Thus, the ratification of NAFTA would not mean free trade or trade diversion for all the NTBs listed.

How would a customs union or FTA affect nonmember countries in commodities subject to import quotas? Several scenarios are possible. If the import quotas on third countries are binding and remain so after integration, then removal of the NTB in, say, the United States on imports from (say) Mexico, would cause an increase in Mexican exports to the United States. U.S. output would be displaced, thereby constituting trade creation. No trade diversion would occur. Second, if the United States decides to keep overall imports constant, it would tighten the quotas on third countries. In that case, there would be trade creation as well as trade diversion. The two effects would be equal in magnitude if the added exclusion equals the increased imports from Mexico, so as to maintain overall U.S. imports constant. On the other hand, trade creation would be larger (smaller) than diversion if the new exclusions fall short of (exceed) the added internal imports. But under this scenario, there would always be some trade diversion. Under the third scenario, the increase in internal imports would reduce demand for external imports to a point where the quotas are no longer binding. This is also a case of trade diversion. Finally, if the NTBs are in the form of VERs there could be redistribution of the quota rents. Most likely, different commodities would fall under different scenarios discussed above.

A recent study (Roland-Holst, Reinert and Shields [1992]) assesses the effect of removing all impediments to trade by assuming that all price differentials between the United States, Canada, and Mexico are due to some form of trade restrictions. If finds that the diversionary impact of NTBs plus tariffs to be *ten times* greater than that caused by the removal of tariffs alone. However, multiplying our estimates by ten would no doubt lead to gross overestimation for several main reasons: Considering the role of transport costs and product differentiation, not all price differentials can be attributed to trade restrictions; not all NTBs will be removed by NAFTA;

and the multiplication factor mentioned above is likely to vary greatly by commodity groups (as in the above paragraph) and may not be so high in the heavily impacted categories. But without assigning a specific number, it is possible to conclude that the diversionary impact is likely to be several times the estimates above for mere tariff elimination. Even a factor of 2 would bring the trade diversion to well over 10 percent (of Australia-New Zealand exports to NAFTA).

However, it should be noted that the bilateral exports (our denominator) are themselves a small portion of total exports and certainly of GDP. Thus, the terms of trade effects are small relative to the overall economy, a result consistent with estimates by CGE models.

B. Service Transactions

Next it is important to consider the effects of NAFTA on the fledgling service export sectors in Australia and New Zealand. Quantitative analysis in this area is extremely difficult, given the paucity of data and definitional problems. In addition, it is not yet certain to what extent services will be freed in NAFTA. Yet several points can be made. First, trade in services has become increasingly important for the economies of Australia and New Zealand, and as this trend is likely to continue, any segmentation of the international marketplace for services will be detrimental to their respective growth. Although recent reliable data are difficult to locate, it is estimated[19] that total exports of private services as a percentage of total exports of goods and services increased from 10 percent in 1960 to 14 percent in 1984 for Australia, and from 5 percent to 20 percent for New Zealand. Second, the services sector is of great importance in attracting foreign investment to the two countries (discussed below). In 1983, 43 percent of the stock of direct foreign investment in Australia was in services, as opposed to 26 percent in manufacturing, and for New Zealand, the respective figures for the period

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19. Taken from Stern, Robert M. and Bernard M. Hoekman [1988], "The Service Sector in Economic Structure and in International Transactions," Chapter 2 in Castle, Leslie and Christopher Findlay (eds.), *Pacific Trade in Services* (Sydney: Allen and Unwin); p. 44.

1976-1983 were 51 percent and 33 percent.[20] Third, telecommunications services (and equipment) constitute an important area in which Australia is competitive. It is developing business ties with its Asian developing neighbors, including Vietnam, Mongolia, and the Pacific Islands, through its Overseas Telecommunications Cooperation hub in Sydney. Currently, North America, the EC, and Japan are each pursuing separate telecommunications technical standards, and Australia could actually go in any direction, despite its traditional links to the EC system through its close relationship with the United Kingdom. Hence, if NAFTA ultimately leads to exclusionary technical standards in telecommunications, the export market for these services will be limited. A multilateral solution under the auspices of the International Telecommunications Union in Geneva is far from adoption, although the United States has tabled a possible framework for telecommunications at the current Uruguay Round of GATT.[21]

C. Investment Diversion

In addition to trade diversion, Australia and New Zealand could experience diversion of direct foreign investment (DFI) flows away from their home markets and toward internal NAFTA markets. When economies form an FTA, there will be changes in DFI flows to take advantage of new opportunities resulting from a *regional* (as opposed to national) division of labor. The investment effects of the FTA are at least three fold: First, as internal prices are equalized, DFI flows will be reallocated in such a way that production will take place in the most efficient location. This effect will result in a more efficient allocation of resources and, thus, can be called "investment creation."[22] Second, because the FTA distorts the relationship between part-

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20. Ibid.; p. 50.

21. For a detailed analysis of the effects of EC 1992 on third countries in the area of telecommunications, see: Jussawalla, Meheroo, "The Anticipated Impact of Europe's Single Market on the Telecommunications Industry in Asia," in Plummer, Michael G. and William E. James (eds.), *Europe and Asia in the 1990s*, forthcoming.

22. The concept of investment creation – as well as diversion, discussed below – stems from analysis found in Kreinin, Mordechai [1964], "On the Dynamic Effects of Customs Unions," *Journal of Political Economy*, April.

ner and non-partner country prices, the former may now have a competitive advantage over the latter. Hence, some DFI will flow into partner countries not because they are more efficient, but because they have a price advantage resulting from the FTA. As this effect suggests a less efficient allocation of resources, it can be referred to as "investment diversion." Third, to the extent that the FTA becomes more efficient due to the dynamic growth effect, new profit opportunities will emerge and DFI will follow.

In sum, investment creation should obtain in industries experiencing trade creation. Although the static investment creation effect will imply a reduction in DFI to nonpartner countries, it will be at least partly offset by the growth effects. On the other hand, investment diversion is likely to obtain in industries facing trade diversion, leading to a less efficient allocation of resources and a negative growth effect. Therefore, nonpartner countries will be mainly affected by investment diversion. The higher the preferential margin, the greater the incentive for investment to flow into partner countries. Hence, a review of commodities experiencing the greatest degree of trade diversion would reveal the most likely candidates for investment diversion.

Potential investment diversion is highly significant for Australia and New Zealand for several reasons. Inflows of DFI bring new capital and technologies essential to the modernization and advancement of the two economies, which is particularly important in enhancing structural adjustment. Relative decreases in DFI from advanced economies would have important detrimental effects on long-run economic growth. Second, as Table 3 shows, the United States is an important source of DFI for both Australia and New Zealand. Matching the sectors having the largest stock of DFI with the categories experiencing the greatest trade diversion offers a general idea of the industries where most of the investment diversion would occur. Machinery and transport equipment could be affected because of Canadian and Mexican protection that would divert some investment away from Australia and New Zealand. Much of the U.S. manufacturing DFI in Australia and New Zealand is in food products, chemicals, and fabricated metals, which would be adversely affected. It should also be noted that other important sources of DFI, especially from the Asia-Pacific region, would flow to North America to take advantage of free trade, a phenomenon

Table 3
Stock of U.S. Direct Investment Abroad by Country and Major Industry

(US$ million)

Country	Year	All Industries	Petroleum	Manufacturing								Wholesale Trade[a]	Finance & Insurance	Other Industries[b]
				Total	Food & Kindred Products	Chemicals & Allied Products	Primary Fabricated Metals	Non-Electric Machinery	Electric & Electronic Machinery	Trans-Portation Equipment	Other Manufac-turing			
Australia	1977	5,823.0	971.0	2,368.0	251.0	401.0	192.0	363.0	126.0	565.0	470.0	684.0	470.0	291.0
	1980	7,662.0	1,264.0	2,911.0	330.0	511.0	299.0	524.0	167.0	449.0	631.0	1,064.0	669.0	464.0
	1985	8,772.0	1,627.0	3,044.0	389.0	1,300.0	76.0	393.0	135.0	114.0	636.0	971.0	1,162.0	1,968.0
	1986	9,340.0	1,731.0	3,375.0	396.0	1,518.0	110.0	348.0	56.0	309.0	638.0	991.0	1,299.0	1,943.0
	1987	11,363.0	3,164.0	3,491.0	435.0	1,712.0	111.0	297.0	72.0	106.0	758.0	1,104.0	1,491.0	205.0
	1988	13,186.0	3,147.0	4,557.0	498.0	2,119.0	222.0	430.0	97.0	285.0	906.0	1,290.0	1,367.0	261.0
	1989	14,495.0	3,009.0	5,771.0	1,072.0	2,256.0	311.0	511.0	133.0	528.0	960.0	1,273.0	1,115.0	313.0
New Zealand	1977	410.0	na	137.0	28.0	26.0	2.0	3.0	7.0	na	na	na	15.0	5.0
	1980	578.0	na	196.0	31.0	49.0	5.0	11.0	16.0	na	na	na	16.0	3.0
	1985	576.0	na	162.0	20.0	56.0	4.0	5.0	6.0	na	na	114.0	45.0	20.0
	1986	598.0	na	171.0	20.0	57.0	5.0	6.0	7.0	na	na	123.0	53.0	23.0
	1987	743.0	na	242.0	20.0	80.0	8.0	na	8.0	na	69.0	134.0	54.0	24.0
	1988	833.0	na	213.0	-12.0	93.0	na	14.0	1.0	na	77.0	156.0	57.0	39.0
	1989	1,167.0	na	379.0	109.0	104.0	na	16.0	10.0	na	87.0	178.0	199.0	26.0

Notes: na = Not disclosed or not available.

a. Retail trade included with wholesale trade for 1977.

b. Including banking and services.

Sources: U.S. Department of Commerce, *Survey of Current Business*, August 1982, 1986, 1987, 1988, 1989, 1990; mimeos, 11/21/86.

which is already occurring.[23]

There is an increasingly close link between trade and investment in the contemporary global economy. Nearly a third of international trade is conducted between parents and affiliates of of multinational corporations. In fact, an important advantage of DFI establishments for the development of the host economy is their tendency to be more trade-oriented than domestic firms, thereby generating greater foreign exchange and increasing links with the global economy, as well as having stronger international contacts. As DFI is diverted toward North America – and Europe – trade flows between parents and affiliates will also be redirected, thereby inhibiting to some extent new economic opportunities and relationships for Australia and New Zealand.

D. Dynamic Effects

Beyond the static reallocation effects, there are dynamic growth effects of NAFTA that would stimulate imports from Australia-New Zealand. McCleery [1992] uses a computational general equilibrium (CGE) model to estimate changes in the U.S. growth rate due to NAFTA, and concludes that growth would increase by 0.1 percent, while that of Mexico would increase by 0.9 percent per year. Canada's annual growth is estimated to rise by 0.25 percent. Other studies are consistent with these results.[24] Thus, the growth effect would compensate for some of the static trade diversion. However, with any reasonable coefficient of the income elasticity of import demand in the integrating regions (say, around 1.5), it would not offset it completely. And it would certainly not offset it in the major market, the United States. Considerable diversion is likely to remain.

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23. This will be applicable not only to the most obvious source, Japan, but also to the Asian Newly-Industrializing Economies that are already anticipating the creation of NAFTA. For example, Kia Motors of Korea recently (August 1991) signed an agreement with Mexico to produce automobiles for export to the U.S. market in anticipation of free trade.
24. For a summary of the results of general equilibrium models used to estimate the overall effects of NAFTA on the integrating economies, see Plummer, Michael G., "ASEAN and Economic Integration in the Americas," *OECD Development Centre Technical Paper*, forthcoming.

Not only that, but there should be negative dynamic effects in Australia and New Zealand themselves. The static trade and investment diversion shrinks the size of the market relative to what it would be in the absence of the regional groupings elsewhere. Hence, unfavorable dynamic effects are superimposed upon it.

III. Conclusion: What is Oceania to do?

This paper assesses the effect of economic integration in North America on Australia and New Zealand, using a commodity matching technique which allows for both quantitative and qualitative analysis. The main objective is to identify the industries in the 2 countries that will be heavily impacted by NAFTA. It is found that a number of key primary and manufactured commodities will be adversely affected. As a subsidiary goal, we estimate the overall terms of trade effect to be small. This is consistent with the results of CGE models used to quantify the effects of NAFTA on the integrating countries. Although difficult to quantify, NTBs and other forms of protection would cause further trade diversion, perhaps doubling the tariff-induced effects. Moreover, there is potential for investment diversion away from the Australian and New Zealand economies. As Australia and New Zealand are both striving to strengthen their trade and investment ties, regionalism in North America is of concern. What options are open to Australia and New Zealand to minimize the impact of NAFTA as well as the EC?

First, a liberal international trading environment is a key to expanding international trade and investment. Lower MFN tariffs and NTBs would mitigate the discriminatory effect of preferential trading agreements. Hence, Australia and New Zealand have a considerable stake in the outcome of the Uruguay Round of GATT. They should continue to press for liberalization of agricultural trade as part of the Cairn's Group, but also for success in many other areas being negotiated in Geneva, including NTBs, subsidies, trade in services, and trade-related investment measures. Also, they should work for a successful integration of trade in services into the GATT framework, perhaps as part of the proposed General Agreement on Trade in Services (GATS).

Second, Australia and New Zealand should continue to advance their

respective unilateral liberalization programs. Recent reforms have rendered their economies far more competitive, and while the adjustment process has been difficult, growth is now emerging from a solid base. For example, New Zealand is included among the top-10 rankings of the 1993 *World Competitiveness Report.* In short, one attractive option is to pursue a policy of free trade.

Third, while Australia and New Zealand have already negotiated a comprehensive free-trade agreement between themselves, called "Closer Economic Relations," bilateral trade with each other is relatively small, amounting to 5 percent and 18 percent of total Australian and New Zealand exports, respectively, in 1990. On the other hand, the share of trade with the Asia-Pacific region has been booming, growing to about two-thirds of total trade in 1990. Hence, Australia and New Zealand should endeavor to form closer economic links with their Asia-Pacific neighbors, through informal as well as formal channels. The Asia-Pacific Economic Cooperation (APEC) process, which includes all of Australia's and New Zealand's major regional trading partners, could be the focus of the these efforts. Moreover, a strong APEC could serve to counter Asian arrangements that exclude Australia and New Zealand, such as the East-Asian Economic Grouping (proposed by Malaysia in December 1990) and the East-Asian Economic Caucus (agreed to by ASEAN in January 1992).

Appendix
Sources of Data

Trade Data: United Nations, *Commodity Trade Statistics*, relevant issues, 1985-1990.

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