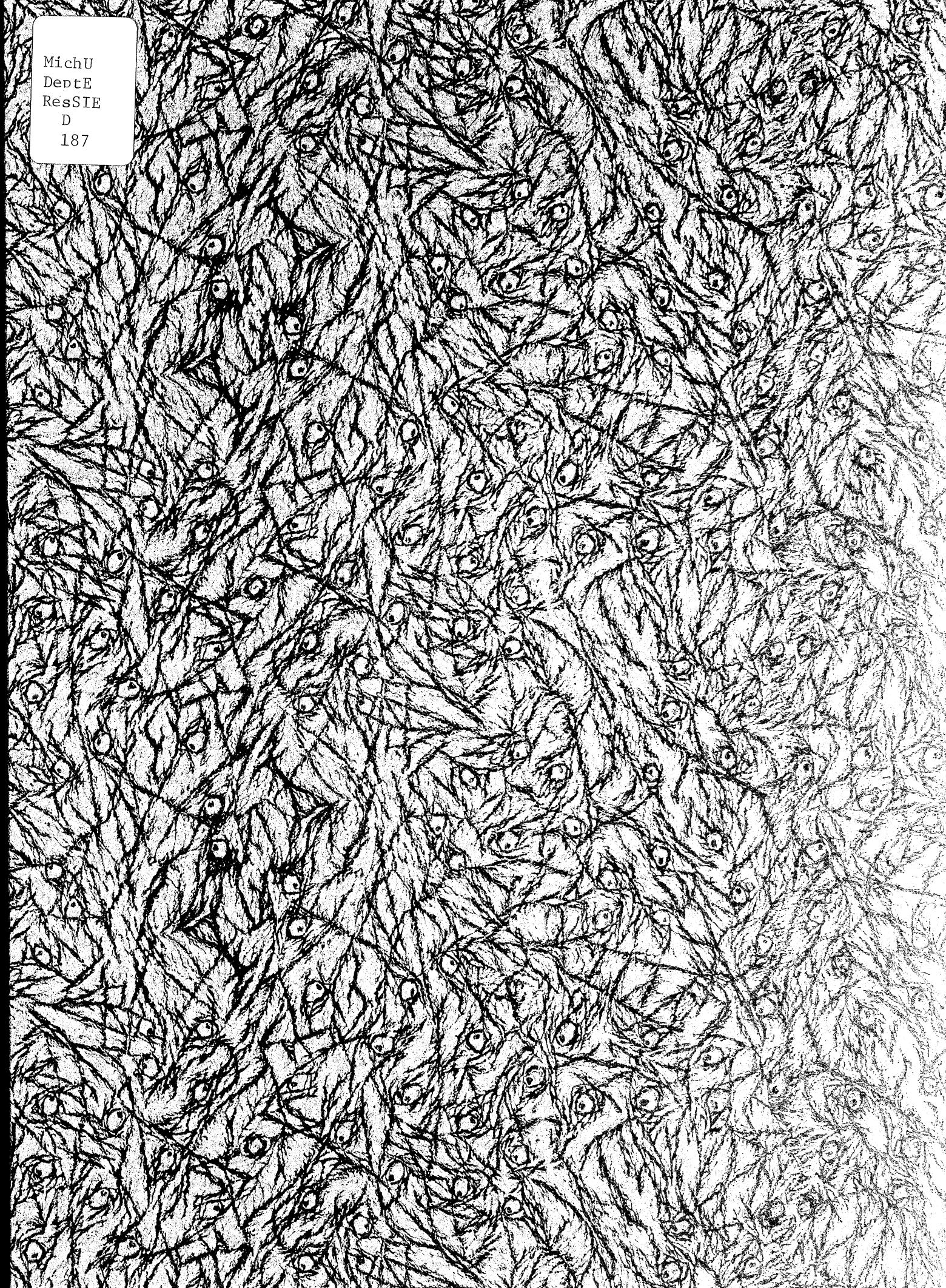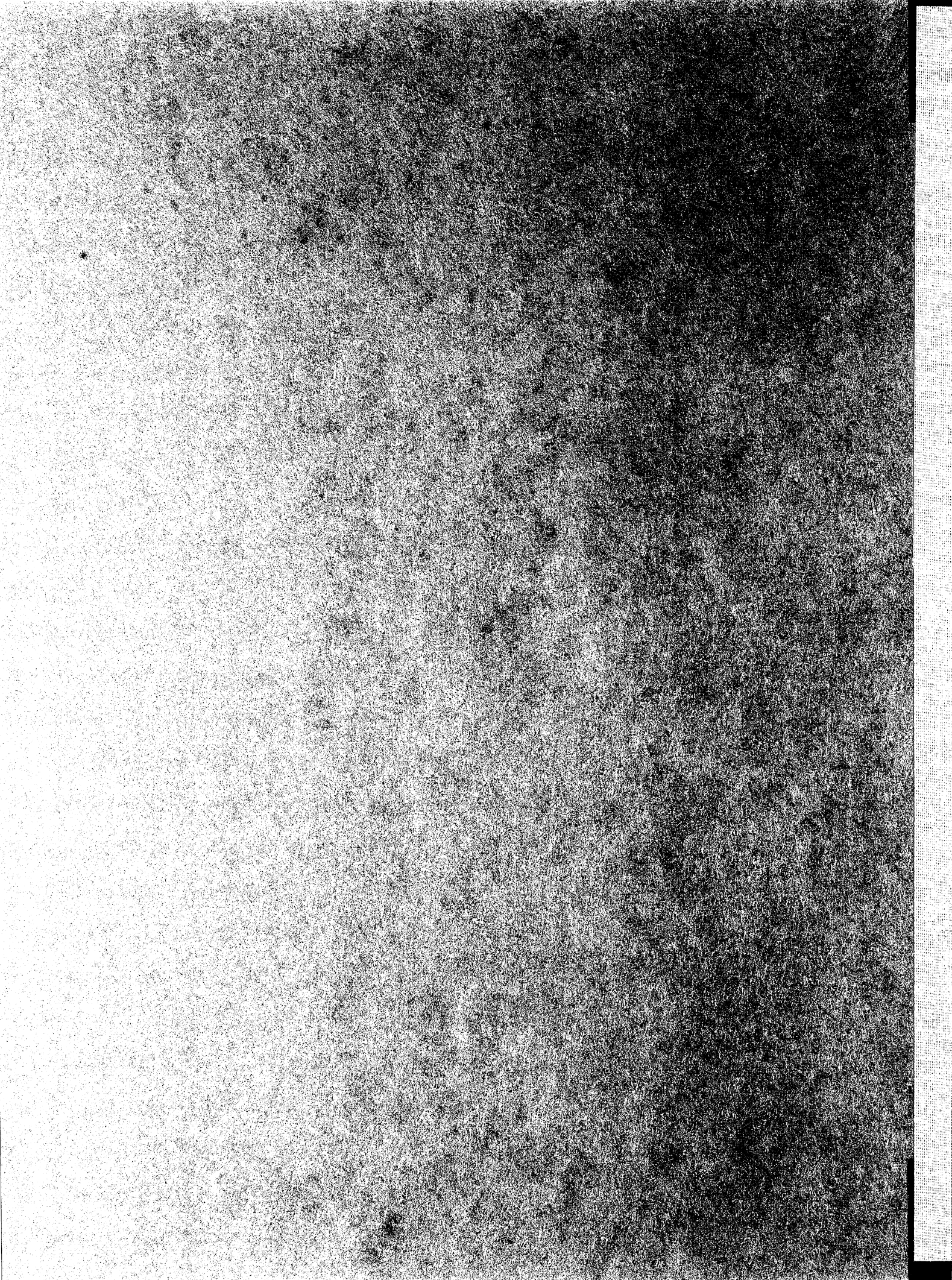# RESEARCH SEMINAR IN INTERNATIONAL ECONOMICS

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Testimony of
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Regarding
United States-Canada Free Trade

before the
Subcommittee on Economic Stabilization
of the
Committee on Banking, Finance, and Urban Affairs
United States House of Representatives

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Good morning Mr. Chairman and members of the subcommittee. I would like to thank you for inviting me here today to report on my research with Robert M. Stern, Professor of Economics at the University of Michigan, pertaining to the proposed free-trade area between the United States and Canada. This research was conducted as part of a larger project on U.S. trade policy at the University of Michigan. I intend to focus my testimony today on the currently available empirical results concerning the economic effects of the removal of tariffs on merchandise trade between the U.S. and Canada.

A substantial amount of work has been undertaken on this topic by American and Canadian researchers. As with much research in economics, the results sometimes seem to be contradictory. I will look at these results in two ways. First, I will summarize some of the major studies. Next, I will try to synthesize the various views in a framework that allows us to see the most likely impact of the current negotiations between the U.S. and Canada on trade, employment, and national income in each country.

Economists have touted the virtues of free trade for nearly two centuries. Consumers benefit from trade by the availability of a wider variety of products at a lower cost. Producers benefit from trade through the increased opportunity to specialize in highly productive industries which may yield higher wages or profits.

Of course, there are always individuals who are hurt by free trade. Workers might be hurt because of a fall in wages or because they simply find it difficult to uproot their families to search for the higher paying jobs in the newly expanding export industries. Consumers might be hurt because the prices of goods they consume rise.

Economists do feel confident, however, that free trade will lead to the most efficient allocation of our nation's resources, maximize the value of output, and make us all potentially better off. For, with a larger pie, it is possible to compensate those hurt by trade, so that we may all gain.

These types of conclusions focus on the attainment of multilateral free trade. However, the question now under consideration is that of bilateral free trade. How then should we evaluate the opportunities for selective free trade with Canada? The answer is no longer clear, for the gains from trade cannot be guaranteed by removing tariffs only on selected trade partners. As a result, economists have always viewed preferential tariff reductions as something of a curiosity.

The basic theory of international trade shows us that a preferential tariff reduction on imports from Canada could have two effects. On the one hand, the tariff cut may allow consumers to buy lower priced, more efficiently produced imports from Canada. This is called 'trade creation' and raises real GNP in the U.S. On the other hand, the U.S. may simply substitute imports from Canada for the even lower priced and more efficiently produced imports from Japan, Europe, or the developing countries, which are still subject to a tariff. This is called 'trade diversion' and lowers real GNP.

The General Agreement on Tariffs and Trade (GATT) takes the view that a free-trade area is a movement toward trade liberalization and so is legal under the rules of the GATT. However, as a result of the conflicting effects of trade creation and trade diversion, it is difficult to guarantee that removing tariffs on U.S.-Canadian trade will be desirable for either country. This is a question that cannot be resolved by international trade

theory. The answer can be ascertained only by looking at the specifics of each individual case.

Before discussing the empirical results that are available, we should be aware of the current levels of protection, so that we can understand the scope of a potential agreement. The average tariff rates on bilateral trade for some broadly defined product categories are presented in Tables 1 and 2. Table 1 contains the tariff rates as they were before the Tokyo Round of tariff reductions, and in Table 2 we report the rates which will apply after the Tokyo Round is fully implemented in 1987.

Look first at Table 1. Column 1 gives the average tariffs which apply to U.S. imports from Canada for 22 broadly defined product categories. Column 3 contains these tariffs on Canadian imports from the U.S. It is apparent that tariff barriers on U.S.-Canadian trade are already quite low. Prior to the Tokyo Round, the U.S. imposed an average tariff rate of only 1.2% on imports from Canada. Comparable tariffs imposed by Canada on U.S. exports averaged 5.2%.

Look now at Table 2. The post-Tokyo Round rates are even smaller, as can be seen from columns 1 and 3. U.S tariffs average less than 1% and Canadian tariffs average 3.8%. Although there are some individual rates which are quite high, they tend to apply to product categories which are not heavily traded between our two countries, such as textiles, clothing, and footwear.

Let us now look at the current U.S.-Canadian trade proposal. The U.S. is proposing to reduce tariffs on Canadian exports by an average of about seven-tenths of one percentage point. In return, Canada will cut its tariffs on our exports by nearly four percentage points.

This is not a large reduction compared to other recent tariff cuts by the U.S. For example, in the Tokyo Round of tariff negotiations, the U.S. agreed to reduce tariffs on imports from virtually the whole world by 1.2 percentage points, or by about 34%. The

evidence is that the U.S. has had very little difficulty adjusting to this much more substantial trade liberalization.

The notion that the U.S. and Canada should favor each other with lower tariffs is not new. The U.S. and Canada already impose lower tariffs on bilateral trade than on imports from the rest of the world. The post-Tokyo Round tariffs imposed by the U.S. on countries other than Canada average 4.3% (as compared to 0.7% on Canadian exports), while Canada's tariffs on the rest of the world average 7.4% (as compared to 3.8% on U.S. exports). This result has occurred because both countries have chosen to impose lower tariffs on the types of goods which are traded bilaterally.

There is an important point to be inferred from this comparison. The political reality is that tariffs tend to be high on those product categories which need protection to remain competitive. The fact that our tariffs are already low on the types of goods that are traded between our two countries indicates that, with a few exceptions, the vast majority of our industries don't need protection from Canadian suppliers.

The low degree of protection currently in place suggests that the economic effects of a free-trade agreement are likely to be quite small. Most, though not all, empirical studies support this conjecture. I will now summarize the results of recent work in this area. In presenting these results I will first discuss the mechanisms through which tariff reductions affect the economies of our two countries. In each case I will then discuss the results of studies which have concentrated on the relevant mechanisms.

It is important to look at several different approaches to get an accurate picture. Trade models with many countries and many goods are exceedingly complex. They usually consist of thousands of equations. At this stage in our development of these models no one has managed to incorporate all the possible variations in assumptions about the national economies and their interactions. We must construct alternate models and make informed choices about when to apply each one.

1. The first approach is based on the observation that Canada is much smaller than the U.S. On the surface this appears reasonable, as the U.S. economy is roughly nine times the size of the Canadian economy.

In general, the effect of a tariff is to raise the price of imported goods, which in turn raises the price that domestic producers of these goods can charge. Domestic producers respond to the higher price by increasing production and employment in the protected sector. If the U.S. eliminates tariffs on Canadian goods but keeps them on the rest of the world, then Canadian exporters can also receive a higher price for their goods sold in the U.S. As with U.S. producers, Canadian producers would react to this incentive by increasing supply to the American market.

A preferential tariff reduction for Canada would provide Canadian producers with the same protection received by U.S. producers. Canadian producers would be able to slide behind the tariff wall erected by the U.S. against imports from third country suppliers, thus enabling them to raise their prices to the same level received by U.S. producers.

It might seem that tariff removal by Canada on imports from the U.S. will allow U.S. producers to gain the same advantage, that is, selling to Canadians behind the protection of the Canadian tariff. However, due to Canada's relatively small size, this may not be the case. The Canadian tariff reduction on imports from the U.S. will make these goods seem cheaper to Canadians, and thus more desirable than imports from the rest of the world. As a result, Canadian consumers may decide to consume exclusively those goods produced by the U.S. and Canada, reducing trade with the rest of the world to zero.

From the American perspective it may seem desirable for American producers to take over Canadian markets. However, this is not the case. Since Canada is not importing from the rest of the world, Canada's tariffs are not raising the prices received by Canadian and U.S. firms for products typically imported by Canada. As a result there is no tariff wall providing protection for American or Canadian producers of these products.

Further, due to the small size of the Canadian market, American exporters will still have excess capacity after supplying the Canadian market. In addition to satisfying Canadian consumers, American producers will export further to the rest of the world. However, there is no reason for countries other than Canada to willingly pay a higher price for U.S. goods.

American producers, then, receive the same price for their output as before the formation of the free-trade area. Without an increase in price, there can be no increase in overall supply. If there is no increase in overall production in the U.S., then the increase in exports to Canada can only come at the expense of exports to other countries. Thus, while the U.S. does take over the Canadian market, we will lose market share in the rest of the world.

Who benefits from such an arrangement? Canadian producers are receiving a higher price for their exports and Canadian consumers are buying imports at a lower price. Clearly this is a desirable arrangement for Canada. But how has the U.S. fared? U.S. producers receive the same price and U.S consumers pay the same price as before the free-trade arrangement. Moreover, the U.S. treasury has lost the tariff revenue that it used to collect on imports from Canada. Therefore, the U.S. is clearly worse off as a result of the exchange of preferential tariff reductions.

Recent empirical estimates of the gain to Canada based on the Canada-is-a-small-country approach are in the area of about 2.3% of gross national expenditure, or 3.5% of personal income.[1] These figures, while small, are not inconsequential.

2. The reasoning under point 1 is an accurate description of many product categories that would be involved in an exchange of preferences. However, one might reasonably argue that, while Canada is small compared to the U.S., it is hard to believe that such a small tariff reduction would lead Canada to cease trade with the rest of the

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[1]See for example, Dauphin (1978), Pinchin (1979), and Williams (1976).

world. In fact, Canada is a major factor in many world markets, such as agricultural products, oil, wood products, paper products, nonferrous metals, and nonelectric machinery. In addition, Canadian consumers may prefer a wider variety of products than those sold exclusively by U.S. firms. Thus, Canada will probably continue to trade extensively with the rest of the world after the formation of the free-trade area.

Who gains in this case? U.S. tariff reductions on imports from Canada will induce U.S. consumers to shift some purchases from domestically produced goods to Canadian goods. This will tend to increase the price received by Canadian exporters, while reducing the price received by U.S. producers. On the other hand, Canadian tariff removal on goods coming from the U.S. will have the opposite effect, raising the price received by American producers.

On balance, the price received for American exports will typically rise. This result occurs because Canadian tariffs are larger than U.S. tariffs, thus Canada will be conceding more if tariffs are abolished. The improvement in the terms on which we trade with Canada will increase real national income in the U.S.

This is the approach adopted by Professor Stern and myself in our research. The results of our research on employment, trade, and production are reported in Table 3 and are based on the 1976 values of these variables. We find that bilateral tariff removal would raise U.S. income by $1.2 billion in 1985 prices. Such a small increase is only a tiny fraction of GNP, approximately 0.03%. In contrast, the free-trade area would lower Canada's real GNP by roughly 0.35%. As was pointed out to me by a distinguished member of the Yale University Law Faculty, our 0.03% gain might not even cover our legal fees during the negotiations.

Our experiments show that U.S. imports increase in all 22 of the broadly defined product categories that we include in the model. Canadian import penetration is most notable in petroleum products, rubber products, metal products, nonelectrical machinery, and transportation equipment. We find that total U.S. imports should increase by 1.14%.

However, we find that exports also increase in most product categories. The only exceptions are agricultural products, petroleum products, and transportation equipment. Our export gains were largest in chemicals, rubber products, metal products, machinery, and miscellaneous manufactures. Total U.S. exports increase by 1.1%.

The employment effects are generally insignificant as well. We find that employment increases in many of our most important manufacturing sectors, primarily metal products (3,536), machinery (6,798), textiles (3,616), and miscellaneous manufactures (2,246). The employment gains in some sectors are offset by losses in six of the 22 tradable industries, although the decline exceeds 1000 workers in only one industry, transportation equipment. The number of jobs in this sector declines by approximately 3500. Other jobs are lost in the nontraded sectors, such as wholesale and retail trade (−9,174), financial services (−4,896), and personal services (−1,075).[2]

3. A third view stresses the importance of scale economies in manufacturing. The analysis under point 2 leaves the impression that free trade with the U.S. may lower Canadian income. However, this may not be the case. Due to the small size of the Canadian market, Canadian manufacturers tend to produce at suboptimal plant size. In other words, these producers may be able to produce more efficiently and at lower cost if output were raised. There is a strong feeling among many researchers that if Canada were to obtain unfettered access to U.S. markets, Canadian producers would be able to increase production to a more efficient and competitive level.

Although this view has intuitive appeal, empirical investigation of this mechanism has produced disappointing results. Such studies indicate that U.S. income would rise by about 0.1%, while Canadian income would decline by 0.1%. Although Canadian producers would succeed in increasing efficiency by expanding the scale of production, the problem of

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[2]For a complete discussion of the empirical results summarized here see Brown and Stern (1986).

declining prices for Canadian exporters, which emerged under point 2 above, is still of greater importance. Under this scenario, Canadian producers continue to be plagued by falling export prices, while American producers are able to increase their prices.[3]

4. A fourth view focuses on the importance of the competitiveness of the industries involved in trade. This provides another channel through which Canada may gain from a bilateral tariff abolition. It is hypothesized that the small size of Canadian markets not only results in suboptimal production volume, but also results in a small number of firms in each industry. It has been suggested that these firms are able to tacitly collude, setting price above and output below the free market level.[4] This strategy exacerbates the inefficiency brought about due to low levels of production. Under these conditions, a tariff reduction by Canada would force Canadian producers to behave competitively, rather than collusively, thereby increasing output and producing more efficiently.

Research along these lines has produced dramatic results.[5] A model incorporating this assumption has shown that tariff reductions by Canada alone increase Canadian GNP by 4.1%, despite the decline in the price Canadians receive for their exports. U.S. tariff reductions on Canadian exports further increase Canadian GNP by as much as an additional 5%.

This survey makes it clear that a free-trade agreement will affect the two economies through several diverse and complex channels. This complexity makes empirical work difficult, and no single approach has adequately captured the nature of our two economies. What lessons, then, can we draw from this research? The first is that either country could lose from the agreement, but the potential losses are small. The estimated loss for the

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[3]For a further discussion of this work see Wigle (1986).

[4]See Eastman and Stykolt (1967) for a discussion of this point.

[5]See Harris and Cox (1984).

U.S. never exceeds 0.4% of GNP, and the estimated loss for Canada never exceeds 0.35% of GNP in any study. Secondly, there are small potential gains for the U.S. and enormous potential gains for Canada. The estimated gains for Canada ranges up to 9% of GNP, and the U.S. may gain up to 0.1% of GNP.

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TABLE 1
BILATERAL AND TOTAL IMPORT WEIGHTED AVERAGE
TARIFF RATES
PRE-TOKYO ROUND

SECTOR	BILATERAL TRADE WEIGHTED						TOTAL TRADE WEIGHTED		
	U.S. TARIFFS		CANADIAN TARIFFS		OTHER* COUNTRY TARIFFS		U.S.	CANADA	OTHER
	CANADA	OTHER	U.S.	OTHER	U.S.	CANADA			
Agriculture	2.4	2.0	2.8	4.6	9.7	3.6	2.2	3.4	7.6
Food	6.9	6.3	6.6	7.0	10.2	7.9	6.3	6.9	12.2
Textiles	12.7	14.3	19.0	18.5	5.7	16.6	14.4	18.9	6.3
Clothing	22.3	26.1	24.7	23.3	13.5	18.4	27.8	25.4	16.1
Leather Prod.	3.5	4.9	5.9	10.2	0.7	1.9	5.6	8.2	2.9
Footwear	9.0	8.9	24.2	24.2	13.7	14.7	8.8	24.5	12.4
Wood Prod.	0.5	7.8	4.6	8.5	1.1	2.1	3.6	5.8	1.6
Furniture & Fixt.	9.1	5.9	19.4	18.7	8.5	20.6	8.1	19.4	8.4
Paper Prod.	0.2	2.8	11.9	11.7	3.5	2.5	0.5	11.8	4.8
Printing & Publ.	0.6	1.2	5.6	6.2	1.3	1.3	1.1	5.7	1.8
Chemicals	1.0	5.6	7.9	7.8	5.7	5.4	3.8	7.9	6.3
Petrol. Prod.	0.1	0.3	0.7	0.1	0.6	0.2	1.4	0.2	1.3
Rubber Prod.	5.1	2.9	12.9	10.7	4.0	2.8	3.6	12.2	2.9
Non-metal Min. Prod.	0.7	11.9	7.0	14.0	1.4	0.1	9.1	9.5	3.1
Glass Prod.	9.9	9.9	11.0	12.5	8.4	9.1	10.7	11.3	8.5
Iron & Steel	3.6	5.1	6.5	6.9	1.4	3.3	4.7	6.7	3.3
Nonferr. Metals	1.0	1.3	3.0	0.7	2.5	0.4	1.2	2.0	1.8
Metal Prod.	6.0	6.8	14.0	13.9	6.1	10.3	7.5	14.1	6.0
Nonelec. Mach.	3.7	5.3	6.2	7.1	4.9	6.7	5.0	6.1	4.9
Elec. Mach.	7.2	6.1	12.8	12.3	5.9	6.0	6.6	12.9	5.8
Transport Equip.	0.0	3.4	0.0	3.6	4.6	4.2	3.3	2.4	6.3
Misc. Mfr's	1.1	3.2	7.8	8.4	6.6	7.5	7.8	8.8	6.1
AVERAGE	1.2	6.0	5.2	9.7	5.8	2.8	4.5	6.4	3.8

Source: based on data supplied by the Office of the U.S. Trade Representative
*Industrialized countries only.

TABLE 2
BILATERAL TRADE WEIGHTED TARIFF RATE AVERAGES
POST-TOKYO ROUND

SECTOR	U.S. TARIFFS		CANADIAN TARIFFS		OTHER TARIFFS	
	CANADA	OTHER	U.S.	OTHER	U.S.	CANADA
Agriculture	1.6	1.8	2.2	1.8	9.6	6.3
Food	3.8	4.8	5.4	6.1	8.7	7.1
Textiles	7.2	9.1	16.9	16.4	4.7	14.1
Clothing	18.4	21.4	23.7	22.1	11.6	15.4
Leather Prod.	2.5	3.8	4.0	8.7	0.4	1.3
Footwear	9.0	8.9	21.5	21.9	13.4	13.8
Wood Prod.	0.2	3.8	2.5	4.9	0.9	1.8
Furniture & Fixt.	4.6	2.9	14.3	14.1	6.1	15.3
Paper Prod.	0.0	1.3	6.6	6.5	2.9	2.2
Printing & Publ.	0.3	0.7	1.1	1.0	0.9	1.0
Chemicals	0.6	3.5	7.9	7.0	3.9	3.9
Petrol. Prod.	0.0	0.1	0.4	0.1	0.5	0.2
Rubber Prod.	3.2	2.0	7.3	6.0	3.1	2.3
Non-metal Min. Prod.	0.3	7.2	4.4	8.5	1.1	0.1
Glass Prod.	5.7	5.8	6.9	7.9	6.9	7.3
Iron & Steel	2.7	3.9	5.1	5.5	1.2	2.6
Nonferr. Metals	0.5	0.8	3.3	2.7	2.1	0.3
Metal Prod.	4.0	4.4	8.6	8.9	4.6	8.6
Nonelec. Mach.	2.2	3.2	4.6	4.8	3.3	4.8
Elec. Mach.	4.5	4.1	7.5	7.1	4.8	5.0
Transport Equip.	0.0	2.5	0.0	2.5	2.0	3.0
Misc. Mfr's	0.9	2.0	5.0	5.3	4.3	5.1
AVERAGE	0.7	4.3	3.8	7.4	4.6	3.0

Source: based on data supplied by the Office of the U.S. Trade Representative

TABLE 3
SECTORAL EFFECTS OF U.S.-CANADIAN FREE TRADE, TARIFFS ONLY, POST-TOKYO ROUND
(Number of Workers and Millions of U.S. Dollars)

SECTOR	U.S.				CANADA			
	EMPLOYMENT	IMPORTS	EXPORTS	OUTPUT	EMPLOYMENT	IMPORTS	EXPORTS	OUTPUT
Agriculture	-392.1	37.1	-2.1	2.6	2807.9	13.0	47.2	23.9
Food	-701.0	27.9	25.9	101.7	192.9	17.5	30.8	-42.8
Textiles	3616.5	7.2	78.4	119.4	-445.7	68.6	5.6	-17.0
Clothing	982.1	15.2	28.5	25.8	878.0	9.1	9.2	13.8
Leather Prod.	130.2	6.9	7.3	3.9	377.5	4.6	9.3	8.7
Footwear	48.1	11.3	5.0	1.9	356.1	-0.2	6.3	8.2
Wood Prod.	-772.0	42.9	16.5	-24.0	1312.7	17.9	55.3	44.1
Furniture & Fixt.	342.8	67.9	52.4	7.9	1334.5	48.5	67.8	35.0
Paper Prod.	371.6	73.0	63.0	33.3	961.0	66.7	100.4	39.1
Printing & Publ.	1236.9	2.4	39.1	55.9	-893.0	36.2	3.7	-23.5
Chemicals	1483.2	96.0	186.4	189.4	-729.0	183.1	96.6	-66.4
Petrol. Prod.	-454.9	107.8	-1.4	-59.3	497.8	-19.5	90.2	105.2
Rubber Prod.	216.3	120.1	135.9	24.0	726.8	112.1	121.9	32.9
Non-metal Min. Prod.	317.1	18.1	29.1	19.1	272.4	25.4	30.3	5.6
Glass Prod.	226.6	12.1	19.1	10.8	-13.4	16.8	12.2	-1.4
Iron & Steel	406.2	37.7	23.4	29.6	856.3	22.9	31.8	41.3
Nonferr. Metals	-439.0	59.1	9.1 .	-46.3	1693.4	6.1	95.8	95.9
Metal Prod.	3536.5	116.4	270.4	164.0	-2391.7	253.6	112.1	-126.9
Nonelec. Mach.	2498.8	122.9	149.7	123.9	2730.2	138.3	123.1	97.2
Elec. Mach.	4298.9	86.4	206.3	174.1	-907.9	185.0	74.3	-59.4
Transport Equip.	-5369.8	297.4	-160.5	-398.9	6195.8	-150.6	292.1	541.1
Misc. Mfr's	2246.0	90.8	125.6	76.9	1267.5	88.1	78.0	37.1
Mining & Quarrying	-742.1			-29.2	3182.1			99.7
Utilities	336.9			11.8	-538.6			-17.0
Construction	1001.7			76.6	-493.0			-75.6
Wholesale Trade	-9173.8			139.7	-2239.1			-138.2
Transportation	720.6			45.0	-1435.5			-51.8
Financial Services	-4896.3			187.7	381.6			-151.5
Personal Services	-1075.4			3.5	-15936.8			-356.5