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TRADE NEGOCIATIONS STUDIES:

DOCUMENTS RELEASED UNDER THE ACCESS TO INFORMATION ACT,

MAY 21, 1986

INDEX

COMMUNIQUE

STUDY NO. 1:

Interim report on the economic implications of a Canada/U.S.
enhanced trade agreement. (Dept. of External Affairs,
Economic and Trade Analysis Division. August 23, 1985)

TRADE NEGOTIATIONS STUDIES:

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Dept. of External Affairs
Min. des Affaires extérieures

COMMUNIQUE

AUG 21 1986

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STUDY NO. 1:

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TRADE NEGOTIATIONS STUDIES:

DOCUMENTS RELEASED UNDER THE ACCESS TO INFORMATION ACT,
MAY 21, 1986

(See Department of External Affairs Communiqué No. 98, May 21, 1986)

Ces documents seront traduits et publiés dans les mois prochains.

A) AN INTERNAL OVERVIEW OF COMPETITIVENESS ISSUES.

- (1) Interim report on the economic implications of a Canada/U.S. enhanced trade agreement. (Dept. of External Affairs. Economic and Trade Analysis Division. August 23, 1985)

Based on Informetrica and Inforum models.
Accompanied by a covering memo on the subject
"Canada-USA: economic analyses".

B) TRADE LIBERALIZATION BETWEEN CANADA AND THE UNITED STATES: THE IMPLICATIONS FOR CANADIAN CONSUMERS AND CONSUMER PROTECTION POLICIES.

(See E and J below)

C) POSSIBLE CANADIAN OBJECTIVES AND OPTIONS IN A COMPREHENSIVE TRADE AGREEMENT WITH THE UNITED STATES.

- (2) Safeguards: possible Canadian objectives and options in a comprehensive trade agreement with the United States. (Dept. of External Affairs. Trade Policy Bureau. February 26, 1986)

D) CANADA/USA TRADE IN SERVICES.

- (3) Canada/USA -- trade in services. (Dept. of External Affairs. Services and General Trade Policy Division. December 4, 1985)

Draft overview paper.

E) INTELLECTUAL PROPERTY IN THE CONTEXT OF BILATERAL NEGOTIATIONS

- (4) Measures relating to intellectual property. (Dept. of Consumer and Corporate Affairs, Bureau of Policy Co-ordination. March 12, 1985)

"A suggested insertion to the paper on issues relating to a possible Canada/United States Free Trade Area Treaty".

- (5) Intellectual property in the context of bilateral negotiations. (Dept. of Consumer and Corporate Affairs, Strategic Policy Research Branch. August 20, 1985).

F) THE AUTOMOTIVE AGREEMENT IN A CANADA-UNITED STATES COMPREHENSIVE TRADE ARRANGEMENT

- (6) The Automotive agreement in a Canada-United States comprehensive trade arrangement. (Grey, Clark, Shih and Associates Ltd. for Dept. of External Affairs. January, 1986).

G) POLICY HARMONIZATION: IMPLICATIONS OF A CANADA-UNITED STATES TRADE AGREEMENT

- (7) Policy harmonization: implications of a Canada-United States trade agreement. (C.D. Howe Institute for Dept. of External Affairs. February 1986).

H) FEDERAL AND PROVINCIAL BARRIERS TO INTERNAL TRADE

- (8) Federal and provincial barriers to internal trade. (Dept. of Regional Industrial Expansion. Trade Policy Directorate. August 29, 1985).

I) INVESTMENT RESPONSES BY MULTINATIONAL ENTERPRISES TO THREE CANADIAN POLICY OPTIONS FOR CANADA-UNITED STATES TRADE

- (9) Investment responses by multinational enterprises to three Canadian policy options for Canada-United States trade. (Institute for Research on Public Policy for Dept. of External Affairs. 1985).

J) TRADE POLICY AND THE SYSTEM OF CONTINGENCY PROTECTION IN THE PERSPECTIVE OF COMPETITION POLICY

(10) Trade policy and the system of contingency protection in the perspective of competition policy. (Rodney de C. Grey for Dept. of External Affairs. February 1, 1986).

K) ECONOMIC INTEGRATION: SOME ASPECTS OF THE EUROPEAN EXPERIENCE

(11) Economic integration -- some aspects of the European experience. (A.W.A. Lane for Dept. of External Affairs, October 21, 1985).

L) ECONOMIC IMPACTS OF ENHANCED BILATERAL TRADE: NATIONAL AND PROVINCIAL RESULTS

(12) Economic impacts of enhanced bilateral trade, national and provincial results. (Informetrica for Dept. of External Affairs. August 20, 1985).

Analysis: Harold Henson, Paul Jacobson,
Carl Sonnen. Author: Carl Sonnen.

Review: Michael McCracken.

M) ECONOMIC EFFECTS OF TRADE LIBERALIZATION WITH THE USA: EVIDENCE AND QUESTIONS

(13) Economic effects of trade liberalization with the U.S.A.: evidence and questions. (A.R. Moroz and Gregory J. Meredith; Institute for Research on Public Policy for Dept. of External Affairs. September, 1985).

N) IMPACT OF TRADE LIBERALIZATION ON INVESTMENT: THE ADJUSTMENT PROCESS

(14) Effect of enhanced trade on investment: survey evidence. (Dept. of External Affairs. October, 1985).

Includes report "Impact of trade liberalization on investment: the adjustment process".

O) UNITED STATES TRADE REMEDY LAW

(15) United States trade remedy law. (Arnold & Porter for Dept. of External Affairs. January, 1986).

At head of title: Canada-United States
Trade Initiative: research papers.

P) INSTITUTIONAL PROVISIONS AND FORM OF THE PROPOSED
CANADA-UNITED STATES TRADE AGREEMENT

(16) Institutional provisions and form of the proposed Canada-United States trade agreement. (Frank Stone; Institute for Research on Public Policy. April, 1986).

"A study prepared in November 1985 for
the Dept. of External Affairs".

Q) SECTOR COMPETITIVENESS PROFILES AND SECTOR PROFILES

(17a) Sectoral competitiveness profiles: capital and industrial goods. (Dept. of Regional Industrial Expansion. Rev. August, 1985).

(17b) Sectoral competitiveness profiles: consumer goods, services and processing. (Dept. of Regional Industrial Expansion. Rev. August, 1985).

(18) Sectoral profile: energy products. (Dept. of Energy, Mines and Resources. August, 1985).

(19) International competitiveness profiles: the fisheries sector. (Dept. of Fisheries and Oceans. September, 1985).

(20) [Sector studies:] Effects on major farm inputs of trade liberalization with the United States [and other studies]. (Dept. of Agriculture. September 5, 1985).

R) UNIT COST COMPARISONS FOR CANADIAN AND AMERICAN INDUSTRIES

(21) Unit cost comparisons for Canadian and American industries. (Data Resources of Canada for Dept. of External Affairs. September, 1985.)

S) ADDITIONAL DOCUMENTS

- (22) Government procurement background paper. (Dept. of External Affairs. November 14, 1985).
- (23) Possible institutional arrangements for a Canada-U.S. trade agreement. (Dept. of External Affairs. September, 1985).
- (24) A potential Canada/USA trade agreement: agricultural trade issues. (August 14, 1985).
- (25) Science, technology and economic development: a working paper. (Ministry of State for Science and Technology).

Prepared for the Federal-Provincial Meeting
of Ministers Responsible for Science and
Technology, Calgary, February 4-5, 1985.

- (26) Canadian trade negotiations: introduction, selected documents, further reading. (Dept. of External Affairs. 1986. Dist.: Dept. of Supply and Services. Catalogue No. E74-8/1986E).

Not included in this collected set of documents.



communiqué

Nº:
No.: 98

May 21, 1986.

MINISTERS MAKE TRADE-TALK STUDIES PUBLIC

The Secretary of State for External Affairs, the Right Honourable Joe Clark and the Minister for International Trade, the Honourable James Kelleher announced that twenty-six documents relating to trade negotiations with the United States, including over sixty sector studies, are being made public today.

The release follows extensive interdepartmental consultations and a thorough review of all documents requested by the Ministers.

The number and range of the documents released exceeds the requirements of the Access to Information Act.

The studies may be examined, or requested in writing, at the Access to Information Office, first floor, Tower A, Department of External Affairs, Lester B. Pearson Building, 125 Sussex Dr. In order to avoid a further delay documents are being released in the original drafting language.

A summary of the studies is available in both official languages.

For more information:

Ian Hornby
Special Assistant - Communications
Office of the Minister for International Trade

Studies for the Trade Talks

The following pages provide an overview of studies prepared or commissioned by the government between August 1985 and April 1986. These papers represent only a portion of completed and on-going studies that the government has undertaken to strengthen its negotiating position in bilateral trade talks with the United States and in multilateral negotiations through the General Agreement on Tariffs and Trade (GATT).

Unless otherwise noted, all of the studies which are referred to here are available for review in the Access to Information Office, Tower A, Department of External Affairs, Lester B. Pearson Building, 125 Sussex Drive, Ottawa.

Readers should be aware of the following:

- Some documents available to the public do not lend themselves to summaries, and thus only brief descriptions are provided here.
- In order not to jeopardize trade negotiations, portions of some documents have been "severed", and only those parts which are neither prejudicial to negotiations nor contain commercial information are available.
- Many studies described here are preliminary drafts, and thus lack the precision of the final versions.
- The views expressed in outside studies commissioned by the government are those of the authors and are not necessarily those of the Government of Canada.

AN INTERNAL OVERVIEW OF COMPETITIVENESS ISSUES

**Prepared by: Department of External Affairs
Policy Development Bureau
August 23, 1985**

Severed study available.

Description

This interim report contains preliminary results from the research program undertaken in the summer of 1985 on the economic implications of an enhanced trade agreement between Canada and the United States and is based on two separate studies, one by Informetrica Ltd, the other by the Department using the University of Maryland's Inforum model.

Highlights

Informetrica Study

Seven alternative trade liberalization cases were selected for comparison with the base case. Case 4, assumed to be the most likely, combined tariff and non-tariff barrier elimination with a productivity increase.

The results of this case are as follows:

- Real Gross National Product is, on average, about 1.7 percent higher per year than in the base case.
- Canada's real net exports increase.
- The Consumer Price Index is lower than the base case in every year of the period.
- Employment gains are evident from the outset, reflecting increases in industry output. By 1994, overall employment is running more than 100,000 above the base case.

- Employment losses are indicated in agriculture and manufacturing, in spite of the aggregate rise in employment. Informetrica attributes these losses not to declining manufacturing activity but, rather, to increased labour productivity.
- The exchange value of the Canadian dollar appreciates, and by 2115 it is running around 92 2/3 cents U.S.

Inforum model

- A free trade arrangement, requiring immediate removal of tariff barriers by Canada and the U.S.A. with no adjustment or phase-in, would result in some short-term economic damage to the country or economic hardships to some people. Under this trading arrangement, Canada would have a net job loss of around 131,000. New manpower or industrial adjustment programs would be necessary to buffer the impact of job changes in some industries or communities.
- There seems to be large potential, at least in our manufacturing sector, for reaping benefits from scale economies through expanding markets in the U.S.A. , and thus, for improving employment prospects in the country. However, these benefits will be realized over a longer period.

Trade Liberalization Between Canada and the United States:

The Implications for Canadian Consumers and Consumer Protection Policies

Prepared by: Department of Consumer and Corporate Affairs

Severed study available.

Highlights

The review of Canadian studies on the effects of trade liberalization from the viewpoint of the consumer's interest revealed that estimates of net benefits range from between very little to about nine percent of G.N.P., but never negative. The

uniformity of the conclusions of the studies reviewed provided very strong support for the conclusion that freer trade between Canada and the United States would serve the interests of Canadians, particularly Canadians as consumers.

Differences in standards commonly intended to serve the interests of consumers can act as a nontariff barrier to trade. While there are cases where such differences can be clearly justified, there are many others in which this may not be true. Consequently, the report recommended that this issue should be subject to closer scrutiny.

**POSSIBLE CANADIAN OBJECTIVES AND
OPTIONS IN A COMPREHENSIVE TRADE
AGREEMENT WITH THE UNITED STATES**

Prepared by : Department of External Affairs
Trade Policy Bureau
26 February, 1986

Severed study available

Description:

This paper considered the manner in which safeguards might be dealt with in the context of the negotiation of a comprehensive trade agreement with the United States. "Safeguards" refers to emergency action against imports of particular products, which, while neither dumped nor subsidized, nor unfairly traded in any

other manner, are deemed to be causing serious injury to domestic producers.

CANADA/USA TRADE IN SERVICE

**Prepared by: Department of External Affairs
Services and General Trade Policy
Division
December 4, 1985**

Severed study available

Overview

When the Prime Minister of Canada met with the President of the United States in Québec City in March 1985 they agreed on a Work Plan on Trade, a number of elements of which would facilitate and enhance trade in services.

The Canadian and U.S. economies both have an overwhelming percentage of gross domestic product accounted for by services (in 1983, approximately 63% in Canada).

In 1984, trade in services between Canada and the United States amounted to approximately \$20 billion. Of the \$141 billion generated in Canada by tradeable services exports in 1984 some 59% is estimated as exports to the U.S. Of Canada's 1984 tradeable services imports of \$19.2 billion, 61% is estimated as imports from the U.S. Canadian business service exports to the U.S. were \$2,400 million in 1984.

INTELLECTUAL PROPERTY IN THE CONTEXT OF BILATERAL NEGOTIATIONS

Prepared by: Department of Consumer
and Corporate
Affairs
Strategic Policy Research Branch
August 20, 1985

Severed study available

Description

This paper provided background information and preliminary assessments regarding intellectual property issues which are relevant to the upcoming Canada/U.S. bilateral trade negotiations.

Conclusions

Stronger intellectual property protection in Canada will not necessarily result in changes in the pattern of Canada/U.S. trade but it will ensure that some remuneration flows to the rights holders, most of whom reside in the U.S.

The Americans will likely wish to raise a number of intellectual property issues in the initial phase of bilateral negotiations. The only issue from the Canadian side would be S.337 of the U.S. Trade and Tariff Act of 1974 although the effect of this section on Canadian economic interests is arguably small.

Should the trade talks proceed to encompass more comprehensive integration of the two economies, intellectual property would have to be eliminated as a potential trade barrier between the two countries along the European lines.

THE AUTOMOTIVE AGREEMENT IN A CANADA- UNITED STATES COMPREHENSIVE TRADE ARRANGEMENT

**Prepared by: Grey, Clark, Shih and Associates
Limited**

November 6, 1985

Severed study available

Description

This paper examined the options to the future of the Automotive Agreement, likely United States attitudes and international implications as well as current international trade and industrial developments in the automobile industry.

Highlights

Substantial structural changes in the production techniques employed by the North American automobile companies will occur as they adjust to new competition which will determine production, location of vehicle assembly and parts plants and employment levels.

The North American automobile companies will experience a declining share of the automobile market which will bring further pressure on decisions relating to the shared production objectives of the Automotive Agreement.

POLICY HARMONIZATION: IMPLICATIONS OF A CANADA-UNITED STATES TRADE AGREEMENT

**Prepared by: C.D. Howe Institute
February, 1986**

Complete study available

Highlights

A trade agreement would leave the bulk of the pressures for Canada to harmonize its domestic economic policies with those of the United States more or less unchanged. Political and

cultural sovereignty and enlightened social programs are unlikely to be seriously affected -- although some specific cultural support may be subject to review.

Added pressures to harmonize policies could be expected in intellectual property regimes, in agriculture, and in certain areas of cultural and commercial policies promoting Canada's cultural identity and autonomy.

The mounting pressures in the United States to use duties to penalize perceived Canadian subsidies to such goods as softwood lumber could be halted; pressures to prevent Canada from using regional subsidies as instruments of social policy could diminish; pressures on cultural policy could stop if Canada were able to negotiate an acceptable approach.

FEDERAL AND PROVINCIAL BARRIERS TO INTERNAL TRADE

Prepared by: Department of Regional Industrial
Expansion
Trade Policy Directorate
August 29, 1985

Study Available from DRIE

Description

This paper examined selected internal barriers to trade in the context of possible future international trade negotiations. This paper did not provide an exhaustive inventory of such barriers, nor did it attempt to pass judgement on their legitimacy.

Highlights

There is a wide range of areas where internal barriers exist: labour mobility, government procurement, and industrial programs. This paper listed and examined a limited number of such areas more directly relevant to trade negotiations:

- liquor regulation,
- government procurement,

- agricultural policies,
- transportation regulation,
- subsidies.

Canada's domestic preparations for international trade negotiations must include a discussion of barriers to internal trade as they affect international trade, the willingness of the provinces to reduce such barriers and ways of arriving at a commitment that will satisfy the provinces as well as Canada's trading partners and be sufficiently binding to ensure compliance.

INVESTMENT RESPONSES BY MULTINATIONAL ENTERPRISES TO THREE CANADIAN POLICY OPTIONS FOR CANADA-UNITED STATES TRADE

**Prepared by: Derek Chisholm
Institute For Research on Public
Policy**

Available from IRPP

Description

This study examined probable changes in foreign direct investment within Canada by multinational enterprises (MNEs). The examination sought answers to three questions about MNE responses to reductions in trade barriers. First, will the level of foreign control over domestic industries change significantly? Second, will foreign-owned firms change their Canadian strategy? Third, what is the impact on our trade with the United States of various economic determinants and policy determinants that are independent of foreign direct investment?

Highlights

The level of foreign control over domestic industries could initially diminish during the medium term after trade barriers are reduced, but over a longer horizon technically advanced foreign investment and foreign control could increase.

The form of foreign control could alter as MNEs respond to reduced trade barriers with corporate strategies that integrate Canadian subsidiaries by rationalization or world product mandates.

Taxation is probably the most important policy influence on our trade patterns. Labour costs are the major determinant of both our trade patterns and foreign investment flows.

TRADE POLICY AND THE SYSTEM OF CONTINGENCY PROTECTION IN THE PERSPECTIVE OF COMPETITION POLICY

Prepared by **Rodney de C. Grey**
February 1, 1986

To be published by the Department of Consumer and
Corporatate Affairs.

Description

This paper considered a range of trade policy measures applied in the U.S., Canada and the EEC in relation to competition policy and the extent of contradictions between the two policy objectives.

Highlights

The paper proposed a considerable tightening-up of the contingency protection system because it was seen as providing more restrictive action than the economies of importing countries, and their political systems, could afford.

ECONOMIC INTEGRATION SOME ASPECTS OF THE EUROPEAN EXPERIENCE

**Prepared by: A.W.A. Lane
October 21, 1985**

Complete Study Available

Description

The paper looked at some of the features of the movement towards economic integration in Europe. It concluded with some comments on the implications of a comprehensive trade agreement with the United States.

Highlights

There are some useful lessons to be learned from the European experience:

- Permanent dismantling of tariffs and NTBs can provide a stimulus to industrial restructuring which increases efficiency and competitiveness.
- Where there is integration between highly developed countries which have a broad range of secondary industries, intra-industry specialization tends to predominate.
- The way in which state aids are treated in a Canada-U.S. trading arrangement could have an important bearing on its regional impact. The Rome Treaty took a particularly tolerant attitude towards measures of this kind.

**ECONOMIC IMPACTS OF ENHANCED BILATERAL
TRADE
NATIONAL AND PROVINCIAL RESULTS**

**Prepared by: Informetrica
August 20, 1985**

Complete Study Available.

Description

This study assessed the impact of removing both Canadian and American tariff and non-tariff barriers (NTB) staged over 1988-1992, with varying assumptions.

Highlights

The results suggested there would be positive effects on real Gross National Product from all dimensions of trade enhancement. The effect of a reduction of non-tariff barriers is comparatively large, providing notable benefits to Canadian economic activity through to the mid-1990s.

Increased industry output is reflected in employment gains at the outset. By 1994, aggregate employment would increase by more than 100,000, this level being sustained throughout most of that decade.

The study showed that the economies of all provinces would gain from fully enhanced trade with the U.S. The Atlantic provinces, Ontario and Manitoba would enjoy the largest increases in economic output.

ECONOMIC EFFECTS OF TRADE LIBERALIZATION WITH THE USA: EVIDENCE AND QUESTIONS

**Prepared by: Moroz and Meredith
Institute for Research on Public
Policy
September 1985**

Complete Study Available from IRPP

Description

The paper evaluated freer trade with the United States, in the form of a functional, sectoral or comprehensive arrangement in the context of existing economic literature.

Highlights

The main conclusion in this paper suggested that bilateral trade liberalization could be expected to provide large, long-run economic benefits to Canada. It could also be expected to lead to a more efficient and flexible microeconomic structure which, in turn, could significantly improve the performance of the Canadian macro-economy and its ability to create more, and better, job opportunities.

Bilateral trade liberalization would involve significant structural changes in the economy. While these structural adjustments are a major source of the large potential long-term net economic benefits, the adjustment process could entail significant transitional costs.

These costs would include labour adjustment costs as workers move from one industry to another. There could also be various factors which would affect the adjustment process, adjustment costs, and the ability and speed by which the long-term economic benefits are realized. Nevertheless, it would appear that the bilateral trade liberalization option would provide the conditions and the environment for a healthier and sounder Canadian economy.

**IMPACT OF TRADE LIBERALIZATION ON
INVESTMENT:
The Adjustment Process**

Prepared by: Department of External Affairs

Complete study available

Description

This paper, and a companion piece on survey evidence, estimated the nature of changes in investment patterns by referring to studies on the nature of the adjustment process and to surveys dealing with investment decisions at the individual firm level.

Highlights

National adjustments within the European Community after the 1958 Treaty of Rome were so much lower than expected that it was decided in 1960 to accelerate tariff reductions from 10% to 20% per year and to eliminate all quotas by 1961.

A major empirical analysis of Canadian industry reaction to the most recent tariff cuts under the GATT shows none of the effects predicted by the "deindustrialization" argument. Both Canadian imports and exports increased, and no industry experienced major declines.

Surveys conducted by the Conference Board of Canada and the Department found that the majority of firms surveyed did not consider trade barriers as a governing factor on future investment decisions.

UNITED STATES TRADE REMEDY LAW

Prepared by: Arnold & Porter
January, 1986

Severed study available.

Description

This memorandum discussed the political and legal feasibility in the United States of various proposals which Canada might make in the trade talks to modify the way U.S. import relief laws are applied to Canadian exports.

Highlights

Although elements of a Canada-U.S. trade agreement may be generally welcomed, individual provisions that are perceived as weakening the U.S. import relief laws are likely to generate considerable controversy.

To proceed under the fast-track procedure, the Administration is required to keep the relevant congressional committees closely informed on the progress of the negotiations. In practice, the fast-track procedure gives Congress a continuing and persuasive influence over the U.S. negotiators that permits it to significantly limit their discretion.

INSTITUTIONAL PROVISIONS AND FORM OF THE PROPOSED CANADA-UNITED STATES TRADE AGREEMENT

Prepared by: Frank Stone
Institute for Research on Public
Policy
April 1986

Study available from IRPP

Description

The study addressed two institutional and legal issues: new institutional arrangements created under the agreement and the nature and form of the bilateral agreement.

Highlights

The agreement should provide for a Ministerial-level committee to help ensure cooperation between the two governments in its implementation, interpreting its provisions and improving it in the light of changing circumstances.

The proposed Joint Trade Commission would be designed to operate in a collegial manner to assist the two countries in implementing the new agreement, and to assist generally in the management of the bilateral trade relationship.

- The Commission should be authorized to establish a Joint Advisory Board drawn from the two federal governments, provincial and state governments and the private sectors.
- The Commission should be authorized to establish Joint Dispute Panels to help resolve particular bilateral disputes.
- The Commission should be authorized to establish a Joint Injury Panel, drawn from the Canadian Import Tribunal and the United States International Trade Commission, to investigate and report on injury to domestic producers.

SECTOR COMPETITIVENESS PROFILES AND SECTOR PROFILES

Prepared by **Department of Regional Industrial
Expansion**

Energy, Mines and Resources Canada

Department of Fisheries and Oceans

Department of Agriculture

Description.

Draft studies on over 40 economic sectors were prepared by desk officers in these departments for consultation with industry and the provinces. The comments from the provinces and other necessary revisions or additions are currently being incorporated into new drafts.

UNIT COST COMPARISONS FOR CANADIAN AND AMERICAN INDUSTRIES

Prepared by: **Data Resources of Canada**
September 1985

Description

The study compiled Canadian and American economic and industrial statistics, and compared total unit costs, both in nominal dollars and in terms of exchange-rate adjusted dollars, and labour productivity.

Highlights

The depreciation of the Canadian dollar relative to the U.S. dollar after 1976 has provided a significant advantage to domestic producers, making most industries more cost competitive than their U.S. counterparts in 1984. This cost advantage is a recent development; few industries have enjoyed a consistent cost advantage for many years.

Where industries show a cost advantage, it is more often related to lower material costs than to labour costs. Many industries show high and rising labour costs relative to U.S. industries.



communiqué

N°: 98
Not:

Le 21 mai 1986

PUBLICATION D'ÉTUDES TRAITANT DES POURPARLERS SUR LE COMMERCE

Le secrétaire d'État aux Affaires extérieures, le Très honorable Joe Clark, et le ministre du Commerce extérieur, l'honorable James Kelleher, ont annoncé que 26 documents traitant des négociations avec les États-Unis sur le commerce, et comprenant plus de soixante études sur des secteurs particuliers, seront rendus publics aujourd'hui.

Leur parution fait suite à de nombreuses consultations interministérielles ainsi qu'à une étude approfondie de tous les documents, effectuées à la demande des Ministres.

Le nombre et la teneur des documents publiés dépassent les exigences de la Loi sur l'accès à l'information.

Les études peuvent être consultées ou obtenues en écrivant au Bureau de l'accès à l'information, 1^{er} étage, tour A, ministère des Affaires extérieures, Édifice Lester B. Pearson, 125, promenade Sussex. Pour ne pas imposer de délai supplémentaire, les documents paraîtront dans leur langue originale. On peut en obtenir un résumé dans les deux langues officielles.

Pour plus d'information, s'adresser à:

Ian Hornby
Adjoint spécial - Communications
Bureau du ministre du Commerce extérieur
(613) 992-7332

ÉTUDES PRÉPARATOIRES AUX POURPARLERS SUR LE COMMERCE EXTÉRIEUR

Les pages suivantes donnent un aperçu des études rédigées par le gouvernement ou pour son compte entre août 1985 et avril 1986. Ces documents représentent seulement une fraction des études terminées ou en cours que le gouvernement a entreprises ou commandées dans le but de raffermir sa position dans les pourparlers sur le commerce bilatéral avec les États-Unis et dans les négociations multilatérales dans le cadre du GATT (Accord général sur les tarifs douaniers et le commerce).

À moins d'indication contraire, les études mentionnées ici sont destinées au Bureau de l'accès à l'information, 1er étage, tour A, ministère des Affaires extérieures, Édifice Lester B. Pearson, 125, promenade Sussex, Ottawa.

Le lecteur doit être conscient des faits suivants:

- Certains documents à la disposition du public ne se prêtent pas à la rédaction d'un résumé; par conséquent, une brève description seulement est fournie dans leur cas.
- Afin de ne pas compromettre les négociations commerciales, des parties de certains documents ont été retranchées; par conséquent, seulement les parties qui ne sont pas préjudiciables aux négociations et ne contiennent pas de renseignements commerciaux sont disponibles.
- Plusieurs des études décrites ici sont des versions provisoires; elles n'ont donc pas la précision des versions finales.
- Les vues exprimées dans les études données à contrat par le gouvernement sont celles de leurs auteurs et ne correspondent pas nécessairement à celles du gouvernement du Canada.

APERÇU INTERNE DES QUESTIONS DE CONCURRENCE

Auteur: Ministère des Affaires extérieures
Direction générale du développement
de la politique
le 23 août 1985

Étude fractionnée disponible

Description

Le rapport provisoire contient des résultats préliminaires du programme de recherche entrepris pendant l'été 1985 sur les répercussions économiques d'un accord commercial amélioré entre le Canada et les Etats-Unis et repose sur deux études distinctes effectuées l'une par Informetrica Ltd. et l'autre par le Ministère, lequel a utilisé le modèle Inforum de l'université du Maryland.

Points saillants

Étude effectuée par informetrica

Sept modèles de libéralisation du commerce ont été choisis à des fins de comparaison avec le modèle de base. Le modèle no. 4, qui paraissait le plus probable, supposait à la fois la suppression des obstacles non tarifaires aussi bien que tarifaires et une augmentation de la productivité.

Les résultats de ce modèle sont les suivants:

- Le produit national brut réel dépasse, en moyenne, de 1,7% par année celui qui résulterait du modèle de base.
- Augmentation nette des exportations réelles du Canada.
- L'indice des prix à la consommation est plus faible que dans le modèle de base pour chacune des années de la période.
- Des augmentations du nombre d'emplois sont évidentes dès le départ, ce qui reflète des accroissements de la production

industrielle. En 1994, le niveau global des effectifs dépasserait de 100,000 celui prévu pour le modèle de base.

- Des pertes d'emplois sont prévues dans les secteurs de l'agriculture et de la fabrication, malgré la montée globale du nombre d'emplois. Informetrica attribue ces pertes non pas au ralentissement de l'activité manufacturière, mais à l'accroissement de la productivité de la main-d'oeuvre.
- La valeur relative du dollar canadien augmentera et sera d'environ 92 2/3 cents US en 2115.

Modèle Inforum

Un arrangement prévoyant le libre-échange qui exigerait la suppression immédiate des obstacles tarifaires par le Canada et les États-Unis, sans période d'adaptation ni mise en place progressive, entraînerait une certaine détérioration économique à court terme pour le pays ou des difficultés économiques pour certaines personnes. En vertu d'un tel arrangement commercial, le Canada subirait une perte nette d'environ 131,000 emplois. De nouveaux programmes d'adaptation de la main-d'oeuvre ou de l'industrie seraient nécessaires pour atténuer les répercussions des changements d'emplois dans certaines industries et collectivités.

Il semble que des possibilités considérables de bénéficier des économies d'échelle découlant de l'expansion des marchés aux États-Unis se présenteront, au moins pour le secteur manufacturier, et que les possibilités d'emploi au pays s'amélioreront. Toutefois, ces avantages ne se révéleront qu'à longue.

**Libéralisation du commerce entre
le Canada et les États-Unis:
Répercussions sur les consommateurs canadiens et les
politiques de protection des consommateurs**

**Auteur: Ministère des Consommations et des
Corporations**

Étude fragmentée disponible

Résumé et conclusions

L'examen des études canadiennes effectuées sur les effets de la libéralisation du commerce, du point de vue des consommateurs, a révélé que les estimations des avantages nets se situent entre presque rien et 9% du PNB et qu'elles ne sont jamais négatives. La concordance des conclusions des études examinées appuie très fortement la conclusion selon laquelle la libéralisation du commerce entre le Canada et les États-Unis serait profitable aux Canadiens, particulièrement à titre de consommateurs.

Les différences dans les normes qui ont généralement pour objet de servir les intérêts des consommateurs peuvent constituer des obstacles non tarifaires au commerce extérieur. Bien qu'il existe des cas où de telles différences sont nettement justifiées, elles ne le sont pas dans beaucoup d'autres. En conséquence, le rapport recommande que cette question fasse l'objet d'un examen plus approfondi.

OBJECTIFS ET OPTIONS POSSIBLES POUR LE CANADA DANS UN ACCORD COMMERCIAL GLOBAL AVEC LES ÉTATS UNIS

Auteur: Ministère des Affaires extérieures
Direction générale du développement
de la politique
le 26 février 1986

Description

Dans ce document, on examinait la manière dont les mesures de sauvegarde pourraient être traitées dans le contexte de la négociation d'un accord commercial global avec les États-Unis. Les mesures de sauvegarde sont des mesures d'urgence contre les importations de produits particuliers qui, sans être sous-évaluées ni subventionnées, ni faire l'objet d'aucune autre pratique déloyale, sont considérées comme causant un préjudice grave aux producteurs nationaux.

COMMERCE DE SERVICES ENTRE LE CANADA ET LES ÉTATS-UNIS

Auteur: Ministère des Affaires extérieures
Direction des services et de la
politique commerciale

Étude fragmentée disponible

Aperçu

Lorsque le Premier ministre du Canada a rencontré le Président des États-Unis à Québec en mars 1985, ils ont convenu d'un plan de travail relatif au commerce, dont un certain nombre d'éléments ont pour objet de faciliter et d'améliorer le commerce des services. Les services représentent un pourcentage élevé du produit national brut tant du Canada que des États-Unis (environ 63% au Canada en 1983).

En 1984, le commerce de services entre le Canada et les États-Unis a été de l'ordre de 20 milliards de dollars. Sur les 14,1 milliards produits au Canada en 1984 par des exportations de

service, on estime que 59% proviennent d'exportations vers les États-Unis. Sur les importations canadiennes de 19,2 milliards de dollars de services en 1984, on estime que 61% provenaient des États-Unis. Les exportations de services aux États-Unis par le secteur privé se sont chiffrées à 2,400 millions de dollars en 1984.

QUESTIONS DE PROPRIÉTÉ INTELLECTUELLE DANS LE CADRE DES NÉGOCIATIONS BILATÉRALES

Auteur: Consommation et Corporations
Canada Direction de la recherche stratégique
le 20 août 1985

Description

Ce document fournissait des données de base ainsi que des évaluations préliminaires à propos des questions de propriété intellectuelle qui sont pertinentes pour les négociations commerciales bilatérales canado-américaines.

Conclusions

Une protection plus ferme de la propriété intellectuelle au Canada n'entraînera pas nécessairement de changements dans le modèle des échanges commerciaux canado-américains, mais elle assurera une certaine rémunération aux titulaires de droits d'auteur, dont la plupart résident aux États-Unis.

Les Américains voudront probablement soulever un certain nombre de questions de propriété intellectuelle au début des négociations bilatérales. Du côté canadien, la seule question concernera l'article 337 du tarif américain de 1974 (U.S. Trade and Tariff Act), bien que l'on puisse prétendre que les effets de cet article sur les intérêts économiques canadiens sont plutôt limités.

Si les pourparlers sur le commerce devaient porter sur une intégration plus poussée des deux économies, il faudrait éliminer la question de la propriété intellectuelle comme

obstacle commercial éventuel entre les deux pays, en s'inspirant des politiques européennes.

LE PACTE DE L'AUTOMOBILE DANS UN ACCORD COMMERCIAL GLOBAL ENTRE LE CANADA ET LES ÉTATS-UNIS

**Auteur: Grey, Clark, Shib and Associates,
Limited
le 6 novembre 1985**

Description

Dans ce document, les auteurs examinent les options pour l'avenir du Pacte de l'automobile, les attitudes probables des États-Unis de même que les répercussions internationales ainsi que des faits nouveaux dans le domaine de l'industrie automobile qui influent sur le commerce international et l'ensemble de l'industrie.

Conclusions

Des modifications structurelles importantes des techniques de production utilisées par les sociétés nord-américaines de l'industrie automobile se produiront à mesure que ces sociétés s'adapteront à la nouvelle forme de concurrence qui déterminera la production, l'emplacement des usines de montage et de pièces de véhicules ainsi que les niveaux d'emploi.

La part du marché de l'automobile détenue par les sociétés nord-américaines se contractera, ce qui entraînera des pressions accrues sur les décisions relatives aux objectifs de production partagée contenus dans le Pacte de l'automobile.

HARMONISATION DES POLITIQUES - RÉPERCUSSIONS D'UN ACCORD COMMERCIAL CANADO-AMÉRICAIN

Auteur: Institut C.D. Howe
février 1986

Points saillants

Un accord commercial ne changerait pas beaucoup les pressions exercées pour que le Canada harmonise ses politiques économiques intérieures avec celles des États-Unis. Il est peu probable que la souveraineté politique et culturelle ainsi que les programmes sociaux éclairés soient sérieusement touchés - mais il se peut que certaines politiques d'appui à la culture soient révisées.

On peut s'attendre à des pressions accrues en faveur de l'harmonisation des politiques pour ce qui est des régimes de propriété intellectuelle, de l'agriculture et de certains domaines de la politique culturelle et commerciale. Les Canadiens peuvent espérer conserver les politiques essentielles de promotion de l'identité et de l'autonomie culturelles de leur pays.

Les pressions croissantes que s'exercent aux États-Unis en faveur de l'imposition de droits de douane comme pénalités pour ce qui est perçu comme des subventions canadiennes pour des marchandises telles que le bois de construction résineux pourraient être arrêtées; les pressions visant à empêcher le Canada d'utiliser des subventions régionales comme instruments de ses politiques sociales pourraient diminuer; les pressions qui s'exercent sur la politique culturelle pourraient cesser si le Canada parvenait à négocier une approche acceptable.

**INVESTISSEMENTS PAR DES MULTINATIONALES
EN RÉPONSE À TROIS OPTIONS POLITIQUES
CANADIENNES
POUR LE COMMERCE CANADO-AMÉRICAIN**

**Auteur: Derek Chisholm
Institut de recherches politiques**

Peut être obtenu de l'Institut.

Description

Dans cette étude, l'auteur a examiné les changements qui surviendront probablement dans les investissements étrangers directs au Canada par les multinationales en réaction à trois options distinctes concernant la politique commerciale bilatérale du Canada avec les États-Unis. Il a cherché à répondre à trois questions. Premièrement, le niveau de contrôle étranger sur les industries canadiennes changera-t-il de manière sensible? Deuxièmement, les entreprises appartenant à des étrangers modifieront-elles leur stratégie pour leurs activités au Canada? Troisièmement, quelles sont les répercussions sur notre commerce avec les États-Unis des différents déterminants économiques et politiques qui sont indépendants des investissements étrangers directs?

Conclusions

Le niveau de contrôle étranger sur les industries canadiennes pourrait d'abord diminuer à moyen terme lorsque les obstacles commerciaux auraient été réduits, mais les investissements étrangers et le contrôle étranger pourraient augmenter à long terme dans les domaines techniquement avancés.

La forme du contrôle étranger pourrait changer à mesure que les multinationales réagiraient à la diminution des obstacles tarifaires par des stratégies qui intégreraient les filiales canadiennes grâce à la rationalisation ou à des mandats concernant la production mondiale.

Le système fiscal est probablement l'influence politique la plus importante sur nos habitudes commerciales. Les frais de main-d'oeuvre sont le déterminant majeur à la fois de nos habitudes commerciales et des flux d'investissements étrangers.

**POLITIQUE COMMERCIALE ET SYSTEME
DE PROTECTION EXCEPTIONNELLE DANS
L'ÉVENTUALITÉ
D'UNE POLITIQUE SUR LA CONCURRENCE**

Rédacteur: Rodney de C. Grey
le 1er février 1986

**Document que publiera le ministère de la
Consommation et des Corporations.**

Description

Le document traite d'un certain nombre de mesures de politique commerciale appliquées aux États-Unis, au Canada et dans le CEE en rapport avec une politique sur la concurrence ainsi que de l'ampleur des contradictions entre les objectifs des deux politiques.

Résumé

Le document propose un resserrement considérable du système de protection exceptionnelle parce qu'il a été perçu comme fournissant un mécanisme pour des mesures plus restrictives que les économies des pays importateurs et leurs systèmes politiques ne peuvent supporter.

INTÉGRATION ÉCONOMIQUE - CERTAINS ASPECTS DE L'EXPÉRIENCE EUROPÉENNE

Auteur: A.W.A. Lane
le 21 octobre 1985

Étude complète disponible.

Description

L'auteur de document examine certaines des caractéristiques du mouvement vers l'intégration économique en Europe. Il conclut par quelques commentaires sur ses répercussions pour l'examen d'un accord commercial global éventuel avec les États-Unis.

Points saillants

Nous pouvons tirer quelques leçons de l'expérience européenne:

- La suppression permanente des tarifs et des obstacles non tarifaires peut fournir un stimulant à la restructuration industrielle, laquelle améliorera l'efficacité et la compétitivité.
- Lorsqu'il y a intégration entre pays fortement industrialisés qui ont un vaste éventail d'industries secondaires, la spécialisation à l'intérieur des industries tend à dominer.
- La façon dont l'aide publique sera été traitée dans un arrangement commercial canado-américain pourrait avoir une influence importante sur ses répercussions régionales. Les signataires du Traité de Rome se sont montrés particulièrement tolérants à l'égard des mesures de ce genre.

RÉPERCUSSIONS ÉCONOMIQUES D'UN COMMERCE BILATÉRAL AMÉLIORÉ: RÉSULTATS NATIONAUX ET PROVINCIAUX

Auteur: Informetrica
le 20 août 1985

Étude complète disponible.

Description

Ce document est une évaluation, à partir de diverses hypothèses, des conséquences qu'aurait la suppression, échelonnée de 1988 à 1992, des obstacles tarifaires et non tarifaires tant canadiens qu'américains.

Aperçu des résultats

Les résultats prévus seraient positifs pour le produit national brut, quel que soit l'aspect envisagé du renforcement du commerce. Les effets d'une réduction des obstacles non tarifaires seraient passablement importants et profiteraient de manière sensible à l'activité économique canadienne jusque vers le milieu des années 90.

La production industrielle accrue se refléterait dès le début dans les augmentations du nombre d'emplois. D'ici 1994, le nombre total d'emplois aurait augmenté de plus de 100 000, et le niveau se maintiendrait pendant la plus grande partie de la décennie.

L'étude démontre que l'économie de toutes les provinces bénéficierait d'échanges commerciaux intensifiés au maximum avec les États-Unis. Les provinces de l'Atlantique, l'Ontario et le Manitoba sont les provinces qui jouiraient des plus fortes augmentations du rendement économique.

CONSEQUENCES ÉCONOMIQUES DE LA LIBÉRALISATION COMMERCE AVEC LES ÉTATS- UNIS -- INDICES ET QUESTIONS

Auteurs: Moroz and Meredith
Institut de recherches politiques

L'étude complète peut être obtenue de l'Institut.

Description

Le document présente une évaluation d'un commerce plus libre avec les États-Unis, sous forme d'arrangement fonctionnel, sectoriel ou global, à partir de la documentation existante sur l'économie.

Conclusions

La principale conclusion qui ressort du document est que l'on peut s'attendre que la libéralisation du commerce bilatéral produise des avantages économiques considérables et de longue durée pour le Canada. On peut également s'attendre qu'elle mènera à une structure micro-économique plus efficace et plus souple qui, à son tour, pourrait améliorer de manière notable la performance de la macro-économie canadienne ainsi que sa capacité à créer des emplois plus nombreux et meilleurs.

La libéralisation du commerce bilatéral entraînerait des modifications structurelles importantes. Même si elles sont l'une des principales sources des grands avantages économiques nets éventuels à long terme, le processus d'adaptation pourrait entraîner des frais de transition considérables.

Ces frais d'adaptation comprendraient des frais d'adaptation de la main-d'oeuvre lorsque des travailleurs changeraient d'industrie. Il pourrait également y avoir divers facteurs qui influeraient sur le processus et les frais d'adaptation et sur la capacité et la rapidité avec lesquelles on pourrait profiter des avantages économiques à long terme. Néanmoins, il semble que la libéralisation du commerce bilatéral fournirait les conditions et le milieu propices à l'amélioration de la santé et de la solidité de l'économie canadienne.

RÉPERCUSSIONS DE LA LIBÉRALISATION DU COMMERCE SUR LES INVESTISSEMENTS: Le processus d'adaptation.

Auteur: Ministère des Affaires extérieures

Étude complète disponible.

Description

Ce document ainsi qu'un document connexe fondés sur des résultats d'enquête fournissent une évaluation de la nature des changements dans les habitudes d'investissement par référence à des études sur la nature du processus d'adaptation et à des enquêtes sur les décisions des diverses entreprises en matière d'investissements.

Points saillants

Les adaptations nationales à l'intérieur de la Communauté européenne après la signature du Traité de Rome en 1958 ont été tellement plus limitées qu'on ne l'avait prévu qu'il fut décidé en 1960 d'accélérer la réduction des tarifs - 20% par année au lieu de 10% - et de supprimer tous les contingents au plus tard en 1961.

Une étude empirique d'envergure sur la réaction de l'industrie canadienne aux plus récentes réductions tarifaires dans le cadre du GATT ne révèle aucun des effets prévus dans l'argument de la "désindustrialisation". Il est vrai que les importations canadiennes ont augmenté, mais les exportations ont fait de même. Aucune industrie n'a subi de ralentissement majeur.

La grande majorité des entreprises interrogées dans le cadre d'enquêtes du Conference Board du Canada et du Ministère n'estiment pas que les obstacles au commerce constituent un facteur décisif dans les décisions concernant les investissements futurs.

LÉGISLATION AMÉRICAINE VISANT À RECTIFIER LE COMMERCE EXTÉRIEUR

Auteurs: Arnold and Porter
janvier 1986

Étude fractionnée disponible.

Description

Ce mémoire envisage la possibilité, politique et juridique, de réaliser aux États-Unis diverses propositions que le Canada pourrait avancer au cours des pourparlers sur le commerce en vue de modifier la manière dont la législation sur la limitation des importation américaines est appliquée aux exportations canadiennes.

Aperçu

Même si les éléments d'un accord commercial canado-américain peuvent être généralement bien accueillis, les clauses particulières qui seraient perçues comme affaiblissant la législation sur la limitation des importations américaines provoqueraient sans doute beaucoup de controverse.

Pour procéder rapidement, l'Administration américaine doit tenir les comités pertinents du Congrès bien au fait du progrès des négociations. En pratique, cette procédure donne au Congrès une influence constante et puissante sur les négociateurs américains qui lui permet de limiter sensiblement la latitude dont ceux-ci disposent.

CLAUSES INSTITUTIONNELLES ET FORME DE L'ACCORD COMMERCIAL CANADO-AMÉRICAIN PROPOSÉ

Auteur: Frank Stone
Institut de recherches politiques
avril 1986

On peut obtenir l'étude en s'adressant à l'Institut.

Description

L'étude porte sur deux questions institutionnelles et juridiques: les nouveaux arrangements institutionnels créés en vertu de l'accord ainsi que la nature et la forme de cet accord.

Points saillants

L'accord devrait prévoir la création d'un comité de ministres et de personnes de rang équivalent qui aiderait à assurer la coopération entre les deux gouvernements pour la mise en oeuvre de l'accord, l'interprétation de ses dispositions et son adaptation aux circonstances changeantes.

La Commission mixte du commerce extérieur, qui est proposée, serait conçue pour fonctionner de manière collégiale en vue d'aider les deux pays à mettre en oeuvre le nouvel accord et de les aider, en général, à gérer les relations commerciales bilatérales.

- La Commission devrait être autorisée à établir un Conseil consultatif mixte composé de membres des gouvernements des deux pays, des provinces et des États ainsi que du secteur privé.
- La Commission devrait être autorisée à établir des groupes mixtes de discussion qui aideraient à résoudre les différends bilatéraux particuliers.

- La Commission devrait être autorisée à établir un groupe mixte d'enquête, composé de membres du Tribunal canadien des importations et de la Commission américaine du commerce international, qui serait chargé d'enquêter sur les préjudices causés aux producteurs nationaux et de présenter des rapports sur ce sujet.

PROFILS DE LA COMPÉTITIVITÉ DES SECTEURS ET PROFILS DES SECTEURS

Auteurs: Ministère de l'Expansion Industrielle
Régionale

Ministère de l'Énergie, des Mines
et des Ressources

Ministère des Pêches et des Océans

Ministère de l'Agriculture

Description

Des études provisoires sur plus de 40 secteurs économiques ont été rédigées par des responsables de secteur dans ces ministères à des fins de consultation avec l'industrie et les provinces. On travaille actuellement à intégrer les commentaires des provinces ainsi que les autres révisions et ajouts nécessaires dans de nouvelles versions.

COMPARAISONS DES COÛTS UNITAIRES ENTRE LES INDUSTRIES CANADIENNES ET LES INDUSTRIES AMÉRICAINES

Auteur: Data Resources of Canada
septembre 1985

Description

Cette étude est une compilation de statistiques canadiennes et américaines sur l'économie et l'industrie et compare les coûts

unitaires globaux, à la fois selon leur valeur nominale et selon leur valeur corrigée des taux de change, ainsi que la productivité de la main-d'oeuvre.

Aperçu

La dévalorisation du dollar canadien par rapport au dollar américain après 1976 a procuré un avantage sensible à nos producteurs, rendant la plupart de nos industries plus concurrentielles que leurs contre parties américaines en 1984. Cet avantage est récent; peu industries ont joui d'un avantage soutenu sous ce rapport pendant plusieurs années.

Lorsque des industries bénéficient d'un avantage pour ce qui est des coûts, c'est plus souvent à cause des coûts inférieurs des matières premières que des coûts de la main-d'oeuvre. Dans de nombreuses industries, les coûts de la main-d'oeuvre sont élevés par rapport aux industries américaines et sont à la hausse.

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| Date | August 23, 1985 |
| Number/Signature | CPE-0213 |

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ENCLOSURES
ANNEXES

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I attach for your review and comment the first draft of the economic analyses which we commissioned on macro-economic impacts and competitiveness measurements in support of your memorandum on Canada-U.S. enhanced access trade arrangements.

2. The final consultants' reports and the detailed data bases should be available within the next ten days. Meanwhile we will proceed to develop this draft, aiming to submit our next report according to your schedule dated August 21.

3. The section on competitiveness does not include anything from the inter-departmental profile exercise now underway, because most sectors are the responsibility of ORIA and their input reached us at 4 p.m. today.

Mark D. Segal

Mark D. Segal
Acting Director
Economic and Trade
Analysis Division

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INTERIM REPORT
ON
THE ECONOMIC IMPLICATIONS OF A CANADA/U.S.
ENHANCED TRADE AGREEMENT

EXTERNAL AFFAIRS

CPE

AUGUST 23, 1985

INTRODUCTION

This interim report contains preliminary results from the research program undertaken this summer, and coordinated by CPE, on the economic implications of an enhanced trade agreement between Canada and the United States. A more detailed and comprehensive discussion paper is also being prepared. The information contained in the interim report contains highlights from the portion of the research that has been completed to date (August 23, 1985). These findings have only very recently been produced, and there has not yet been time to do a full interpretation, nor to fully resolve apparent conflicts between the results of different studies. These tasks will be undertaken in the full discussion paper.

The research assumes that a trade enhancement agreement with the U.S. would entail the removal of all tariffs and all non-tariff barriers (except subsidies) between Canada and the United States over the five year period 1988-1992. It then seeks answers to two broad questions:

- (a) Could Canada compete successfully under such an agreement?
- (b) What would be the macroeconomic effects of such an agreement, at both the national and provincial level?

The macroeconomic analysis is based on two separate studies. One was carried out by INFORMETRICA Ltd., using their TIM model of the Canadian economy. It estimates the impact on the major macroeconomic aggregates such as GNP, employment, prices, investment, net exports, etc., as well as the output of different industrial groups.

The other macroeconomic study was carried out in CPE using the University of Maryland's INFORUM model, which contains 28 Canadian industrial sectors. While this model also permits estimation of impacts on a range of macroeconomic indicators, the discussion in this interim report concentrates on employment. Moreover, the INFORUM model, besides yielding results at the aggregate level, also reveals the intersectoral shifts of employment that would result from a trade agreement.

Both the INFORMETRICA and INFORUM analysis used the results of CPE's calculations of average tariffs and the tariff equivalent of non-tariff barriers. This work is described in supplementary documents accompanying this report.

Models of the INFORMETRICA (TIM) and INFORUM kind are, at best, imperfect instruments for capturing the intricate economic processes set in motion by trade liberalization. Moreover, different assumptions about the behaviour of economic agents or about government policy, can be critical to the conclusions reached. For example, INFORMETRICA and INFORUM make quite different assumptions about the price policy response of import-competing producers, and this leads to very different findings with

respect to output and employment. However, as long as the assumptions are explicit and identifiable, the user of such research may judge for himself which assumption is the more realistic. One advantage of using econometric models is that they force us to change implicit assumptions into explicit ones, thereby exposing the analysis to testing by others. They also enable us to bring vast quantities of statistical evidence together in a coherent way, to trace multiple and simultaneous interactions among economic variables, and to impose internal consistency on the analysis.

The competitiveness portion of the analysis also contains two parts, although only one of these is discussed in this interim report. The Department of Regional and Industrial Expansion is preparing sectoral profiles on thirty or more industries, which assess their current competitive capacity and their potential competitiveness under the proposed trade enhancement conditions. This work has not been delivered yet.

The second part of the competitiveness evaluation was prepared in CPE using (a) research findings on structural competitiveness published earlier this year by IRPP (Joseph D'Crux and James Fleck) and (b) cost competitiveness data supplied by Data Resources Inc. The DRI material compares four broad components of production, cost — labour, intermediate inputs, capital, and indirect taxes — in thirty corresponding goods manufacturing industries in Canada and the United States.

At the best of times, there are many methodological and conceptual problems which complicate analysis of this kind and that should be borne in mind when evaluating the results. In this case, the severe time constraint for delivering this interim report presented additional difficulties, some of which will be overcome as the work continues. The methodological and time constraint problems are described in detail in an accompanying supplementary document. While these preliminary findings may facilitate the current discussions, we wish to emphasize that more time is needed for their interpretation, explanation, and evaluation before drawing policy conclusions. During the next two weeks CPE will be studying these results in detail. In particular, we will attempt to resolve differences in some of the results among the various studies, especially with respect to employment.

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MACROECONOMIC ANALYSIS

- A. Based on INFORMETRICA TIM Model
- B. Based on University of Maryland's
INFORUM Model

A. ANALYSIS BASED ON INFORMETRICA-TM

1. Approach and Assumptions

When analyzing the macroeconomic impact of a proposed policy change, it is usual to begin with a basic — or "base case" — projection of how the economy would perform in the absence of the policy change. INFORMETRICA's base case projection, to the year 2005, assumes that current trade practices are maintained over 1985-2005. (These projections are similar, in most respects, to those of the Department of Finance.) Next, several alternative projections are made, each based on a different set of assumptions about changes in tariff and non-tariff barriers between the two countries, the nature of Canadian production, and Canadian tax policy. The results of these alternative projections are then compared to the base case in order to measure the impact of the new policy and the changed conditions. Because of the model's structure, it measures not only the direct impact of the policy but also indirect and induced effects.

Seven alternative trade liberalization cases were selected for comparison with the base case. These are defined briefly below.

Case 1: Tariff elimination only. Canadian and U.S. tariff barriers are phased out at the rate of 20 percent per year over the period 1988 to 1992.

Case 2: Elimination of non-tariff barriers only (excluding subsidies) phased out over the same period.

Case 3: Combined elimination of tariffs and non-tariff barriers.

Case 4: Productivity improvement. The same as Case 3, plus an assumption that, in addition to the usual cyclical gains in productivity, there will be a further rise in manufacturing productivity of 5 percent over the base case, representing the productivity gain from economies of scale.

Case 5: U.S. protectionism in the absence of a trade agreement with Canada. This case retains the assumptions of Case 4 but also assumes that the U.S. would impose a large import surcharge in 1988-1992 and that Canada would be exempt from this surcharge under the proposed trade agreement. (In effect, an alternative base case is used.) The assumed surcharge of about 10% would move average U.S. tariff rates to 3 times their current level.

Case 6: No revenue recovery. In Cases 1, 2, 4 and 5 it has been assumed that the federal government imposes direct taxes to recover all revenues lost through tariff elimination. In Case

6 the government does not take this action. Case 6 includes productivity improvement, but not the U.S. protectionist assumption).

Case 7: The same as Case 6 except that Case 5 is also included (that is, the U.S. protectionist assumption is included).

It is primarily the price mechanism that introduces the impact of trade liberalization into the model and transmits its effects throughout the economy.

The prices of most imports and exports will change when trade barriers are reduced and this, in turn, will affect the volume of exports and imports. The responsiveness of trade volumes to such price changes -- or the "elasticity" of imports and exports -- is estimated on the basis of historical relationships. These elasticities and, hence, the volume response, vary considerably among different industries.

While the removal of tariffs and NTBs is the initial force that propels all the economic changes described here, and although prices are the vehicle by which the changes are transmitted, the direct price effects are small. When the last tariffs are finally removed by 1992, this directly lowers the Consumer Price Index by only 0.5 percent, and NTB elimination lowers the CPI only by a further 0.25 percent. However, the indirect effects of these reductions, not only on importers but on other sectors of the economy, are much larger. In the scenario selected as "most likely", Case 4, the CPI falls to 6 percent below the base case level.

The response of Canadian producers to trade liberalization will depend in part on whether they are primarily exporters or import-competitors.

If a producer faces significant import competition, then the reduction in Canadian tariffs will force him either to drop his prices or lower his output, or to follow some combination of these options. The INFORMETRICA analysis allowed the response of import-competing firms to vary among industries, but it was assumed in most cases that producers would partly lower their prices. It is important to remember this element. Canadian consumers benefit not only from lower-priced imports but also from lower prices on import-competing domestic goods. This is an inducement for increased consumption which, in turn, has secondary multiplier effects. Moreover, if producers respond to the import competition in this way, there will be less displacement of Canadian production by imports than would occur if import-competitors did not lower their price. This assumption constitutes a major difference between the INFORMETRICA approach and the INFORUM approach, discussed later in this paper, and helps to explain major differences in their findings, especially with respect to employment.

If a producer is primarily an exporter, then the drop in U.S. tariffs will give him an opportunity either to raise his U.S. price or increase the volume of his sales.

For "price-taking" exporters it is assumed that Canadian producer prices rise to capture the full amount vacated by the tariff. In this case the impact is transmitted via increased earnings and investment.

These initial price impacts on imports, exports, and import-competing goods tell only part of the story. One of the advantages of macroeconomic models like TIM is their capacity to trace the transmission of these initial price impulses through the rest of the economy and to measure the net impact on the major aggregates such as disposable income, consumer demand, capital investment, government spending, employment, and so on. This is done both at the national and provincial level.

Most of the impacts that emanate from the price-reducing effects of trade liberalization are simulated endogenously by the trade equations within the TIM model. However, these are not the only benefits that might be conferred by trade enhancement. The larger market would enable Canadian producers to operate on a larger scale and to achieve economies of scale through technological change and increased specialization, accompanied by rising productivity. The increased productivity, in turn, affects prices, employment, output and other major variables.

While the model does capture "cyclical" increases in productivity (which occur, for example, when the increased level of economic activity raises the level of capacity utilization and when investment responds to changing costs and demand) it is not equipped to estimate endogenously the more incalculable productivity gains to be achieved through economies of scale. For this purpose an exogenous assumption is made that in manufacturing most Canadian producers would be enabled by scale economies to raise productivity by an additional 5 percent over the base case level. (INFORMETRIKA has introduced this element into the analysis both by making exogenous positive changes to industry investment and by direct employment reductions per unit of output.)

Some important assumptions have also been made with respect to government policy responses. The most important of these are: (1) that the Bank of Canada will maintain the same differential between Canadian and U.S. real interest rates as in the base case projection, (2) that past policies will apply to the exchange rate; it will be flexible and will react endogenously to other variables, (3) that the Federal government will raise income taxes to recover fully the loss in revenues from tariffs, except in the two Cases where this assumption is dropped.

2. Impact Results at National Level

All seven Cases of trade enhancement were found to make a positive contribution to GNP. Of the 7 cases, Case 4 seems the closest to reality in terms of both economic and policy assumptions. Case 4 combines tariff and NTB elimination with an exogenously assumed productivity increase due to economies of scale. Because Case 4 appears to be the most probable scenario, this interim report will concentrate on it. The results for this Case will be addressed first, and will be discussed in greater detail.

2007 and other Cases. A complete set of statistical findings for Case 4 is included in the supplementary reference package which accompanies the report. Complete tables for the other Cases are available from CFI.

2.1 Case 4: Combined Impact of Tariffs and NTBs and Scale-Related Productivity Gains

- (i) Real Gross National Product is, on average, about 1.7 percent higher per year than in the base case. The size of this gain increases from only 0.13 percent in 1988 to more than 2.5 percent in 2005. By 2005, real GNP (in 1971 constant dollars) is \$6.3 billion higher than in the base case.
- (ii) Real industry output (Real Domestic Product) follows a similar, and even steadier, pattern. By 1991 it is 1.1 percent above the base case, and the gains increase in size every year to almost 2.5 percent in 2005.
- (iii) Reduction of tariffs and non-tariff barriers by the United States yields real Canadian export increases that are more than sufficient to offset increased real imports into Canada in response to Canadian reduction of tariffs and NTBs and increased Canadian final demand. In other words, Canada's real net exports increase relative to the base case. The gains are especially strong in the early 1990's: 21 percent above base in 1990, 17 percent in 1991, 20 percent in 1992, and 15 percent in 1993. (Bear in mind, however, that these percentage increases are on a small base.) After the mid-1990's, appreciation of the Canadian currency diminishes the size of the gains in both absolute and proportional terms.
- (iv) Increased competition from foreign suppliers drives Canadian industrial prices down. Productivity gains (both from cyclical and scale sources) reinforce this downward pressure. Industry output prices are below the base case level throughout the period and after 1995 they are about 6 percent below base case level every year. Although real wages rise, during the first half of the period productivity also rises sufficiently to hold down unit labour costs, which further reduces price pressure.
- (v) The industrial price effects described above are transmitted to the rest of the economy and contribute to a general lowering of prices. This is reflected in the Consumer Price Index whose level is lower than the base case in every year of the period and, like industry prices, runs about 6 percent below base case after 1995. This should not be confused with the inflation rate — the rate of change in the CPI from year to year. The inflation rate does fall significantly from 1988 through 1995 but, after that, tightened labour markets begin to generate

wage demands that are not fully offset by productivity gains, so that the inflation rate then rises again to approximately the base case rate. But the level of prices remains about 6 percent below the base case level because of the fall in the earlier years.

- (vi) Lower prices imply an increase in disposable income. (Remember that although the government is assumed to increase taxes to recover lost revenue, consumers still get the benefit of price reductions by import-competing domestic producers plus the "price equivalent" benefits of NTB removal.) However, over the longer term, consumer demand accounts for more than half of the GNP gain.
- (viii) As a result of increased consumption, higher net exports, a drop in nominal interest rates, and reduced costs of materials and equipment, business investment increases substantially. To these endogenous increases, INFORMETRICA has added exogenous increases in investment, reflecting an assumption that businesses will make extra investments in new production processes and technology in order to reap economies of scale. Consequently, real business investment, especially non-residential, runs well above the base case throughout the period, and is especially strong in the mid 1990's when it averages about 5 percent above base case level. In 1995, for example, the increased investment accounts for 44 percent of the rise in GNP.
- (ix) Employment gains are evident from the outset, reflecting increases in industry output. By 1994, overall employment is running more than 100,000 above base case and the margin ranges between 95,000 and 145,000 through the rest of the period to the year 2005. The largest absolute gains occur in services (averaging about 50,000 per year from 1997 on), and trade (about 37,000 a year from 1997). Employment also rises significantly above the base case forecast in public administration, transportation storage and communications, construction, fisheries, and mining. Smaller increases appear in finance, utilities, and forestry.
- (x) Employment losses are indicated in agriculture and manufacturing, in spite of the aggregate rise in employment. The agriculture losses are very small, but in manufacturing they are quite large, especially after the mid-1990's. From 1988 to 1994, manufacturing employment runs about 3,000 per year below base case. Then the

losses increase sharply. From 1995 to 2005, manufacturing employment averages 25,000 per year below the base case level, and averages more than 45,000 below base between 1998 and 2002. INFORMETRICA attributes these losses not to declining manufacturing activity — indeed, manufacturing output averages about 3 percent above base case from 1992 on — but, rather, to increased labour productivity. Moreover, it is important to remember that these are losses only in the sense that manufacturing employment is lower than it would have been in the absence of the policy — that is, lower than the employment projection in the base case forecast. It does not mean that employment falls below current levels. Manufacturing employment actually rises from 2.2 million in 1985 to 2.5 million in 2005.

- (xi) The unemployment rate falls from the base case level but only by a small degree, in spite of the substantial rise in overall employment. On average, the unemployment rate is only about one-third of a percentage point below the base case level even after full implementation of the agreement in 1992. This is because increased real wages induce accelerated entry of workers into the labour force.
- (xii) The exchange value of the Canadian dollar appreciates, and by 2005 it is running around 92 2/3 cents U.S., compared with the base case projection of 85 cents and the current level of about 73 cents. (Some degree of appreciation had already been projected in the base case, with a gradual rise to 85 cents by 1995, remaining constant thereafter.) The exchange rate in Case 4 runs above the base case rate throughout 1999-2005, and the gap widens steadily over that period. The increase reflects improved growth prospects, reduced inflation and, in the early years of the impact, an improved balance of payments on current account. After the mid-1990's the exchange rate appreciation diminishes the positive impact of the trade agreement on net exports.
- (xiii) In general, non-federal government balances improve. Initially, assuming that the federal government recovers tariff revenue losses, the federal treasury benefits as well. However, the trade agreement implies increased supply competition and reduced profit margins for import-competing firms, and this is sufficient in the longer term to generate negative effects on federal corporate tax revenues.

SUMMARY OF NATIONAL RESULTS
 Impact of "Case 4" Relative to Base Case

| <u>% Change</u> | <u>1992</u> | <u>2005</u> |
|---------------------------------|-------------|-------------|
| Real GNP | 1.6 | 2.5 |
| Real Consumption | 0.5 | 2.3 |
| Real Business Investment | 3.9 | 3.7 |
| Real Net Exports | 19.9 | 3.0 |
| Employment | 0.5 | 1.0 |
| Real Per-Capita Personal Income | 1.3 | 3.0 |

2.2 Case 1: Elimination of Tariffs Only

- (i) Real Gross National Product is increased, but to a considerably smaller degree than in Case 4. The positive impact is about 1/4 the size of the impact in Case 4.
- (ii) The Consumer Price Index is lower than in the base case but the improvement is only about half that of Case 4.
- (iii) Real net exports increase relative to the base case, although in most years the gains are considerably smaller than in Case 4.
- (iv) There is a gain in total employment of about 40,000 a year after the mid 1990's compared with over 100,000 on average, in Case 4. However, because there is no assumption of productivity increases from scale economies, manufacturing employment increases in this Case, whereas it fell in Case 4.

2.3 Case 2: Elimination of NTBs Only

- (i) This has stronger positive effects than tariff removal because: (a) the U.S. tariff reduction is smaller than that of Canada since U.S. tariff levels are lower than ours to begin with and (b) the reduction in U.S. non-tariff barriers is comparatively large (relative to both Canadian NTBs and U.S. tariffs) providing large benefits to Canadian GNP through the mid 1990's.
- (ii) The increase in real GNP is about half that of Case 4, and about twice that of tariff removal only, in most years. The contribution to GNP weakens as time goes on, reflecting the acceleration of inflation in the later years. (See point iv).
- (iii) NTB removal is by far the dominant source of employment generation. This is especially evident in the first five or six years. Over the whole period examined, it accounts for about 4/5 of the employment gains of Case 4. Indeed, in some of the earlier years, it

produces more employment than Case 4, because productivity gains in Case 4 are dampening employment expansion initially. It is interesting to note that although the University of Maryland model, discussed later in this paper, shows an overall decline in employment, that model also shows generally positive employment impacts from NTB removal.

- (19) The CPI falls to about 2 percent below the base case level by 1995. However, because of the employment generating effects of NTB removal, labour markets gradually become tighter and unit labour costs rise, so that the inflation rate increases after the middle of the decade. The rate of inflation rises sufficiently that the level of the CPI rises above the base case level by 2001. (Whereas Case 4 allows for productivity increases from economies of scale, and this holds down inflation, no such assumption is made in Case 3.)

2.4 Case 1: Removal of Tariffs and NTBs

This is simply the combination of Case 1 and Case 3. It differs from Case 4 as a result of the assumption of extra productivity gains in Case 4.

2.5 Case 5: U.S. Protectionism

This is the Case that assumes that the U.S. would impose an import surcharge of 10 percent in 1983-1992, from which Canada would be exempt under the proposed trade pact. This assumption, in effect, is an alternative base case. When Case 4 is compared to this Case, instead of to the original base case, all the gains are magnified.

- (i) The gain in net exports is very large in every year. For example, in 1990, 1995, and 2000, real net exports are \$627 million, \$992 million, \$1,643 million, and \$2,528 million, respectively, above base case. (The comparable gains when Case 4 is compared to the original base case are \$268 million, \$81 million, \$159 million, and \$66 million.)
- (ii) The gain in real GNP in Case 5 is \$1.0 billion in 1990, \$5.2 billion in 1995, \$5.2 billion in 2000, and \$8.2 billion in 2005. The comparable figures for Case 4 are \$1.3 billion, 4.2 billion, \$4.2 billion, and \$6.3 billion.
- (iii) From 1995 on, employment averages about 170,000 above base, compared to an average of about 110,000 in Case 4.

2.6 Case 6: No Revenue Recovery and No U.S. Protectionism

This is the same as Case 4, except that there is no assumption of a government tax to recover lost tariff

revenues. (Case 6 is compared to the original base case, not the U.S. protectionism base that was used in Case 5.)

- (i) Real GNP gains are significantly stronger than in Case 4 during the earlier years, but the difference gradually diminishes so that by the year 2000 the gains are about the same in both cases. The decision not to impose a revenue recovery tax stimulates consumption and investment, which raises GNP but also increases imports of goods and services at a faster rate than exports. Real net exports fall below base case by 1993 and the shortfall grows larger as time goes on. Moreover, in nominal terms, deficits begin to appear in the current account of the balance of payments. Foreign borrowing to finance these deficits leads to greater outflows of interest and dividends and still wider deficits. These factors gradually narrow the gains on GNP. Industrial output gains, on the other hand, remain larger than in Case 4 throughout the period.
- (ii) Employment gains are stronger than in Case 4. From 1995 on, employment runs about 140,000 above base case compared with 110,000 in Case 4.
- (iii) The Consumer Price Index falls, but not by as much as in Case 4, because freedom from the revenue recovery tax sustains consumer spending.

2.7 Case 7: No Revenue Recovery and U.S. Protectionism

In the earlier years, this Case shows the strongest impacts of all the Cases. For example, in 1992 the gain in real GNP is \$4.4 billion, compared with \$3.5 billion in Case 6, \$4.0 billion in Case 5, and \$3.1 billion in Case 4. However, in the later years this strength begins to erode for reasons similar to those cited in Case 6.

3. Provincial Impact Results

Table 3 provides indications of the provincial impacts anticipated under Case 4. The Atlantic provinces, Ontario, and Manitoba would enjoy the largest increases in economic output.

PROVINCIAL IMPACTS
 Impact of "Case 4" Relative to Base Case.

| | Real Output (% Change) | | Employment (thousands) | | Real Per-Capita Personal Income (% Change) | |
|--------------------|---------------------------|------|---------------------------|------|--|------|
| | 1992 | 2005 | 1992 | 2005 | 1992 | 2005 |
| Newfoundland | 2.1 | 2.4 | 4 | 7 | 1.2 | 2.0 |
| Prince Edward Isl. | 2.1 | 1.1 | 1 | 2 | .8 | 1.8 |
| Nova Scotia | 1.6 | 2.4 | 3 | 8 | 1.3 | 2.7 |
| New Brunswick | 1.9 | 2.3 | 3 | 4 | 1.4 | 1.1 |
| Quebec | 1.4 | 2.1 | 13 | 29 | 1.2 | 2.8 |
| Ontario | 1.7 | 2.9 | 26 | 52 | 1.3 | 3.3 |
| Manitoba | 1.5 | 2.4 | 4 | 9 | 1.4 | 2.8 |
| Saskatchewan | 1.3 | 1.8 | 2 | 6 | 2.0 | 3.1 |
| Alberta | 1.1 | 1.4 | 4 | 11 | 1.5 | 2.8 |
| B.C. and Terr. | 1.3 | 2.2 | 8 | 19 | 1.1 | 2.9 |
| Canada | 1.5 | 2.4 | 67 | 146 | 1.3 | 3.0 |

The Atlantic benefits, especially from increased activities in the fisheries, fish processing, and other food processing. This comparatively strong gain in goods production is sufficient to draw population into the region, and the benefits to goods production are reinforced by increased output of services to supply the larger population and industrial activity. In Central Canada, Ontario profits from the particularly large increases in durables manufactures. Quebec, in contrast, has an industrial structure dominated by manufacture of non-durables, including some of these industries that are negatively affected, and by forestry, mining, and production of electric power; all of which are only moderately benefited. Consequently, the overall positive impact on activity in Quebec is weaker than that of the national average.

While the generally strong impacts in manufacturing enable Manitoba to approximately match those of the national average, the positive impact on activity in the rest of the Prairies falls short. This reflects the dominating influence there of agriculture and energy production. INFORMETRICA has assumed the trade enhancement would have little direct impact on energy production. If this assumption is relaxed, then the region (as well as the country as a whole) would realize stronger gains. British Columbia and the Territories register average gains in activity.

The largest employment gains, as a proportion of expected base case levels, are again registered in the Atlantic provinces. Initially, the weakest are registered in Central Canada, which experiences its output gains in high productivity industries, and in Saskatchewan and Alberta where output increases least. Other provinces approximately match the one per cent overall increase in

employment that is registered by 1992. In later years, the Atlantic continues to benefit most, but accelerating activity in manufacturing aids Ontario and Quebec in closing the gap between their percentage gains and those of the country as a whole. Despite this picture, it should be noted that in absolute terms the largest employment increases will be concentrated in Central Canada.

The impacts on real incomes of households (measured in Table 3 as before-tax incomes) is more evenly distributed across provinces, and approaches the traditional view that enhanced trade will benefit the periphery. In these terms, income gains in the Atlantic approximately match, or are slightly smaller, than the Canada average, reflecting the fact that increased productive employment would substitute for unemployment insurance and other transfers from governments to households. In contrast, gains on the Prairies, where transfer incomes are already a small part of household income, exceed those of the national average. The modest gains in Quebec reflect the concentration of low-productivity manufactures and a loss of transfer incomes. Ontario benefits because of the comparatively high wage rates paid in its industries. In short, the comparatively even dispersion of impacts on household incomes reflects both the industrial sensitivity of enhanced trade and the "safety net" system that has been constructed in Canada over the past two decades.

EXTERNAL AFFAIRS / AFFAIRES EXTERIEURES
B. ANALYSIS BASED ON UNIVERSITY OF MARYLAND'S INFORUM MODELIntroduction

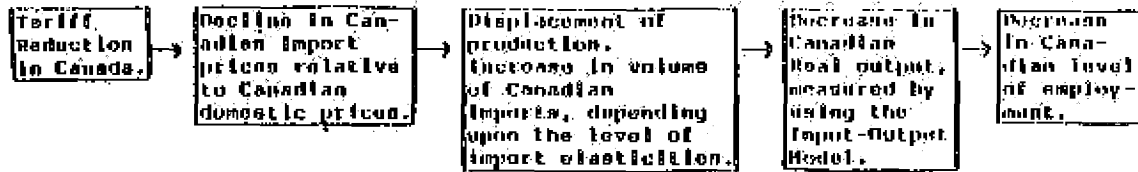
(1) We have carried out a number of computer simulations on the INFORUM INTERINDUSTRY MACRO MODEL (University of Maryland, USA), to measure the industry-by-industry direct and indirect impact of Canada-US Trade liberalization on employment in Canada. In producing these results, the INFORUM model also yields information on a wide range of other macroeconomic variables such as output and investment, but this report focuses on employment. There are serious gaps in our knowledge about the impact of Canada-US free, or freer, trade on jobs by industry. Although there have been a number of studies on the effects of free trade with the USA on trade flows and national output, an analysis of the employment impact has been, to our knowledge, overlooked. However, the current public discussion about the potential benefits derived from Canada-US liberalization highlights the question of jobs: how trade liberalization with the U.S.A. will affect the level of employment in Canada? By using the INFORUM model, we can, to some extent, answer this important question.

(2) The Canadian version of the INFORUM model contains estimated statistical relationships between the volume of Canadian imports and the domestic price and the foreign import price relative to the domestic price; and between the volume of Canadian exports and the foreign demand and the domestic price relative to competitors prices relating to seven major industrial countries - the USA, Japan, the UK, France, Italy, Belgium and West Germany. These import and export equations estimate import and export elasticities which can be used to analyse the potential effects of Canada-US free, or freer, trade on jobs in various Canadian industrial sectors. Although a detailed analysis of the simulation results, along with the methodology used, will be provided later in a separate paper, this brief report sets out some key findings emerging from our work using the INFORUM model. These findings have important policy implications for the ongoing public discussion about liberalizing our trade with the U.S.A.

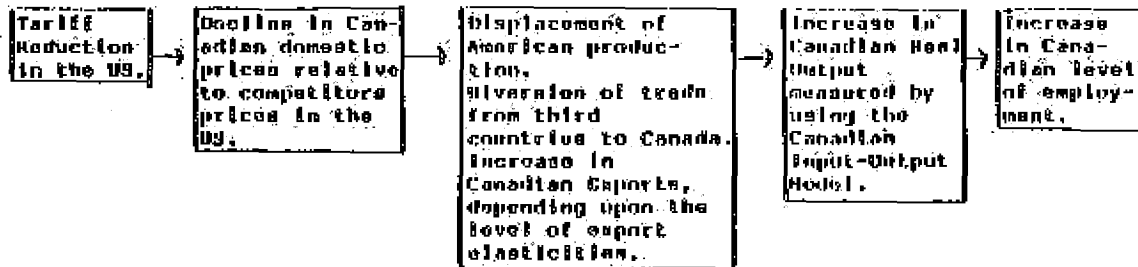
(3) Schematically, the effect of tariff changes on the Canadian economy can be illustrated by the causal sequences in the INFORUM model, presented in Chart 1. A cut in Canadian tariff will result in a proportional decline in Canadian import prices relative to Canadian domestic prices and in an increase in the volume of Canadian imports. The size of effect on Canadian imports depends upon: (a) the height of Canadian tariff rates and (b) the responsiveness of Canadian imports (import elasticity) to relative price changes as a result of removing tariff barriers. In turn, the import elasticity depends on the underlying domestic demand and supply, the share of imports in domestic consumption, and the substitutability of domestic and foreign goods. Finally, the last two causal sequences, relating to the effect of a larger volume of imports on domestic production

CHART 1: CONCEPTUAL FRAMEWORK
CANADA-US TRADE LIBERALIZATION

A: Effects on Canadian Imports



B: Effects on Canadian Exports



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DECLASSIFIED = DÉCLASSÉ
EXTERNAL AFFAIRS = AFFAIRES ÉTRANGÈRES

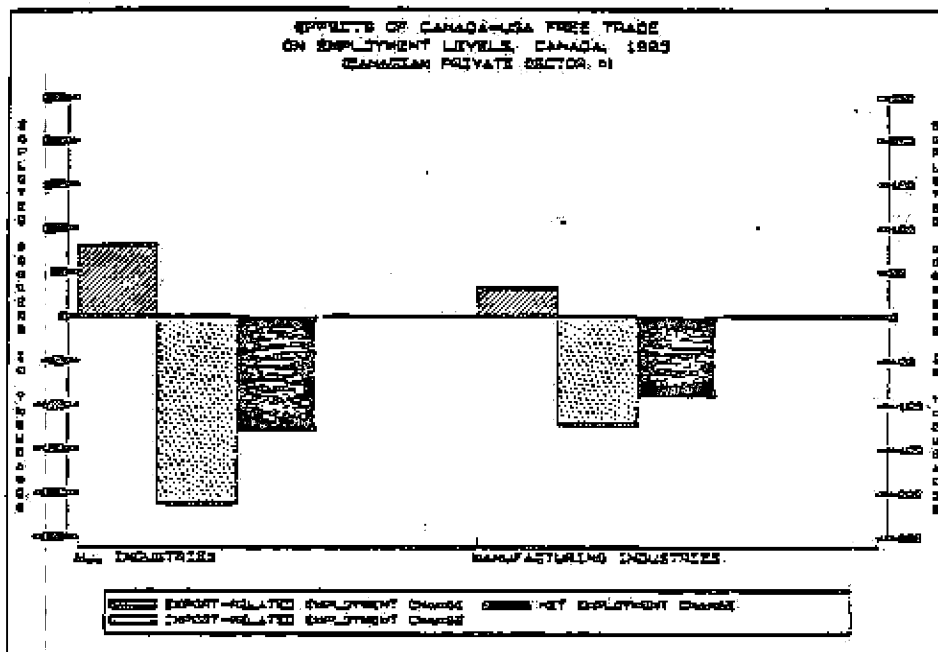
and employment, can be quantified by using the Canadian input-output framework. The effect on production and employment includes both the direct and the indirect effects. For example, a change in the tariff rate applied to steel products will affect the output and employment of not only the steel industry but also the coal and iron ore industries. Conversely, a cut in American tariffs will result in a proportional decline in Canadian domestic prices relative to competitors prices in the U.S.A. and in an increase in Canadian exports by displacing American production and by diverting the American imports from third countries to Canada. Increasing volume of exports will, in turn, increase output and employment in Canada.

SIMULATION RESULTS - EFFECTS ON EMPLOYMENT

(4) First, we have designed a base-line picture of the Canadian economy that is expected to exist in 1995. The picture is the result of Simulation 1 which is carried out on the INFORUM model under the assumption that the MFN tariff concessions, negotiated by Canada and the U.S.A. under the Tokyo Round, will be fully implemented by 1987 and that the reduction in tariff barriers will take 5 years to have a full impact on Canadian trade flows. The latter is a built-in adjustment structure in the INFORUM model. Simulation 1 will produce the 1995 bench-mark estimates of imports, exports, output and employment level, calculated under the assumption that there will be no further trade liberalization with the U.S.A. after the Tokyo Round tariff concessions are completed by both countries.

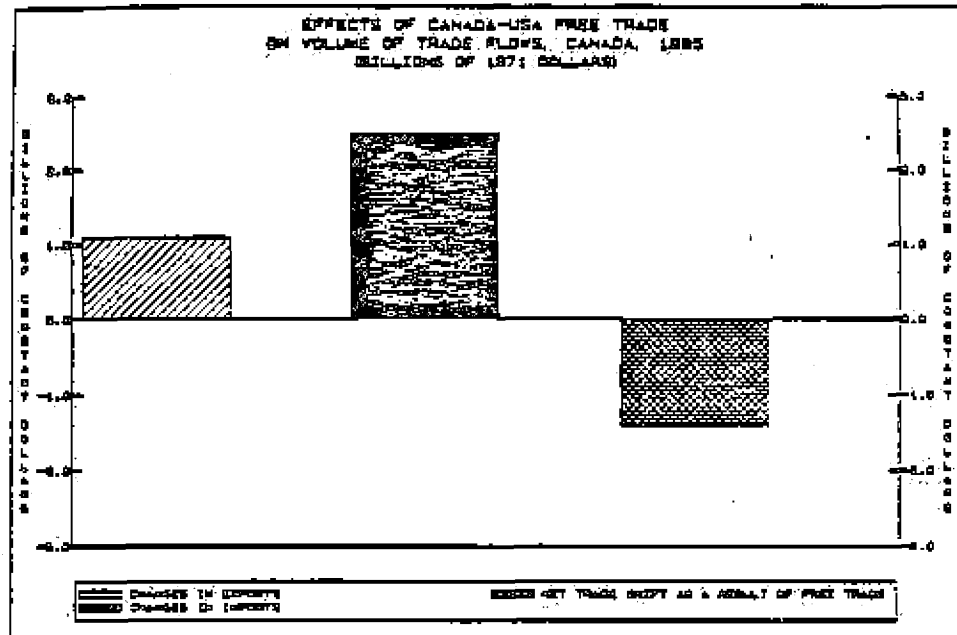
(5) In Simulation 2, we reduce the Post-Tokyo Canada and US tariff rates to zero over the years 1988-1992 and then determine the impact on Canadian exports, imports, real output and employment by 28 industrial sectors. The difference in results between Simulation 2 and Simulation 1 measures the impact of a complete free trade arrangement between the U.S.A. and Canada. The over-all effect of complete free trade is that Canada will lose about 212,000 jobs through rising imports from the U.S.A. and gain about 81,000 jobs through rising exports to the U.S.A. (see chart 2). Thus, the net employment loss, attributable to the complete removal of the Post-Tokyo Round tariff rates by both Canada and the U.S.A., amounts to 131,000 jobs by 1995. It can be seen from Chart 2 that a greater proportion of the job loss (over two-thirds) occurs in the manufacturing sector. This sector will indeed bear the brunt of stronger import competition from the U.S.A.

CHART 1



(6) The reason why Canada will experience a negative employment change is that the Canadian economy is more protected from foreign import competition than the American economy. Whereas the average proportion of U.S. duty-free imports and the U.S. average tariff rate on dutiable imports from Canada will be 74% and 14%, respectively, at the end of the Tokyo Round in 1987, the proportion of Canadian duty-free imports and Canadian average tariff on dutiable imports from the U.S.A. will be 72% and 14%. With the removal of Canadian and American tariff duties, Canadian imports from the U.S.A. will rise more than Canadian exports to the U.S.A. (see chart 3). Thus, there will be a greater displacement of Canadian production and a net decline in real output and employment in Canada.

CHART 3



SOURCE: EXPORTS - ESTABLISHED MARKET OUT OF THE DOMESTIC INTER-INDUSTRY MARKET.
IMPORTS - IMPORTS OF CANADA, USA.

(7) Table 1 describes job changes in Canadian industries after elimination of Canadian and American tariffs. The largest decreases in import-related employment will occur in such industries as trade-wholesale and retail (-36,000 jobs), clothing and knitting mills (-28,000), commercial services (-23,000), metal fabricating (-19,000) and miscellaneous manufacturing industries (-18,000). These industries will be affected adversely by rising imports from the U.S.A. Almost 60% of the import-related job loss is expected to take place in these five industries. On the contrary, job losses arising from changes in imports, as a result of free trade with the U.S.A., will be minimal in agricultural and fishing, forestry, mining, food and beverages, tobacco products, leather products, transport equipment, wood products and non-metallic mineral products. Furthermore, import-related employment changes are relatively small in the two forest-related manufacturing industries, viz., furniture and fixtures; and chemicals and chemical products.

(8) Examining export-related positive employment changes, one may note that the changes are, on the whole, relatively small. The largest increases in export-related employment are observed in trade (+25,000 jobs), machinery industries (+13,000), commercial services (+9,000) and transport and utilities (+6,000). Except for these four industries, export-related employment changes, arising from trade liberalization, are expected to be fairly small.

TABLE 1: JOB CHANGES AFTER ELIMINATION
 OF CANADIAN AND AMERICAN TARIFFS, CANADA 1995
 (THOUSANDS OF EMPLOYED WORKERS)

| Industrial Sector | Imports-Related Employment Changes | Exports-Related Employment Changes | Net Employment Changes |
|--|------------------------------------|------------------------------------|------------------------|
| 1. Agricultural and Fishing | +2 | +2 | 0 |
| 2. Forestry | -1 | 0 | -1 |
| 3. Mining, quarrying and oil well | -1 | 0 | -1 |
| 4. Food and Beverages* | -1 | +1 | 0 |
| 5. Tobacco products* | -1 | 0 | -1 |
| 6. Rubber products* | -6 | 0 | -6 |
| 7. Leather products* | -2 | 0 | -2 |
| 8. Textile products* | -8 | +1 | -7 |
| 9. Clothing & Knitting Mills* | -18 | +1 | -17 |
| 10. Wood Products* | -2 | +1 | -1 |
| 11. Furniture & Fixtures* | -3 | 0 | -3 |
| 12. Paper & Allied Industries | -3 | +1 | -2 |
| 13. Printing & Publishing & Allied | -2 | 0 | -2 |
| 14. Primary Metal* | -8 | +4 | -4 |
| 15. Metal Fabricating* | -19 | +4 | -15 |
| 16. Machinery Industries* | -7 | +11 | +6 |
| 17. Transport Equipment* | -1 | 0 | -1 |
| 18. Electrical Products* | -9 | +4 | -5 |
| 19. Non-metallic Mineral Products* | -2 | 0 | -2 |
| 20. Petroleum & Coal Products* | 0 | 0 | 0 |
| 21. Chemical & Chemical Products* | -1 | 0 | -1 |
| 22. Miscellaneous Manufacturing* | -18 | +1 | -17 |
| 23. Construction Industry | +6 | +2 | +8 |
| 24. Transport & Utilities | -9 | +6 | -3 |
| 25. Trade-Wholesale & Retail | -36 | +25 | -11 |
| 26. Finance & Insurance & Real Estate | -4 | +1 | -3 |
| 27. Commercial Services | -21 | +9 | -12 |
| 28. Other Private Services (elevators, telephones, broadcasting, Universities, etc.) | -9 | +3 | -6 |

* Belongs to the Manufacturing Sector

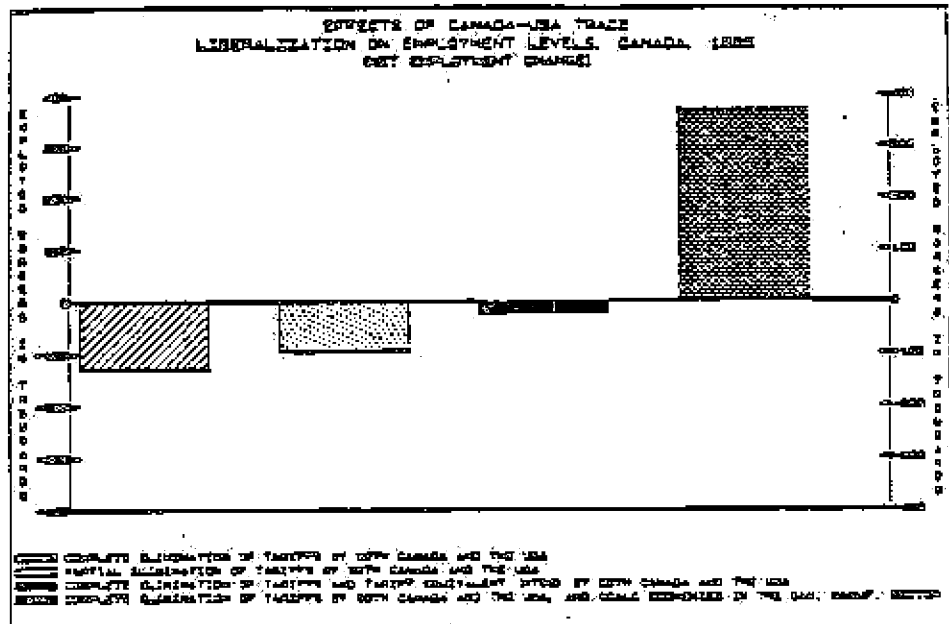
Source: EA/CPS - Simulations carried out on the INFORUM MODEL - University of Maryland - U.S.A.

Since import-related employment changes, although negative, are larger than export-related employment changes, net employment changes are negative in all industries except in machinery industries. The level of employment in machinery industries will expand because employment increases arising from rising exports are greater than employment decreases arising from rising imports. As a result of free trade, employment in machinery industries will increase by 6,000 jobs. Largest net employment decreases are observed for clothing and knitting mills (-27,000 jobs), miscellaneous manufacturing industries (-17,000), metal fabricating (-15,000), commercial services (-14,000) and trade (-11,000). These are the same industries where import-related declines are the greatest. A free trade arrangement with the USA will contribute to declines in employment levels in these five industries. The effects of free trade on employment levels are minimal, or small, in agricultural and fishing, food and beverages, forestry, mining, wood products, transportation equipment, tobacco products, paper and allied industries and non-mineral products.

(9) We have so far discussed a case where there is complete free trade between Canada and the U.S.A., with no duties on either side of the border. Some people believe that a complete free trade arrangement will be difficult to achieve. There are five "sensitive" trade sectors for which Canada or the U.S.A., or both, may not accept a free trade arrangement. These trade sectors are: (1) dairy products, (2) alcoholic beverages, (3) hosiery and knitted wear, (4) clothing and accessories and (5) printing and publishing. We have conducted another simulation on the INFORUM (called Simulation 3) under the assumption that Canada and the U.S.A. will agree to complete free trade in all commodity sectors except the foregoing five commodity groups. Since the exempted sectors have generally greater protection from import competition in both countries, their exclusions are expected to result in a smaller job loss. Simulation 3 indeed shows this result: the net employment loss amounts to 95000 jobs, as compared to 130,000 job loss under a complete free trade arrangement. Under the case of partial free trade, the net job loss for clothing and knitting mills is reduced to zero from 27000 jobs under complete free trade. Partial free trade also reduces the net employment loss for trade-wholesale and retail, and commercial services. For the trade sector, the job loss decreases from 11,000 jobs under complete free trade to 4,000 jobs under a partial free trade arrangement. Employment changes in other industrial sectors are not affected by partial free trade as envisaged in Simulation 3.

(10) The Institute for Research on Public Policy (IRPP) has developed some estimates of tariff-equivalents of non-tariff barriers such as quantitative restrictions, valuation systems and government procurement programmes. These estimates of tariff-equivalent NTE's are available by industry. After relating them to commodity groups, we have combined together the Post-Tokyo tariff rates and the tariff-equivalent NTE rates for both Canada and the USA. Now Simulation 4 on the INFORUM reduces the combined rates to zero and then investigates the effects of trade liberalization on trade flows, and real output and employment by industry. The combined effect of the complete

CHART 4



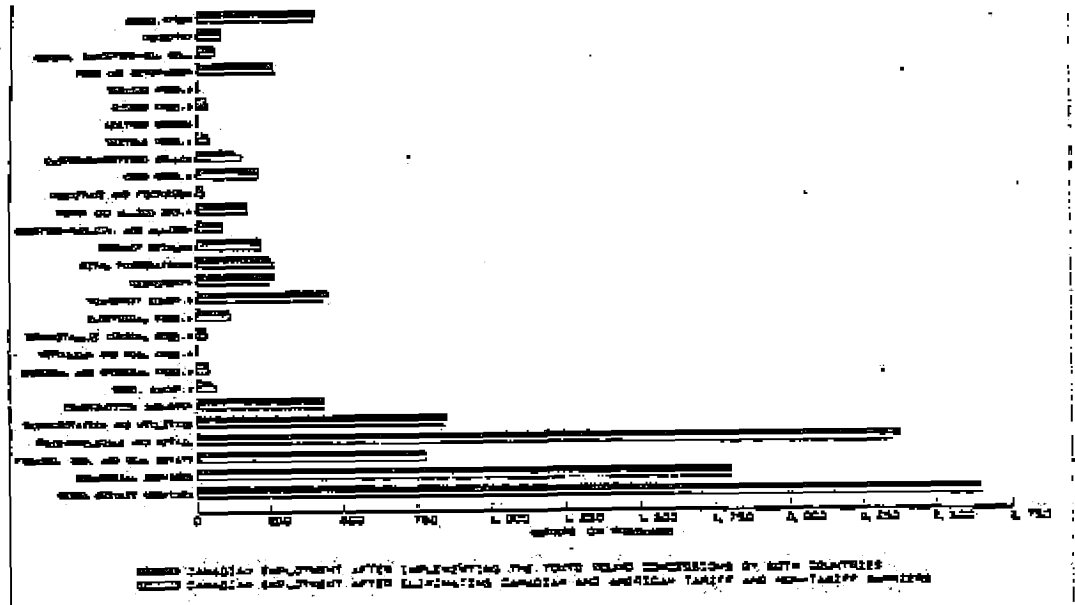
Source: Authors' calculations carried out on the University of Toronto-Canadian Council Model, University of Toronto, USA.

removal of the Post-Tokyo tariffs and tariff-equivalent NTBs amounts to a reduction of net employment loss from 130,000 jobs to 24,000 jobs (see Chart 4). The loss of 24,000 jobs is a small number compared to the employment effects of cyclical fluctuations or the normal employment turnover in the Canadian labour market.

(11) Among 28 industrial sectors analyzed in this report, the net employment is positive in 5 industrial sectors and negative in the remaining 23 sectors. This is apparent in Chart 5 where Canadian employment levels by industry after eliminating Canadian and American tariff and non-tariff barriers are compared to baseline estimates of employment levels obtained after implementing the Tokyo Round concessions by both countries. The effect of including non-tariff barriers in a free trade arrangement is generally favourable to employment in Canada: the removal of non-tariff barriers will either moderate the negative influences of tariff elimination on employment or turn the negative influences on employment into positive impacts. The latter effects are observed in such industrial sectors as transport equipment, transportation and utilities, and trade. The elimination of NTBs will reduce job losses in primary metals, metal fabricating, electrical products, finance and insurance, and other private services.

CHART 5

NET JOB CHANGES AFTER ELIMINATION OF CANADIAN
 AND AMERICAN TARIFF AND NON-TARIFF BARRIERS
 BY INDUSTRIAL SECTOR, CANADA, 1985
 (In thousands of workers)



* BELONGS TO THE MANUFACTURING SECTOR

SOURCE: SAATCHI - SIMULATIONS DERIVED OUT OF THE INFORUM INTERINDUSTRY MODEL, UNIVERSITY OF TORONTO, 1984

(12) We have, so far, conducted four experiments on the INFORUM under the assumption that there are no economies of scale and that the scope for improving productivity through enlarging markets in Canadian industries is limited. This assumption goes against the central argument that economists present in favour of complete free trade with the U.S.A. According to them, there is large potential in our industries for reaping benefits from scale economies through expanding markets in the U.S.A. A free trade arrangement with the U.S.A. will help realize these benefits. To investigate the validity of this argument, another experiment on the INFORUM (Simulation 5) is conducted, taking into account the influence of scale economies on our competitiveness and on Canadian domestic prices relative to competitors prices in the U.S.A. John Baldwin and Paul Gorecki have recently identified 16 manufacturing industries where significant scale economies do exist and have determined their degrees of returns to scale.* It is

* John Baldwin and Paul Gorecki, The Role of Scale in Canada/U.S. Productivity Differences in the Canadian Manufacturing Sector in the 1970s, study #10, Economic Council of Canada and economies exist are: Food and Beverages; Tobacco Products; Rubber and Plastic; Textile; Knitting Mills; Wood; Furniture and Fixtures; Paper and Allied; Printing and Publishing; Primary Metal; Metal Fabricating; Machinery; Transport Equipment; Electrical Products; Non-Metallic Mineral Products; and Chemical and Chemical Products.

assumed in Simulation 5 that the decline in Canadian domestic prices relative to competitors prices, for goods produced by industries with scale economies, is proportional to the degree of returns to scale. Except for this scale adjustment, Simulation 5 is similar to simulation 2 wherein complete free trade with the U.S.A. is assumed.

(13) The effect of the scale adjustment on Canadian exports to the U.S.A., output and employment is really large: the average net employment gain amounts to 171,000 jobs, as compared to the average net-loss of 131,000 jobs under a complete free trade arrangement with no economies of scale (see Chart 4). Table 2 displays industry-by-industry net employment effects derived from Simulation 5 with economies of scale. Among 28 industrial sectors considered here, net employment effects are positive in 19 sectors and are negative or zero in remaining 9 sectors. Large job gains are observed across many industries. In particular, job increases are substantial in trade (+147,000 jobs), machinery industries (+46,000), commercial services (+44,000), transport and utilities (+40,000), transport equipment (+36,000) and wood products (+36,000). Except for machinery industries, job changes were negative for these industries under a free trade arrangement without economies of scale (simulation 2). For those industries with negative net employment effects, the influence of economies of scale are minimal: their employment changes are almost similar to those without economies of scale. These industries include rubber products; leather products; textile products; clothing and knitting mills; furniture and fixtures; and chemical and chemical products.

TABLE 2: NET EMPLOYMENT EFFECTS OF
 A FREE TRADE ARRANGEMENT WITH THE U.S.A.,
 AFTER INCORPORATING THE INFLUENCES OF SCALE ECONOMIES,
 CANADA, 1995
 (THOUSANDS OF EMPLOYED WORKERS)

| Industrial Sector | Net Employment Changes with Economies of Scale | Net Employment Changes with- Out Economies of Scale |
|---|--|--|
| 1. Agricultural and Fishing | +5 | 0 |
| 2. Forestry | +11 | -1 |
| 3. Mining, quarrying and oil well | +1 | -1 |
| 4. Food and Beverages* | +4 | 0 |
| 5. Tobacco Products* | 0 | -1 |
| 6. Rubber products* | -4 | -6 |
| 7. Leather products* | -2 | -2 |
| 8. Textile products* | -6 | -7 |
| 9. Clothing & Knitting Mills* | -26 | -27 |
| 10. Wood Products* | +36 | -1 |
| 11. Furniture & Fixtures* | -2 | -3 |
| 12. Paper & Allied Industries | +4 | -2 |
| 13. Printing & Publishing & Allied | +2 | -2 |
| 14. Primary Metal* | +14 | -4 |
| 15. Metal Fabricating* | +4 | -15 |
| 16. Machinery Industries | +46 | +6 |
| 17. Transport Equipment* | +36 | -1 |
| 18. Electrical Products* | +8 | -3 |
| 19. Non-Metallic Mineral Products* | +3 | -2 |
| 20. Petroleum & Coal Product* | 0 | 0 |
| 21. Chemical & Chemical Products* | -1 | -3 |
| 22. Miscellaneous Manufacturing* | -18 | -17 |
| 23. Construction Industry | +8 | -4 |
| 24. Transport & Utilities | +40 | -3 |
| 25. Trade-Wholesale & Retail | +147 | -11 |
| 26. Finance & Insurance & Real Estate | -6 | -3 |
| 27. Commercial Services | +44 | -14 |
| 28. Other Private Services (elevators, tele-phones, broadcasting, universities, etc.) | +13 | +6 |

* Belongs to the Manufacturing Sector

Source: EA/CPE - Simulation carried out on the INFORUM MODEL
 - University of Maryland - U.S.A.

(14) The analysis of the INFORUM results point to two general conclusions:

- I. A free trade arrangement, requiring removal of tariff barriers by Canada and the U.S.A., will result in some short-term economic damage to the country or economic hardships to some people. Under this trading arrangement, Canada will lose about 212,000 jobs through rising imports from the U.S.A. and gain about 81,000 jobs through rising exports. Although the net job loss is around 131,000, the number of workers whose jobs will be affected, positively or negatively, by a new trading arrangement and who will undergo some work-related adjustments amounts to almost 300,000, which is around 2.5 % of our current total work force. New manpower or industrial adjustment programs would be necessary to buffer the impact of job changes in some industries or communities.

- II. There seems to be large potential, at least in our manufacturing sector, for reaping benefits from scale economies through expanding markets in the U.S.A. and, thus, for improving employment prospects in the country. However, these benefits will be realized over a longer period. Canadian industries will not benefit from scale economies if they lack market and managerial skills and distribution networks to extend markets in the U.S.A. Developing these skills and facilities will take some time.

DECLASSIFIED = DÉCLASSÉ
EXTERNAL AFFAIRS = ~~CONFIDENTIAL~~ AFFAIRES EXTERIEURES

COMPETITIVENESS ANALYSIS

COMPETITIVENESS

A fundamental factor determining the distribution of the gains from trade between countries entering into an arrangement is their relative competitiveness.

Competitiveness is a multi-dimensional concept. Three "tiers" of competitiveness are identifiable:

- (1) the monetary and fiscal framework of the government;
- (2) the industrial structure;
- (3) industries within the structure

The monetary and fiscal framework of the government includes exchange rate, interest rates, levels and structures of taxation, and public spending (for example on human and physical infrastructure, including transportation, communications, health, education, R & D and mobility adjustment/facilitation).

The competitiveness of the industrial structure includes the range of factors determining whether the structure of production can evolve with changes in the structure of demand internationally. Since the structure of demand is heavily influenced by technological change, having a competitive industrial structure requires appropriate policies, institutions and performances regarding technological development and adaptation.

The competitiveness of industries within any particular structure mainly concerns comparative costs, quality and service between firms offering substitutable items.

For analytical convenience, these three tiers are described individually, but they are clearly inter-related. In the broadest sense, relative to a foreign competitor a domestic firm or industry may not be cost or quality competitive if it is either the cause or the victim of institutional and technological constraints to structural competitiveness, while the latter is also influenced by how the monetary and fiscal environment influences innovation, investment and ease of adaptation.

To satisfactorily address the question of Canada's competitiveness relative to the USA would require a comprehensive analysis of the relationship between these three tiers and their subsumed factors, as well as an inter-country comparison of the prevalent packages of factors and how they may change given specific trade liberalization undertakings.

Time and resources have not permitted a comprehensive competitiveness analysis including all three tiers. At this time, no external studies are available to us providing a comparative analysis of how Canadian and American monetary and fiscal policies may affect their bi-lateral competitiveness.

Regarding structural competitiveness: the recent study by Joseph d'Cruz and James Fleck (Canada Can Compete),

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IRPP 1985) provides very useful insights, though the data is to 1981. The particular strength of the IRPP study lies in its quantification of trends, using two indicators:

- (1) Export Revealed Comparative Advantage (ERCA) and
- (2) Relative Market Share (RMS)

According to the study, "ERCA is an indicator of the comparative position of an industry within a country". It is the country's share of world exports of a given industry, relative to the country's share of world exports of all industries. The measure is applied to 71 industrial sectors between 1961 and 1981, showing how the economy is adjusting to changes in the international competitive environment. The study's most important findings for Canada are:

- the overall pattern of change of comparative advantage of industries in Canada shows little strategic improvement;
- heavy reliance on slow growth industries is a principal weakness of the manufacturing sector of the Canadian economy; industries are competing poorly in world markets that are declining in real terms;
- Canada's performance in key growth industries was mediocre at best in the Capital Intensive Sector.

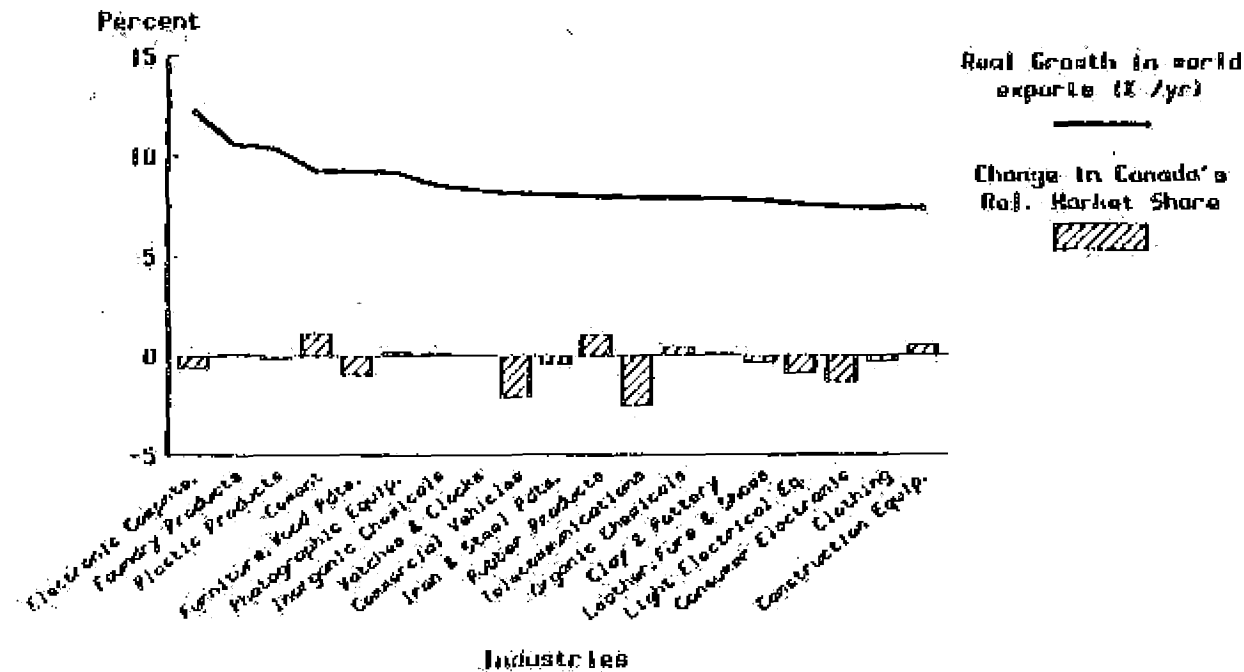
RMS is the country's share of world trade for an industry relative to the combined share of the three largest other exporting countries for that industry. It is used as a measure of the relative ability of the country's industry to compete with like industries in the three (other) major exporting countries. The study's main findings are:

- in industries with high real growth rates, some unfavourable trends appeared in Canada's market share;
- Canada experienced substantial share losses in industries with medium growth rates;
- Canada has also lost market share in industries with low growth rates;
- Canada's market share deteriorated in most low and high technology industries, but improved in some medium technology industries.

Canada's share of U.S. imports is also examined in the IRPP study. The performance between 1967 and 1981 was generally unimpressive. Most industries either just maintained or lost market share in the USA; cement, plastic products, printed matter and rubber products registered gains, few of them very large.

The following charts, extracted from the IRFP study, provide graphic overview and sectoral identification of some major conclusions about the structural competitiveness of the Canadian economy.

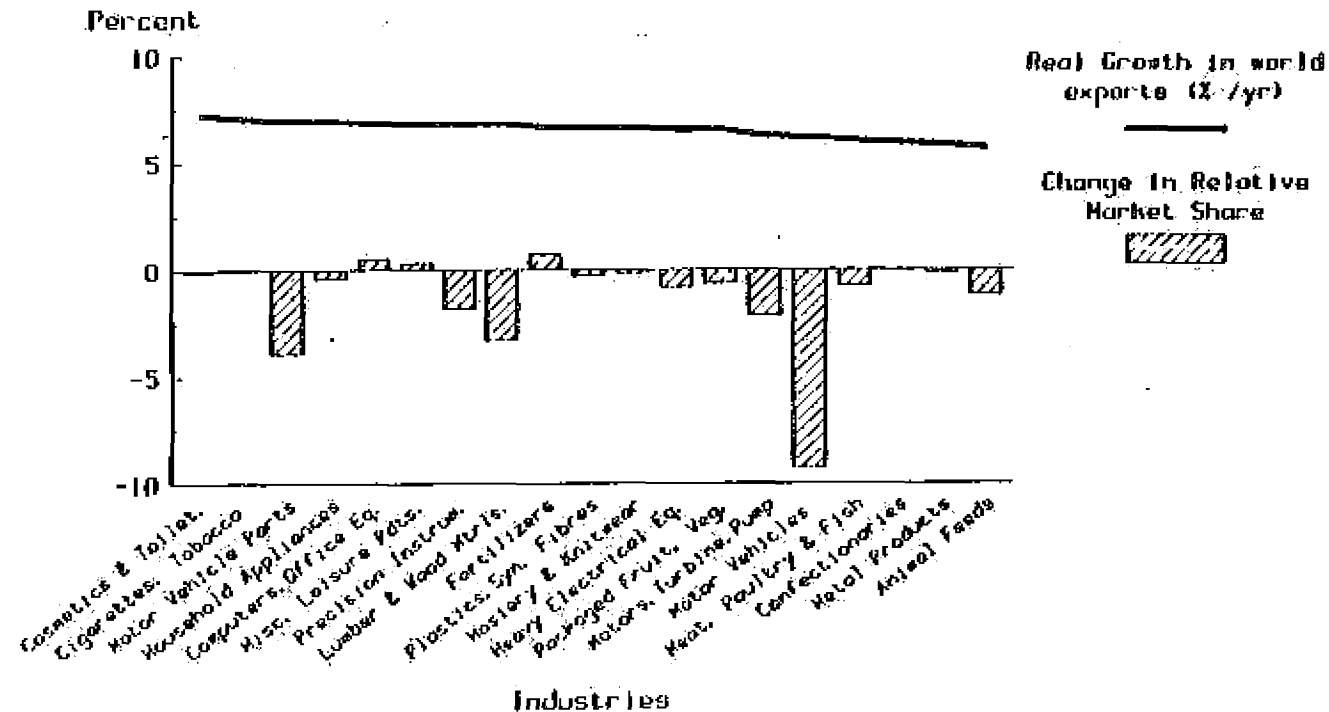
In industries with high real growth rates, some unfavourable trends appeared in Canada's market share.



Industry Sectors ranked by real growth in world exports. Change in Relative Market Share shows 1976-81 less 1971-76

Canada
1976-81 vs. 1971-76

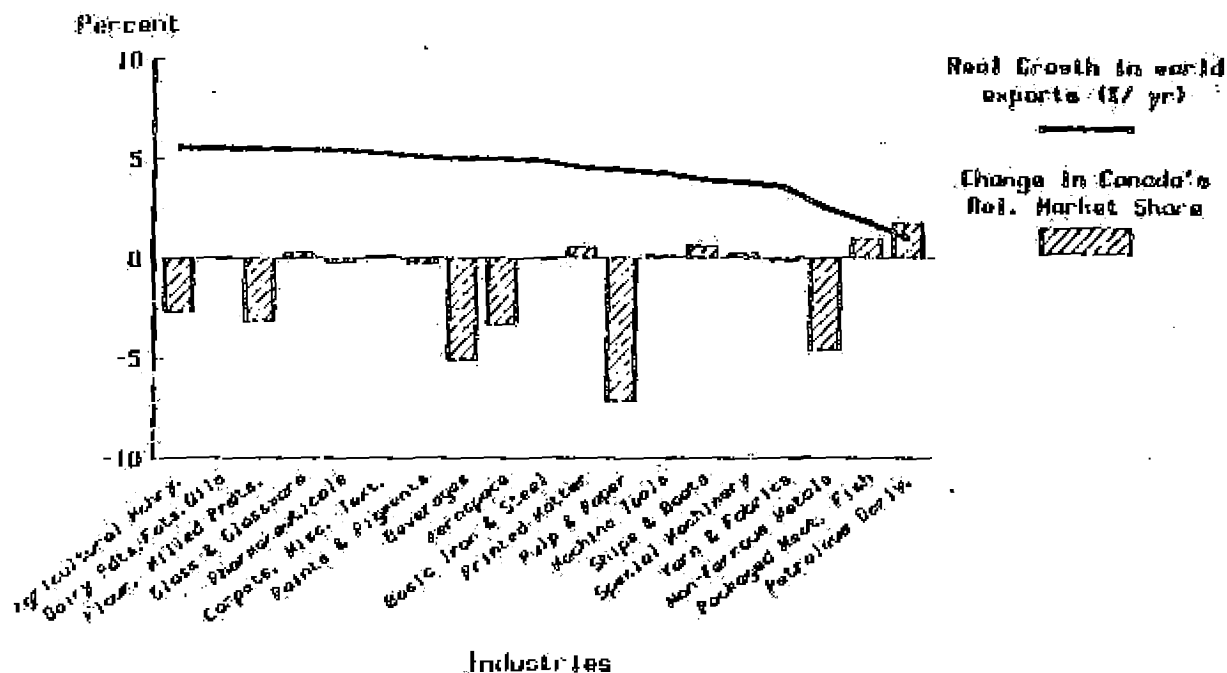
*Canada experienced substantial share losses
in industries with medium growth rates*



Industry Sectors ranked by real growth in world exports. Change in Canada's Relative Market Share shows 1976-81 less 1971-76

Canada
1976-81 vs. 1971-76

Canada has also lost share in industries with low growth rates



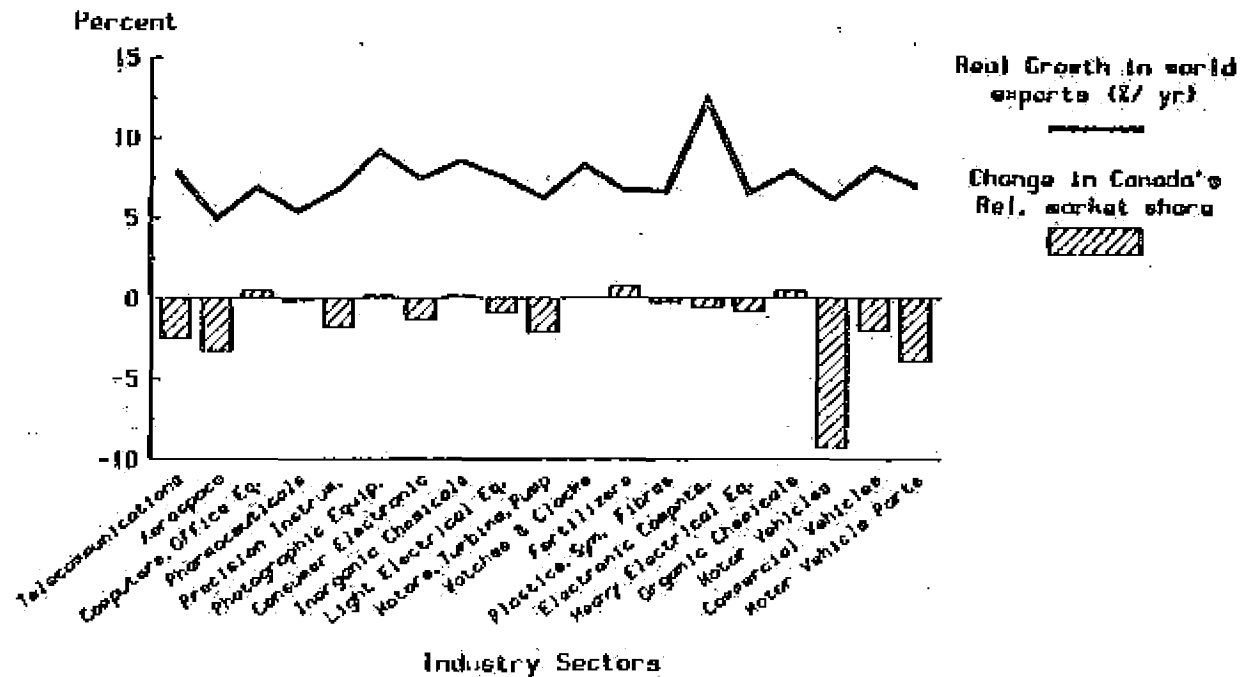
Industry Sectors ranked by real growth in world exports. Change in Relative Market Share shows 1929-01 base 1967-69

Canada
1967 - 1991

20

5.10

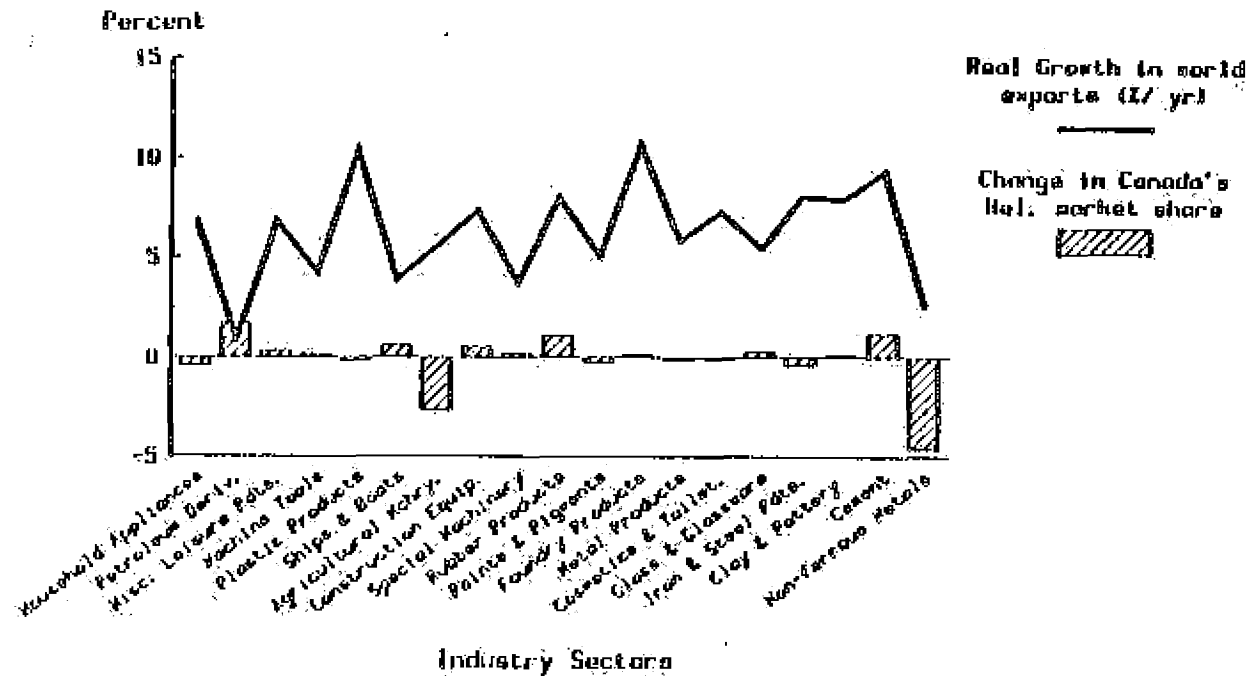
*Canada's market share deteriorated
in most high technology industries*



Industry Sectors ranked by technological intensity. Change in market share shows 1976-01 loss 1971-76

Canada
1976-01 vs. 1971-76

In some medium technology industries, Canada improved its share of world markets

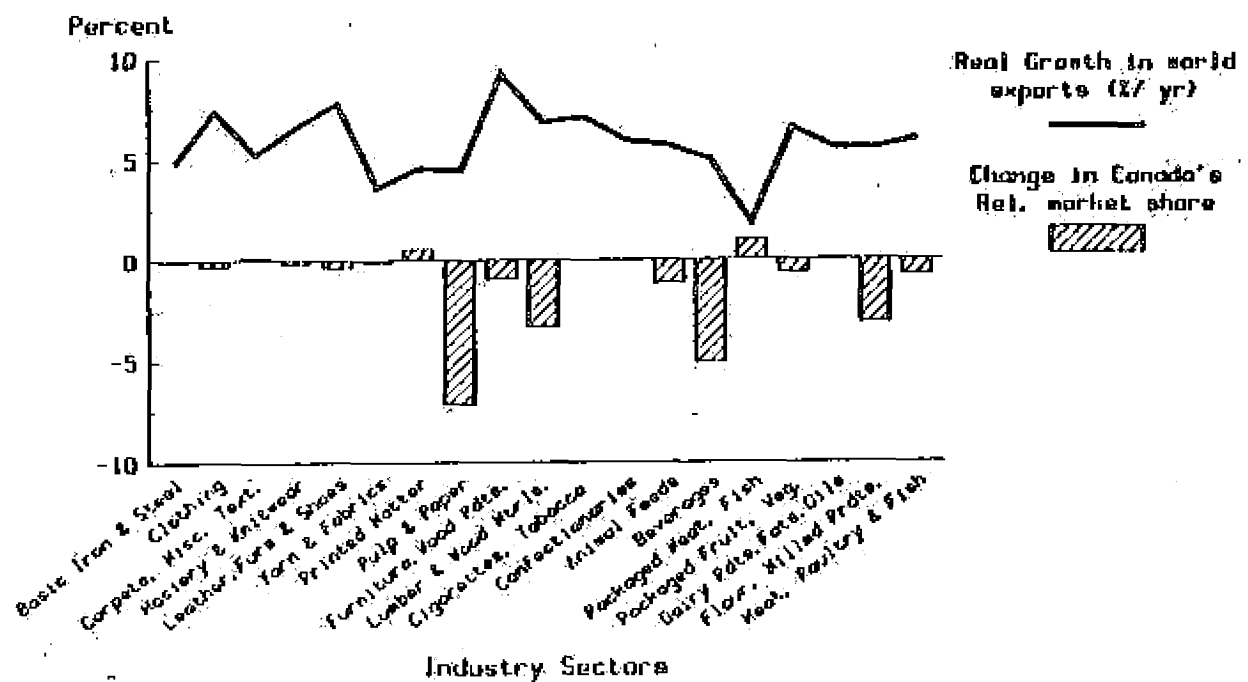


Industry Sectors ranked by technological intensity. Change in market share shows 1976-81 less 1971-78

Canada
1976-81 vs. 1971-78

5.12

Substantial declines in market share were experienced in almost all low technology industries



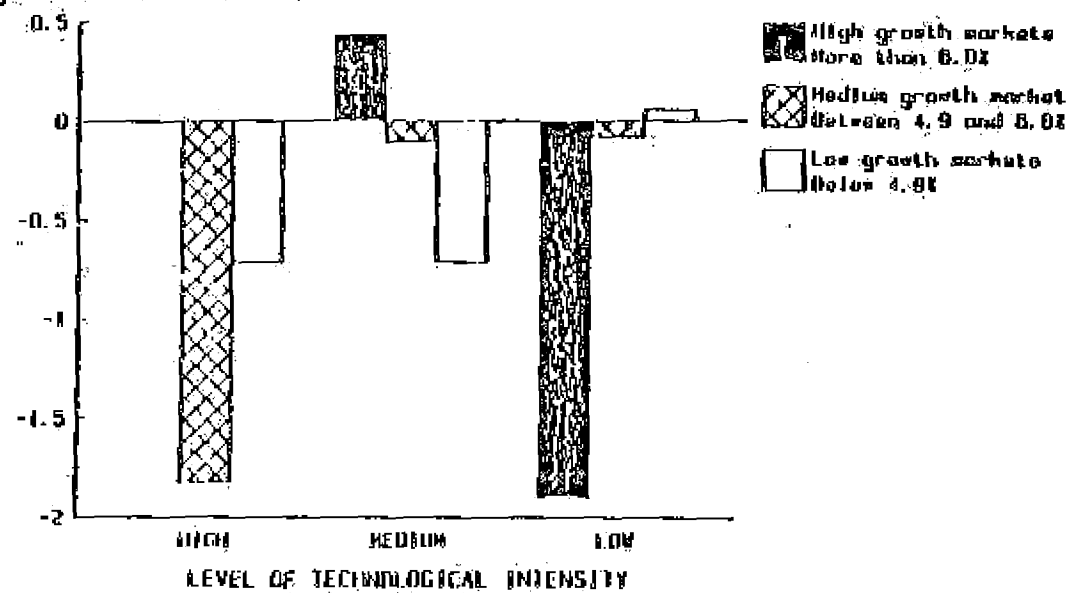
Industry Sectors ranked by technological intensity. Change in market share shows 1976-81 less 1971-76

Canada
1976-81 vs. 1971-76

5.13

Canada has lost market share in every industry group except the medium technology/high growth and the low technology/low growth groups

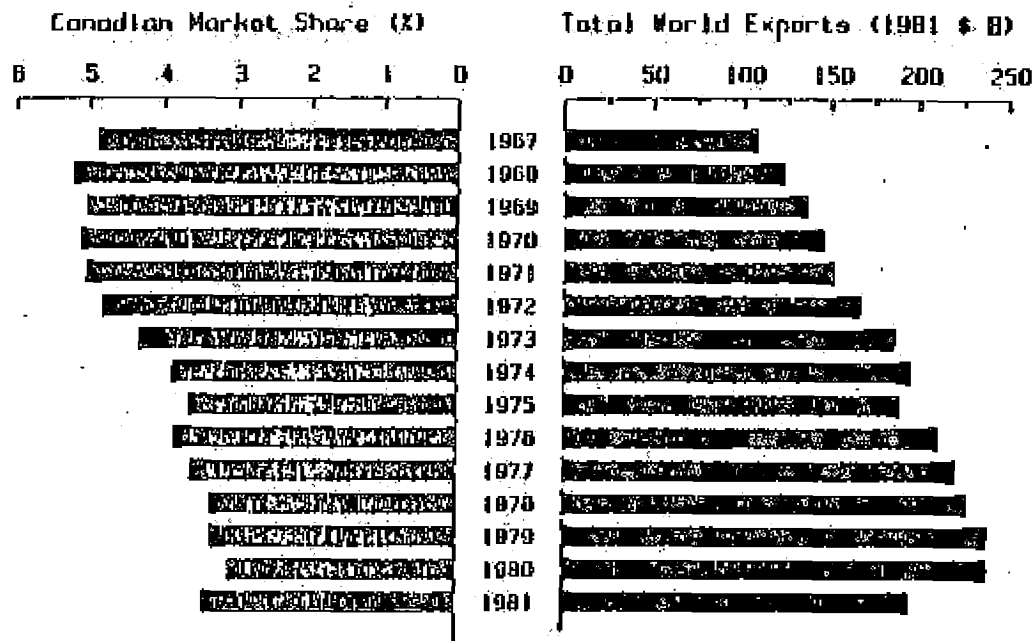
Change in Relative Market Share (%)



Bars show average change in relative market share from 1971-76 to 1976-81 for all industries in the category

Canada
1971-1981

While world exports grew in real terms between 1967 and 1980, Canada lost market share

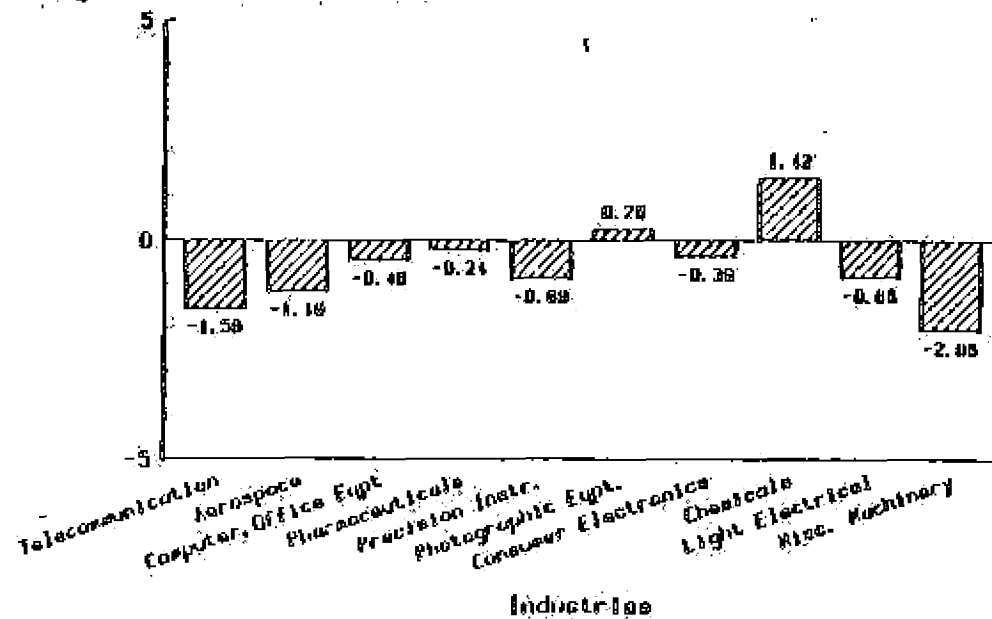


Total World Exports figures are real 1981 U.S. \$ Billion

Canada and World
1967 - 1981

*The competitive position of most
high technology industries deteriorated
during 1976 - 1981*

Change in Relative Market Share



1. Industries ranked by technological intensity
2. Change in Relative Market Share shows 1976-81 average less 1971-76 average.

Canada
1976 - 1981

The evidence from the IRPP study indicates rather serious problems of structural competitiveness. The causes deserve detailed analytical attention, to determine what causal factors in the 1967-1981 period would be operative in the future, perhaps affecting the structural adjustments necessary for Canada to achieve the potential economic benefits of a more competitive North American market.

The sectoral competitiveness analyses undertaken within available time and resources throw some light on factors affecting structural change, and they assess the evolution of relative costs between Canada and the U.S.A.

Two approaches are employed:

- (1) surveys of field knowledge and opinion, and
- (2) statistical analyses of comparative costs.

The surveys of field knowledge include a standard questionnaire addressed to the staff of federal government departments most familiar with the sectors analyzed (list and questionnaire attached), and the reports of the Department's consultations held with industry between June and September 1985. The questionnaire was also distributed to provincial trade officials for information, with a verbal invitation for input of provincial expertise on sectors of particular concern to themselves. There was no feedback.

The questionnaire asked for each sector:

- 1973-1984 output, employment, imports and exports: (some departments used 1980 as the starting year);
- structural characteristics (concentration, location, ownership, sourcing and marketing constraints within a TNE context, R&D effort, technological development, major strengths and weaknesses);
- market access impediments and vulnerabilities: (tariffs, NTBs, regulatory measures, potential protectionist threat);
- potential impact of trade liberalization, assuming tariffs removed over five years from 1987-1992, or another explicit transition period (effect of tariff removal on imports, exports, employment, on domestic or other foreign producers, on investment by TNE's);
- major negotiating and policy issues: (irritants, special adjustment considerations, contingency protection issues, change of existing special arrangements, susceptibility to domestic policy change, non-federal responsibility, need for special undertakings from key transnationals, regulatory matters).

The statistical analysis of comparative costs was contracted with DRI Inc. to extend and deepen the kind of

Canada-USA unit cost comparisons which the firm provides in its quarterly publication: "The Manufacturer's Analyst." The publication breaks total manufacturing into 15 sectors, and produces estimates of comparative unit labour costs. We wished to have a comparative cost analysis which is both more disaggregated and more comprehensive. Available time and resources permitted a 30 industry sector breakdown, and for each sector comparative Canada-U.S. cost analysis for labour, capital consumption, interest, indirect taxes and the sum of material input costs from other sectors. Return to equity is a residual, being the measure of profitability, and therefore not included as a cost, though clearly there is for each industry some rate of return below which resources would eventually shift into other activities.

Due to practical considerations and statistical limitations, some level of aggregation of items into industry groups is unavoidable. Inter-country comparisons are more precise and more meaningful the more disaggregated they are; however, the greater the disaggregation, the greater the difficulty of drawing general conclusions and the more serious the data constraints. At the aggregation level now feasible, the item composition within each sector would not necessarily be the same between the two countries, nor would all items necessarily be traded significantly with or without freer trade, and they could be complementary or competitive goods. The analysis done here implicitly assumes that with trade liberalization all items could be competing with rather than complementary to each other within corresponding sectors, and that the sectors are comparable enough for inter-country comparison to be meaningful.

The DRI approach for each sector is as follows. The goods producing part of the economy is disaggregated into 25 sectors, largely corresponding with the medium input-output aggregation by industry for Canada. In addition, 5 sub-sectors are also analyzed. DRI conformed the product composition of each sector for both countries using its input-output data base for the two countries. The base year is 1971, at which time the Canada and USA dollars traded at parity. DRI assumes that purchasing power parity also existed, (i.e. that in 1971 one Canadian dollar would buy the same amount of real product in Canada as one USA dollar would buy in the USA). This may not be true, raising a systematic comparability issue which cannot be satisfactorily resolved in the near future. The real output series is developed for each sector through to 1984. The sources of real output data are the large version input-output table for Canada and the data base of the Bureau of Economic Advisors (Department of Commerce) for the USA. As the Canadian I/O table is published only to 1980, and the BEA data to 1982, it was necessary to extend the data to 1984 by other means. For Canadian output, CANSIM real domestic product by SIC number growth rates were used to extend the 1980 data to 1984 by sector, and for the USA, BEA preliminary data for 1983 and 1984 is being used. The DRI Report will explain the data series extension methodology in detail.

The current dollar cost of material inputs (i.e. materials purchases from other sectors), labour, indirect taxes, interest and depreciation was developed and

PLANT AND EQUIPMENT INVESTMENT IN CAPITAL, U.S.A.
 In Thousands

| | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 |
|------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Engineering 111 | 0 | 20 | 11 | 21 | 25 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Printing 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Fishing, Hunting, Trapping 111 | 0 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Metal Works 111 | 0 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Metal Works 112 | 0 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Non-Ferrous Metal Products 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Food and Beverage 111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Textile Products 111 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Textile Products 112 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Leather Products 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Leather Products 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Textile Industry 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Textile Industry 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Printing Industry 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Printing Industry 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Clothing Industry 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Clothing Industry 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Wood Products 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Wood Products 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Furniture and Closets 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Furniture and Closets 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Paper and Allied Products 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Paper and Allied Products 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Printing and Publishing 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Printing and Publishing 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Energy (Fuel) Industry 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Energy (Fuel) Industry 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Metal Fabricating 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Metal Fabricating 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Machinery 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Machinery 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Transportation Equipment 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Transportation Equipment 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Electrical Products 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Electrical Products 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Non-Ferrous Metal Products 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Non-Ferrous Metal Products 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Plastics and Coal Products 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Plastics and Coal Products 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Chemical and Chemical Products 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Chemical and Chemical Products 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Synthetic Textiles 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Synthetic Textiles 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Metal Fabricating 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Metal Fabricating 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Paper and Paper 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Paper and Paper 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Chemical Products 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Chemical Products 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Food and Beverage 111 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Food and Beverage 112 | 0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |

111 - Shows the change from the previous period.
 112 - Shows the change from the previous period and the change from the previous period.

aggregated for each sector. The source data for labour costs, materials and indirect taxes are the Canadian input output tables to 1980 for Canada and BEA for the USA. Techniques for estimating 1980 to 1984 (Canada) and 1982 to 1984 (USA) will be described in DRI's Report. The Canadian data for interest and depreciation comes from Canadian corporate financial statistics, and is used in those sectors (most of them) for which DRI determined there was sufficient sectoral concordance between the establishment-based data (used for all non-financial data) and the corporation based data, used for interest and depreciation). In petroleum/coal products, mineral fuels, transportation equipment and motor vehicle parts there is inadequate concordance because the corporate basis contains an aggregate product mix which differs significantly from the establishment output mix contained in those sectors.

When each country's real output per sector per year is divided into its corresponding nominal cost series, the result is the nominal cost (in national dollars for each country) per dollar of that country's real output. The USA unit cost data is then converted into Canadian dollars at the average annual exchange rate to yield a series of "exchange rate adjusted" unit output costs. Thus two series of unit costs are available: one in national currencies before exchange rate conversion, and the other in Canadian dollars after conversion.

DRI then calculated a comparative measure, being the percentage by which Canadian and American unit costs diverged. It is:

$$\frac{\text{Canadian minus American Unit Cost}}{\text{Canadian Unit Cost}} \times 100$$

This is done for unit costs before and after exchange rate adjustment. The purpose of making this distinction is to gain some insight into the role of currency adjustment on the evolution of comparative costs. By comparing unit costs at a parity rate with those at actual rates of exchange between the two dollars, this percentage unit cost divergence is the end result of the exercise.

Intermediate results per sector also available from the DRI data are:

- (1) relative unit costs for each component (material inputs, labour, indirect taxes, interest and depreciation);
- (2) productivity per unit of labour (real output per employee year), and;
- (3) the base data per sector underlying the unit cost and productivity calculations.

A note on exchange rate adjustment and its effect on cost comparisons is in order. The material cost data is recorded in national currency units, and would reflect the effects of currency adjustment on the recorded cost (in local currency) of imported and domestic materials.

Thus, in the event of a devaluation, depending upon the import content share of total materials in the sector and rate of devaluation-induced cost pass-through, some portion of observed cost escalation in the "pre-exchange rate adjusted" unit cost series could be due to devaluation; therefore the series does not reflect purely Canadian-originating cost differences as if devaluation never happened. This effect cannot be easily or quickly isolated. It may be particularly significant for sectors such as transport equipment and mineral fuels, where the import content or the foreign currency valuation basis of material inputs may be relatively pronounced. The Appendix develops this question, and other technicalities of the pre and post exchange rate adjusted data in more detail.

Results of Analysis:

At this writing, we simply describe what the relative unit cost data shows, without showing how the underlying factors contribute to the results. These observations will become readily apparent with the delivery of DRI's Report, containing time series graphs for all relevant variables. (The DRI report will not provide analyses of why the underlying variables behaved the way they did in each country. It is an exercise illustrating what happened, not undertaking the much more complex analytical task of testing hypotheses as to why.)

This report of results should be read with Table 1, which shows for each sector the evolution of percentage difference between Canadian and American unit costs between 1972 and 1981. (It will be completed to 1984 once the USA data becomes available early next week for 1983 and 1984). Bracketed data means that Canada is more expensive than the USA. For each sector, the "N" row is based on national currency units before exchange rate adjustment, and the "C" row is based on Canadian dollars after exchange rate adjustment. The notation "==" means that unit costs were about identical.

The industries portrayed in Table 1 can be aggregated into five distinct categories according to performance history, pre exchange rate adjustment:

- (1) historically uncompetitive industries;
- (2) historically competitive industries;
- (3) increasingly less competitive industries;
- (4) increasingly competitive industries, and
- (5) remaining industries.

Historically Uncompetitive Industries

Before exchange rate adjustment, Canada was generally and significantly not cost-competitive over most or all of the comparison period with respect to:

- . leather industries,
- . clothing manufacture
- . wood industries
- . furniture and fixtures (1974 onward)
- . paper and allied industries (including pulp)

- primary metal industries (including metal stamping)
- chemical products (except 1974-1976)

After exchange rate adjustment, for the above listed industries the following held:

competitive from 1977/78 to 1982: leather, wood, primary metal industries and chemical products;

still uncompetitive, but less so: clothing, furniture and fixtures, paper and allied industries.

Historically Competitive Industries

Before exchange rate adjustment, Canada was significantly competitive through all or most of the analysis period with respect to:

- fishing, hunting and trapping
- metal mines (except 1982)
- tobacco products
- rubber and plastic products (except 1981 and 1982)
- synthetic textiles (except 1982)
- motor vehicle parts and accessories (to be reviewed)

After exchange rate adjustment all of the above were significantly more competitive in all years. The data on motor vehicle parts and accessories shows unbelievably lower unit costs in Canada from 1974 onward, and is being reviewed by the consultants.

Increasingly Less Competitive Industries

Before exchange rate adjustment, the following industries were, on the whole, cost-competitive in the early part of the study period but became increasingly less competitive, or uncompetitive over time:

- agriculture
- forestry
- non-metallic mines and quarries
- food and beverages
- textile industries
- knitting industries
- printing and publishing
- metal fabricating
- electrical products
- non-metallic mineral products
- iron and steel

After exchange rate adjustment they became competitive except for forestry and textiles in 1982. For a number of sectors, the margin of cost advantage was rather slim, especially in the early 1980s.

Increasingly Competitive Industries

- transport equipment.

Before exchange rate adjustment it was not competitive till 1979, then became competitive for 1979. Its margin of competitiveness was insignificant in 1977, 1978, 1979 and 1981. After exchange rate adjustment it was significantly competitive from 1977 onward.

Remaining Industries

- . machinery
- . petroleum and coal products

Machinery:

Before exchange rate adjustment its competitiveness fluctuated within a narrow margin till 1982 when it became significantly uncompetitive. After exchange rate adjustment, it was competitive in 1982 as well.

Petroleum and Coal Products:

These industries were uncompetitive before and after exchange rate adjustment from 1974 to 1978 inclusive, and before exchange rate adjustment in 1981 and 1982. After exchange rate adjustment they were competitive from 1979.

Summary Observations:

Of the thirty sector and subsector groups tabulated, six were historically competitive before exchange rate adjustment, and one other became increasingly competitive over time. The remaining twenty-three sectors were either uncompetitive or increasingly uncompetitive over time before exchange rate adjustment, relying heavily on the exchange rate adjustment to be competitive. Notwithstanding the qualified nature of the pre and post exchange comparison, (having to do with some devaluation-induced imported input cost distortion in the "pre exchange rate adjustment series"), it appears that the exchange rate has played an important role in adjusting the competitiveness of Canadian versus American products, especially since the later 1970s.

Whether the exchange rate would continue to play this role in the future is an issue which requires much analysis of what determines exchange rate movements in the longer term between the Canadian and USA dollars.

With regard to employment, the following is a tabulation of 1984 employment for each of the five industrial performance categories discussed above:

| <u>Industrial Category Before Exchange Rate Adjustment:</u> | <u>1984 Employment persons</u> | <u>Employment Growth 1971-1984</u> |
|---|------------------------------------|--|
| Historically Uncompetitive Industries: | 557,000 | negative in 5 of 7 sectors |
| Historically Competitive Industries (1) | 193,000 | negative in 3 of 5 sectors |
| Increasingly Less Competitive | 1,348,000 | negative in 9 of 11 sectors |
| Increasingly Competitive | 171,000 | negative |
| Remaining Industries: | 99,000 | negative in 1 of 3 sectors |

(1) Employment data for fishing, hunting, trapping not available.

The sum of employment listed above is 2,368,000. This double counts sub-sector with sector performance. Without double-counting, the employment total is 2,247,000.

It appears from the above tabulation that most employment in the Canadian goods-producing sectors is in industries which are exchange rate sensitive in terms of maintaining their competitiveness; also, the employment trend has been negative in most sectors even with devaluation.

APPENDIX

I. The Relationship Between the Exchange Rate and Pre Versus Post Exchange Rate Adjusted Percent Unit Cost Differences

DRI Inc. chose the Canadian dollar as the common currency and exchange rate adjusted the USA values to the Canadian value at the annual average exchange rate. (They could have done the reverse without affecting the relationship.)

Where:

- c= Canadian unit costs in Canadian \$
- a= American unit costs in USA \$ (before any exchange rate conversion to Canadian dollars)
- b= the exchange rate (\$CDN per \$US)
- ac= percent of cost difference: Canada minus USA relative to Canadian costs in national currencies at par
- a* = percent of cost difference: Canadian minus USA relative to Canadian costs in Canadian dollars after exchange rate adjustments

The systematic relationship between the exchange rate and the difference in percent unit cost advantage between pre and adjusted currency values is as follows:

$$n = (c - a) / c \quad (1)$$

$$e = (c - ba) / c \quad (2)$$

$$\{(c - a) / c\} - \{(c - ba) / c\} = n - e \quad (3)$$

which reduces to:

$$b - 1 = c/a (n - e) \quad \text{or,} \quad (4)$$

$$b = 1 + (c/a)(n - e) \quad (5)$$

for example, assume: $c=2$, $a=1.6$, $b=1.2$, then $n=.2$ and $e=.04$

by identity (4): $1.2 - 1 = 2/1.6 (.2 - .04)$, or $.2 = .2$

Verbally, the percent difference in the exchange rate is equal to: pre minus post exchange-adjusted percent unit cost difference times the ratio of Canadian to American unit cost levels in pre-adjusted local currency.

II. Elaboration of the Pre and Post Exchange Rate Adjustment Comparison

By fixing the currencies at parity over time when the source cost data already incorporates the inflationary effect on imported inputs of relative devaluation, the time series of relative unit cost evolution at parity values is not a clean comparison of relative cost change in domestic values as if devaluation had not occurred. Rather, part of the cost difference may be due to the devaluation itself.

For example, let us assume that the only import content (MI) of a sector comes from the USA, it is 20% of that sector's total material input costs (C) (say \$4), material inputs for that sector cost the same in both countries in national currencies before any adjustments; there is full pass through of devaluation in material costs, the exchange rate (B) moves from parity to 1.2 between time "t" and "t-1", there are no indirect or induced impacts of devaluation on other costs, and no other cost inflation of purely domestic factors would have occurred between "t" and "t-1".

With these simplifying assumptions, in year "t" the Canadian material cost per unit of output is \$4. In year "t-1" it changes by virtue of devaluation according to formula (6):

$$c + mc(b - 1) = \$4.16$$

in the Canadian dollar data. Thus if we assume that "a \$ is a \$", as the parity or pre exchange-adjusted series does, the Canadian data will show a cost disadvantage relative to the USA of 16 cents. This is purely due to devaluation, and not to inflation of local costs. However, when Canada competes with the USA in these goods, because a devaluation has occurred, the equivalent American cost in exchange rate adjusted Canadian dollars is $(a)(b) = (4)(1.2) = \$4.80$.

Replacing these values in formulae (1) and (2) to derive percent differences of competitiveness pre and post exchange rate adjustment:

In the parity series, by formulae (1) and (6) for Canada:

$$n = (4.16 - 4) / 4.16 = 3.85\% \text{ uncompetitive.}$$

In the exchange rate adjusted series, by formulae (2) and (6) for Canada:

$$e = (4.16 - 1.2(4)) / 4.16 = 15.4\% \text{ more competitive.}$$

The above looks at competitiveness from the perspective of what happens in the Canadian market in Canadian dollars. Exactly the same relative result is achieved by looking at what happens to competitiveness with devaluation from the perspective of the American market, with the basis of common currency valuation in USA dollars.

With devaluation, the cost in the US market becomes:

$$(c - mc(b-1)) / b = \$3.466 \quad (\text{formula 7}),$$

reflecting the discount of the Canadian portion of materials in US dollars after the devaluation plus the US dollar value of the US input, also calculated by:

$$c(1-m) / b + m = \$3.466 \quad (7A)$$

The exchange rate adjusted data would correctly portray Canada's cost in the USA market as if formulae (7) or (7A) held, while the parity (pre-adjusted) data would show Canadian costs as if formula (6) held. Converting these values into the percentage difference formulae (1) and (2).

In the parity series, as above, $n = 3.85\%$.

In the exchange rate adjusted series, using formula (2)

$$e = (3.455 - 4) / 3.466 = 13.4\%$$

identical with the previous exchange rate adjusted results (Canadian market perspective).

TO: File
FROM: CPE/R. Spence

REFERENCE: REFERENCE

SUBJECT: SUBJECT

Preliminary Canada and U.S. Non-Tariff Barrier Estimates

DECLASSIFIED
EXTERNAL AFFAIRS Canada / Affaires extérieures Canada
CONFIDENTIAL
AFFAIRES EXTÉRIEURES
Date: July 25, 1985
Reference Number: CPE-0194

ENCLOSURES: ATTACHES:

DISTRIBUTION

DCBA
EPC/CANADA

Attached is a first rough cut at quantitative Canada and U.S. NTB estimates.

2. The purpose of quantifying NTBs is not to attempt an accurate portrayal of problems facing Canadian or U.S. exporters. Rather, it is to provide an approximate statistical estimate, at a fairly aggregated industry level, of the level of protection afforded by NTBs; these estimates are in, turn, for use in macro-economic assessment of impacts of NTB liberalization.

3. The selection of NTBs is a function of both the importance of barriers and the availability of quantitative estimates.

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missing are elements of the Autopact (safeguards) which may act as barriers, and auto VEAs (Canada) which apply only indirectly to Canada-U.S. trade. The effect of regulations is also frequently not captured, or not captured fully, in the estimates. For example, the regulatory regime for Canadian breweries is underestimated.

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4. The sources are mainly Peter Horici's book for the National Planning Association (U.S.). These sources give estimates for the immediate pre-Tkvo-Round period. They have been updated where possible and where most important - notably with respect to Q.R.s and some obvious subsidy changes (energy for Canada). There are also some remaining gaps; notably for U.S. primary industries, except agriculture, and for all of the service sectors, whose even the nature of NTBs (except subsidies) is not well documented.

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5. Given the limitations, these estimates should be seen as very tentative and approximate NTB profiles for Canada and the U.S.

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In addition, this process will also use the knowledge of sectoral experts from the three departments, plus others involved in 'sector profiles', and insights gained from industry consultations.

6. The issues in quantifying NTBs can not be that of high precision; essential problems are too great. Procurement practices, for example, are quantified under the assumption that Government's average import propensity would be equal to that of the private sector, by industry, without discriminatory practices. Similarly, quantification of Q.R.s requires assumptions, based on historical numbers, about the growth of market share of imports in the absence of the Q.R. A brief summary of estimation methods, and problems/issues is attached.

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These methods inevitably involve judgements and significant margins of error. They may, however, provide reasonable approximations of barriers whose role has been predominant, relative to tariffs, in the past 10-20 years. They thus provide an important, though rough, input into the assessment of impacts of trade liberalization; even if they are too imprecise and, perhaps more importantly, too aggregated, to be of use to negotiators.

7. One or two characteristics emerge from a comparison of Canadian and U.S. NTB estimates which, arguably, hold some water even if the estimates are very approximate.

8. For both countries, total NTB protection is concentrated in a few sectors.

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Nevertheless, the overall picture is one of concentrated and otherwise relatively small NTB protection at the high level of aggregation available at present.

9. Put another way, while presently estimated NTBs are extremely important to many specific industries, their overall importance to trade flows is quite concentrated in a few sectors.

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10.

11. Given the problems inherent in the attached estimates - notably gaps in coverage, outdated nature of many estimates, tentative nature of some estimates (Q.R.S.), high level of aggregation and methodological issues, I would suggest that they be used for quantitative assessment of trade liberalization, if at all, only with great care and appropriate qualification at this stage - particularly in the case of U.S. estimates.

Randy Spence

**SOME OBSERVATIONS ON NON-TARIFF BARRIERS AND
THEIR USE IN CANADA**

Andrew R. Moroz
International Economics Program

TABLE A.1

Classification of Government Practices Cited as Non-tariff Barriers¹

| Major Groupings | Type by Function | Type by Intent ² |
|---|---|-----------------------------|
| 1. Government Participation in Trade | a) Production Subsidies | I |
| | b) Capital Subsidies | II |
| | c) Export Subsidies including Subsidized Export Financing | I |
| | d) Discriminatory Government Procurement Practices | I |
| | e) State Trading | I |
| | f) Tied Aid | I |
| | g) Exchange Rate Restrictions | II |
| | h) Government Entrepreneurship | III |
| | i) Government Financing | III |
| | j) Government Sponsored Subsidized R&D | II |
| | k) Government Defence Programs | III |
| 2. Standards | a) Variation in Health Standards and Requirements on Products | II |
| | b) Variation in Health Standards and Requirements Governing Production of Goods | II |
| | c) Variation in Packaging and Labelling Standards | II |
| | d) Marketing Regulations | II |
| | e) Variation in Weights and Measures | II |
| 3. Specific Limitations Primarily Affecting Quantities | a) Quotas and Other Quantitative Restraints | I |
| | b) Bilateral Agreements | III |
| | c) Performance requirements for Domestic Sourcing or Exporting | I |
| | d) Buy-Domestic Campaigns | I |
| 4. Specific Limitations Operating Through Price Mechanism | a) Variable Levies | I |
| | b) Minimum Import Prices | I |
| | c) Duty Remission Programs | I |
| | d) Supplementary Import Charges | I |
| | e) Anti-dumping and Countervail Duties | I |
| 5. Taxation System | a) Non-Neutral Border Tax Adjustments | I |
| | b) Variation in Indirect and Direct Taxation | III |
| | c) Variation in Depreciation Method | III |
| | d) Different Taxation of Export Industries | I |
| | e) Tax Credits and Repates | III |

Classification of Government Practices Cited as Non-tariff Barriers¹

| Major Groupings | Type by Function | Type by Intent ² |
|-------------------------------------|--|-----------------------------|
| 6. Customs And Administrative Entry | a) Customs Valuation b) Customs Classification c) Differences in Customs Valuation Systems | II II I |

¹ These are measures and regulations which have been reported by GATT signatories as NTBs.

² In many cases, it is the actual legislation or administrative procedures which determine whether the indicated measure is used as a non-tariff barrier in any given country.

Type I - Measures designed primarily to protect domestic industry from import competition, or to strengthen domestic industry in competing with imports or competing for export markets.

Type II - Trade distorting policies and practices which are imposed primarily with the intent of dealing with non-trade related problems, but which are periodically and intentionally employed for trade-restrictive purposes.

Type III - Policies and practices applied exclusively for non-trade related reasons but which unavoidably serve to distort international competitive conditions.

Brief Summary of Methodologies Used in
Quantifying Individual Non-tariff Barriers (I)

For present purposes, NTBs are divided into subsidies (including tax expenditures), export NTBs and "price NTBs" (all others).

Price NTBs

The most important of these, quantitatively, are quantitative restrictions (quotas, VERs etc), discriminatory procurement practices and some protective features of import valuation systems.

The approach to quantification is to estimate the total degree of price protection or tariff equivalent (TE) afforded a commodity by the introduction of the NTB:

$$TE = \frac{\Delta P_m}{P_m} (1+t) \quad (a)$$

where P_m = price of imports
 t = tariff

Given that the import elasticity of demand of a commodity, $E_m = \Delta Q_m / Q_m$, where Q_m = quantity of imports,

$$\frac{\Delta P_m}{P_m}$$

(a) can be written:

$$TE = \frac{\Delta Q_m}{Q_m} \times \frac{(1+t)}{E_m}$$

Generally, estimates of tariffs and import elasticities are available; what is left is to estimate the impact of the NTB on the quantity of imports.

1. Largely taken from A.R. Morris, "Methodologies for Estimating Non-tariff Barriers," I.R.P.P., Ottawa, June, 1984.

For quantitative restrictions, this is done by projecting historical import volume or market share trends prior to NTB imposition, and comparing with actual imports under the NTB protection.

For procurement practices, the assumption is made that government's average import propensity ($\frac{\text{imports}}{\text{total consumption}}$) would be the same as that of the private sector, in the absence of the procurement practices. Adjustments can be made where the government imports quite different commodities than the private sector in any particular industry.

When using others' estimates of price NTBs, for macro-simulation purposes, the estimates have to be adjusted for differences in elasticities being used. In the present exercise, this was done for the Horick estimates, since Horick's elasticities were quite different from those of the Inforum model. Such adjustment, however, has not yet been undertaken for the Canadian estimates, as elasticities are much more similar.

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For modeling impacts of NTB removal, it is generally $\Delta Q_m/Q_m$, rather than the tariff equivalent, which is desired; future exercises could avoid problems of differing elasticities by going straight to impacts of NTBs on trade quantities.

In modeling NTB reduction, some basic differences between tariff rates and tariff equivalents should also be remembered:

- a tariff rate is an ex-ante estimate of a price differential (world price - import price) which domestic producers can explain, whereas a TE is an ex-post estimate of protection actually explained;
- a TE is a short-run estimate of protection, provided for a given level of output and inputs (the post-NTB level);
- a TE is estimated in a partial equilibrium model; the general equilibrium consequences of the NTB are not incorporated;
- a TE is a static concept, and equivalence with a tariff breaks down once dynamic factors, such as shifting demand or supply curves, are considered; and
- equivalence only applies rigorously under perfect competition in imports and home markets.

Subsidies

Domestic subsidies are measured by their dollar value, by going exhaustively through government programs and assigning subsidies to specific industries. The question is then how to model their protective effect, or the impact on trade volumes of removing them.

In the present exercise, subsidy rates ($\frac{\text{subsidy}}{\text{value of production}}$) are taken as tariff equivalents. The above comments about tariff equivalents apply. In addition, the impact of a subsidy-NTB is not the same as that of a price-NTB or tariff, as shown by the following diagram. The subsidy rate is in fact greater than the tariff rate required to lower imports by the same amount.

For this and previously mentioned reasons, it would be preferable to be able to model the effect of factor subsidies more directly in macro models.

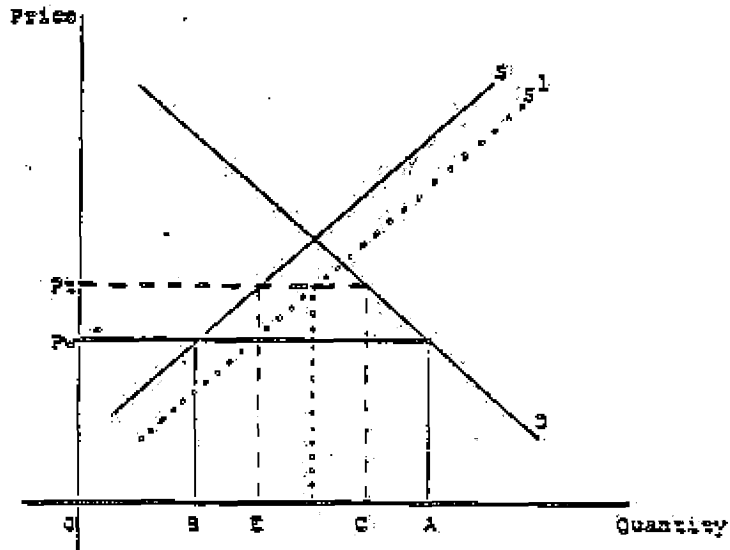
In a more general sense, a TE measures not only the cause of price differences - namely trade barriers - but also the underlying short-run, partial equilibrium market conditions and characteristics. As noted above, its various biases are such that a maximum price-protection effect is estimated. The present estimates, and the way they are used, should be seen in this light.

Export NTB

In the present case, there is only one export NTB estimated for Canada-US trade: the US DISC or tax deferral on export sales. Horick provides estimates by industry of the DISCs as subsidies - (tax savings). The subsidy rate is taken as a (tariff equivalent) measure of the price advantage provided to U.S. exporters in Canadian markets. Removing the DISC would then be equivalent to an increase in Canadian protection. The above-mentioned problems regarding tariff equivalents of subsidies apply here. Implicit also is the assumption that DISC rates by industry, estimated from total subsidies and exports for each industry, are applicable to exports to Canada; more detailed breakdown of subsidies applying to Canadian exports would be needed to refine the estimation procedure.

As above, taking the export subsidy rate as a tariff equivalent tends to overstate the export volume advantage provided to the exporter.

Comparative Price and Import-Volume
Effects of a Tariff and a Subsidy with
Equal Ad-Valorem Subsidy Rate



In the absence of tariff or NTEs, the world price (P_w) prevails; QB is produced domestically and AB imported.

A tariff t raises the imports and domestic prices to P_t ; QE is produced domestically and CE is imported; the import volume falls from AB to CE .

A subsidy, whose rate is the same as t , shifts the domestic supply curve from S to S^1 . In the absence of the tariff, QE would be produced domestically and AE imported.

The subsidy has an equal impact on domestic production, but causes a much smaller reduction in imports because the domestic price is not changed; and total consumption is not reduced.

A subsidy rate thus generally overstates the tariff (equivalent) required to cause an equal reduction in imports.

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TABLE 2

CANADIAN AND U.S. TARIFFS

Post Tokyo Round
Tariffs on Bilateral Trade*

| Commodity** | Canada (%) | U.S. (%) |
|--|---------------|-------------|
| 1. Grains | 2.09 | 1.30 |
| 2. Live Animals | 1.90 | 1.06 |
| 3. Other Agricultural Products | 0.81 | 2.99 |
| 4. Forestry Products | 0 | 1.08 |
| 5. Fish Landings | 0.29 | 0.59 |
| 6. Hunting & Trapping Products | 0 | 0.28 |
| 7. Iron Ores & Concentrates | 0 | 0 |
| 8. Other Metal Ores & Concentrates | 0 | 0.03 |
| 9. Coal | 0 | 0 |
| 10. Crude Mineral Oils | 0 | 0.30 |
| 11. Natural Gas | 0 | 0 |
| 12. Non-Metallic Minerals | 0.39 | 1.14 |
| 13. Services Incidental to Mining | 0 | 0 |
| 14. Meat Products | 1.70 | 0.82 |
| 15. Dairy Products | 5.58 | 7.74 |
| 16. Fish Products | 1.81 | 2.37 |
| 17. Fruits & Vegetables Preparations | 6.19 | 10.70 |
| 18. Foods | 0.94 | 0.81 |
| 19. Flour, Wheat, Meal & Other Cereals | 6.53 | 2.74 |
| 20. Breakfast Cereal & Bakery Products | 7.95 | 0.25 |
| 21. Sugar | 3.75 | 7.36 |
| 22. Miscellaneous Food Products | 4.94 | 2.68 |
| 23. Soft Drinks | 7.68 | 0.91 |
| 24. Alcoholic Beverages | 4.23 | 3.56 |
| 25. Tobacco Processed Unmanufactured | 7.08 | 10.78 |
| 26. Cigarettes & Tobacco Mfg. | 17.15 | 14.86 |
| 27. Tires & Tubes | 9.24 | 1.75 |
| 28. Other Rubber Products | 10.81 | 4.36 |
| 29. Plastic Fabricated Products | 10.18 | 3.64 |
| 30. Leather & Leather Products | 11.64 | 7.49 |
| 31. Yarns & Man-Made Fibres | 7.84 | 4.65 |
| 32. Fabrics | 20.79 | 9.61 |
| 33. Other Textile Products | 11.87 | 6.00 |
| 34. Hosiery & Knitted Wear | 23.76 | 19.61 |
| 35. Clothing & Accessories | 16.53 | 10.58 |
| 36. Lumber & Timber | 0.12 | 0 |
| 37. Veneer & Plywood | 4.69 | 1.16 |
| 38. Other Wood Fabricated Materials | 4.91 | 4.63 |
| 39. Furniture & Fixtures | 13.46 | 1.77 |
| 40. Pulp | 0.01 | 0 |

TABLE 8 (cont'd)

- 2 -

| | | | |
|-----|--------------------------------------|-------|------|
| 41. | Newsprint & Other Paper Stock | 3.92 | 0.10 |
| 42. | Paper Products | 7.34 | 2.15 |
| 43. | Printing & Publishing | 2.18 | 0.27 |
| 44. | Advertising Print Media | 0 | 0 |
| 45. | Iron & Steel Products | 3.61 | 3.64 |
| 46. | Aluminum Products | 2.14 | 0.50 |
| 47. | Copper & Copper Alloy Products | 3.37 | 0.98 |
| 48. | Nickel Products | 0.44 | 0.05 |
| 49. | Other Non-Ferrous Metal Products | 0.72 | 1.49 |
| 50. | Boilers, Tanks & Plates | 6.43 | 2.13 |
| 51. | Fabricated Structural Metal Products | 5.25 | 4.12 |
| 52. | Other Metal Fabricated Products | 6.84 | 1.82 |
| 53. | Agricultural Machinery | 0.16 | 0.14 |
| 54. | Other Industrial Machinery | 3.91 | 2.92 |
| 55. | Motor Vehicles | 0.32 | 0.02 |
| 56. | Motor Vehicles Parts | 0.66 | 0.28 |
| 57. | Other Transport Equipment | 1.69 | 0.23 |
| 58. | Appliances & Receivers, Household | 7.17 | 4.97 |
| 59. | Other Electrical Products | 3.57 | 4.02 |
| 60. | Cement & Concrete Products | 1.70 | 0.71 |
| 61. | Other Non-Metallic Mineral Products | 4.29 | 1.04 |
| 62. | Gasoline & Fuel Oil | 0.02 | 0.59 |
| 63. | Other Petroleum & Coal Products | 3.15 | 0.15 |
| 64. | Industrial Chemicals | 3.94 | 2.55 |
| 65. | Fertilizers | 0.03 | 0 |
| 66. | Pharmaceuticals | 4.96 | 1.31 |
| 67. | Other Chemical Products | 6.29 | 3.94 |
| 68. | Scientific Equipment | 3.21 | 3.09 |
| 69. | Other Manufactured Products | 10.23 | 3.31 |

*Source: Calculated from GATT tapes by DEA/CPE, July, 1985
 - Import-weighted average bound rates, as of end of Tokyo Round
 - 1983 import weights

**Canadian input-output commodity classifications, M aggregation

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CONCEPTUAL AND METHODOLOGICAL PROBLEMS

The research program consists of two main components. One is a detailed look at activity, costs and competitiveness of Canadian industries based on profiles provided by industry officials in the federal government, on recent consultations with industry personnel and industry associations, and on a comparative study of Canada-U.S. industry costs by Data Resources International. The other is a set of macro-economic simulations of bilateral trade liberalization focusing on output and employment changes in aggregate and by 30-40 industries. Simulations use both the TIM model of INFORSTRICA and the linked INFORM model of the University of Maryland. Both micro and macro components rely on a supporting piece of research: the calculation of Canadian and U.S. trade-weighted average industry tariffs, as of the end of the Tokyo Round (1987), and preparation of preliminary quantitative estimates of non-tariff barriers in bilateral trade.

This program has encountered, and suffers from, two main kinds of problems: conceptual and methodological difficulties, and problems more nearly related to the limited time and resources available for the exercise. Although the line is not perfectly clear, the latter are postponed to the following chapter. They, and some of the methodological difficulties, will be better handled in further work in DEA, Finance and DRIE over the next several months. Following is a listing of main conceptual and methodological problems.

Information Sources and Perspectives

A great deal of detailed information about competitiveness and trade-liberalization impacts is obtainable from industry personnel, industry officials in government and consultant studies. However, these sources often do not consider some of the indirect impacts of trade liberalization, such as general growth-including effects on demand, or effects operating on one industry indirectly through impacts on supplying and purchasing industries. They also provide relatively imprecise and frequently differing estimates of impacts. Macro-economic estimates help capture indirect impacts, which are large relative to direct impacts, but also vary considerably with assumptions and models employed.

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Industry Cost Comparisons

Particularly relevant to the DRI study are two problems. The measurement of capital costs entails conceptual and data difficulties. The DRI study uses depreciation (capital consumption allowance) and interest costs. The data sources are not perfectly consistent with that of the other (labour, materials) costs, namely Canadian and U.S. input-output tables. Further, interest costs vary with factors such as debt-equity ratios, and depreciation-plus-interest falls short of a good measure of the user cost of capital. Consistent valuation of real and nominal variables is also an issue.

Secondly, there are general difficulties involved in using exchange rates to compare costs. In the DRI study, the base-year for all real variables is 1971 — a year in which the Canadian and U.S. dollars were at par. However, it is not established that the purchasing power of the two currencies, within their domestic markets, were at par. Disaggregated measures of "purchasing power parity" can in theory be done in a manner appropriate to industry cost comparisons, but this would entail extensive and costly empirical work.

Modeling Initial Price and Production Impacts

Reduction of tariffs has different effects on industry prices, outputs and profit margins, depending on market conditions (supply and demand characteristics) and market structures. The ability of macro models to reflect current market conditions and structures of a large number of industries is currently limited, and expensive to extend. Most studies have used the assumption that import and export prices will fall by the same percentage as the domestic tariff reductions. In the present exercise, the INFORUM and U.S. and INFORMETRICA simulations use this assumption. Trade price changes cause changes in trade volumes which normally are estimated using statistical responses (elasticities) of changes in volumes to changes in prices. These elasticities vary considerably among models, and this contributes a considerable degree of imprecision to estimation of trade liberalization impacts. In addition, the INFORMETRICA model has a relatively sophisticated capacity to estimate domestic price changes caused by the import and export price changes, and consequent effects on consumer demand, government spending, business investment, productivity levels, etc. Details are provided below. The INFORUM simulations pick up only a part of these positive induced impacts, which operate through domestic changes. As elaborated below, this is a major source of differences between the estimates of these two models.

Aggregation

Tariff levels can be calculated at a very detailed commodity level. However, non-tariff barriers are currently available only at a quite aggregated (30-industry) level. More problematic macro-economic models are currently built to handle only a certain degree of disaggregation -- again some 30-40 industries. An exception is the detailed version of the Canadian input-output table. However, while it can provide useful pictures of direct industry impacts, it has no capacity to model the dynamic benefits of trade liberalization. One is thus left with an assessment of inter-industry impacts and adjustments at the level of some 40 industries; intra-industry changes and adjustments are not captured. While inter-industry adjustment can be argued to be the more difficult of the two, for both labour and capital, the fact that there would be additional shifts within agriculture, within transportation equipment, and so on, should be kept in mind.

Services

About one-quarter of the industries examined are service industries, and service industries account for over two-thirds of Canadian employment. However, tariffs do not generally apply to trade in services and neither the nature nor the magnitudes of non-tariff barriers in service sectors are yet well understood. As a result, particularly in the macro-economic assessments, impacts of liberalization in service sectors take place only indirectly through impacts on goods-producing sectors.

N.T.B. Estimates and Impacts

As elaborated below, present estimates are highly preliminary, and will soon be improved, but there are basic impediments to accuracy in quantifying NTBs. In particular, for NTBs such as quantitative restrictions and procurement practices, judgements must be made about what imports would have been in the absence of the barrier. This can be done by looking at pre-barrier trends or, in the case of procurement, assuming that government's import propensity would otherwise equal that of the private sector. Clearly, the judgements and assumptions required preclude precision.

Secondly, there are present methodological limitations in modeling NTB removal. For NTBs other than subsidies, tariff equivalents are generally calculated, and liberalization is treated the same way as tariff reduction. Subsidies present particular difficulties which are related to the modeling problems noted above. Specifically, no models which were available to this exercise contained sufficiently specific information on market conditions and

structure to accurately portray initial price/output effects of subsidy reduction. While subsidy rates can be used as approximations for tariff equivalents, they are poor proxies. In addition, there are as yet unanswered questions about which subsidies (and tax expenditures) might be the objects of trade liberalization negotiations. Assuming that all subsidies would be removed for purposes of trade liberalization, let alone bilateral liberalization, is clearly unrealistic. For those reasons and others noted below, subsidy reduction has not been modelled in the macro-simulations.

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Estimating Investment Responses

The more comprehensive of the macro-economic models, such as INFORMETRICA, can project many of the economic variables which will influence investment decisions in the event of trade liberalization — i.e. demand, prices, capital costs, interest rates and capacity utilization. They cannot, however, identify basic changes in attitudes which might significantly alter location and re-investment decisions of U.S. and Canadian multinationals. Outside evidence is also very thin on this crucial subject, and estimates range from major capital flight to major new capital inflows. More time and resources could improve estimates, but large margins of uncertainty would remain. The INFORMETRICA simulations use the in-built capacity of models to predict investment shifts, but stop short of assessing potential changes in basic attitudes toward Canada, as a place to invest, which could result from bilateral trade liberalization.

Estimating and Modelling Dynamic Production Increases

Dynamic gains from trade liberalization relate basically to productivity increases which come from investment to achieve economies of scale, production specialization and new product possibilities. Estimates have been made of the extent to which specific industries may increase productivity due to economies of scale and specialization (Harris, Gorecki and others), but all entail assumptions and controversies. They thus provide ranges of potential productivity improvements rather than precise estimates. As noted above, the INFORMETRICA simulations project productivity increase resulting from investment responses to lowered prices and costs. Assessing further productivity gains must use either available estimates or alternative assumptions such as the hypothesis that gaps between Canadian and U.S. productivity levels, by industry, will close as a result of trade liberalization.

Separating Trade Liberalization Impacts from Other Policy Changes

Macro simulations attempt to isolate impacts of trade liberalization, which starts with phased tariff and NTB elimination. However, other economic variables soon change. In particular, tariff revenue declines immediately. Subsequently, other tax revenues may increase with economic growth. Similarly, interest and exchange rates would change. The probable fiscal and monetary policy responses of Canada and the U.S. can only be hypothesized, though they can dramatically affect the overall outcome. Nor is assuming no change in other policies an entirely "neutral" assumption. As elaborated below, additional time and resources can expand the number of fiscal, monetary and other policy responses analysed, and shed light on the pros and cons of each. But totally isolating impacts of trade liberalization is conceptually not possible.

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Trade Diversion

Increased Canada-U.S. trade, from bilateral liberalization, occurs in part at the expense of reduced Canadian and U.S. trade with the rest of the world. The two effects can be estimated, and are addressed in the current macro-economic simulations. This is possible because the models separate Canada-U.S. from other trade, and contain separate responses for each. The modelling of trade diversion, however, encounters the same limitations as the modelling of Canada-U.S. trade creation. In addition, particularly where NTBs against third countries are significant, the analysis tends to underestimate the losses which occur when new Canada-U.S. trade -- in textiles for example -- displaces lower cost imports from elsewhere.

The "Base Case"

In considering what might happen without bilateral liberalization, two main problems arise. First is whether U.S. protectionism might otherwise increase. This problem can be addressed by simulating two base cases: a "business-as-usual" scenario and an "increased U.S. protectionism" scenario. The extent and form of possible increased U.S. protectionism, however, cannot be accurately predicted. (Alternatively, if the U.S. dollar declines, U.S. protectionism could decrease, and problems of Canadian competitiveness and protectionism could be exacerbated.)

Second, the nature and timing of another round of multilateral trade negotiations is not currently clear. If bilateral liberalization is followed by multilateral, additional adjustments and impacts — positive and negative — would be encountered. Some of the bilateral trade creation and diversion would be reversed. Simulating a multilateral round of liberalization would require a major exercise of calculating tariffs and NTBs for several other countries — notably the EEC and Japan — and employing economic models for these countries. The present exercise does not address a subsequent MTN round. Nor does it compare the impacts of bilateral liberalization with those of multilateral liberalization.

Provincial Impacts

At present, there are no detailed provincial or regional models to use for simulating economic impacts of trade liberalization by province. Provincial impacts can be and are, in this exercise, approximated by apportioning national impacts according to provincial shares (in imports, exports, production/employment, etc.) by industry. For this purpose, INFORUM simulations use initial shares, while INFORMETRICA's "RIM" models use projected base-case shares.

Additional Technical Problems

Two lesser technical problems should be mentioned. First, in calculating average industry tariffs, there is an issue of what weights — import, production, value added or consumption — to use. The present simulations use import weights, largely due to the nature of the models employed, but there remain conceptual drawbacks to any of the possible weighting methods. Also, ideally, 1987 weights should be used to calculate post-Tokyo-round tariff levels, but such weights are not yet known.

Second, and related, the basic industry and trade data used in model simulations comes from the input-output components of the models employed. There is always about a four year lag in the construction of the input-output tables. For the present exercise, this means that the starting point for trade liberalization is actually the economic structure which existed in 1980/81.

The Research Program

Limitations Due To Time and Resource Constraints

Minimum Distillation and Feedback - Because the four main components of the program have been undertaken simultaneously, and on a tight time schedule, there has not yet been adequate time to assess, compare and integrate results, draw in knowledge from consultative processes, reconcile inconsistencies and, importantly, use results of each approach to strengthen the others. In particular, views of industry and government personnel can strengthen empirical estimates of non-tariff barriers, probable investment responses and so on. Similarly, macro-economic analyses which estimate indirect impacts can sharpen discussion among industry experts on probable detailed industry effects.

A particularly important aspect of this problem is that analysis of services sectors, and trade issues in these sectors, has been undertaken separately, and is less advanced, than that of goods-producing sectors. As previously mentioned, present results embody only indirect impacts on services sectors caused by trade liberalization in goods sectors.

Limited Disaggregation - In the next 3-4 months the DRP industry cost comparison study could be done, at considerable expense, for 109 industries rather than the 30 industry groups covered to date.

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Limited Analysis of Canada-U.S. Interactive Effects - To date, time constraints have precluded the use of U.S. macro-economic models to simulate U.S. impacts of trade liberalization, and feed these results back into the Canadian simulations. As a result, interactive effects are only approximated in the present macro analyses. Appropriate U.S. models are available, including the advanced U.S. MFT model incorporated in the INFORUM linked system. One simulation, reported below, uses this model to:

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project U.S. impacts, but time was not sufficient to link these back to Canadian simulations. This work is also important to better pinpoint American negotiating concerns.

Limited Adaptation of Macro Models - Time has been insufficient to improve the capability of the INFORUM, INFORMETRICA, or other models to simulate bilateral trade liberalization. A particular limitation, in the case of INFORMETRICA analysis, is that export volumes in several sectors -- notably in primary production and autos -- have had minimum historical response to price changes. Simulating U.S. tariff/NTB reductions, on this basis, results in price reductions accruing to U.S. consumers without export volume increases to Canadian producers. In the primary sectors, judgements have been made concerning probable direct volume increases. For autos, no immediate export response is imposed in the simulations, effectively negating any direct impact of bilateral liberalization in this sector. In practice, removal of Autopact safeguards could cause production to shift to the U.S. Conversely, lower real wages in Canada could result in a higher share for Canadian production and export. The separate exercises will address the Autopact and potential effects of bilateral liberalization on the auto industry.

Current-Date NTB Estimates - In addition to conceptual and aggregation problems, most of the NTB estimates are for the immediate pre-Tokyo-Round period (late 1974s). Estimates of the most significant barriers, particularly quantitative restrictions, have been updated for this exercise.

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Limited Supporting Analysis - The research program does not embody, and would benefit greatly from careful research on:

- probable location and investment responses of multinationals; and
- potential productivity improvements in Canadian (and U.S.) industries.

Additional tariff calculations, using alternative weighting schemes, and improvement of elasticity estimates, would also reduce some lesser but significant margins of error.

Limited Sensitivity Analysis - Many areas of uncertainty can be addressed by doing additional simulations, based on varying assumptions. Some major examples include alternative base cases (i.e. U.S. protectionism), various timing of liberalization, possible asymmetry of liberalization, alternative accompanying monetary and fiscal policy, alternative productivity

increases, and alternative investment responses. Time and resources have permitted only a few such "sensitivity" simulations.

Tariff Calculations and NTB Estimates

Tariff calculations were done in-house using GATT computer tapes for the U.S. and Statistics Canada data for Canada. The U.S. tapes contained post-Tokyo-Round bound tariff rates, by tariff line, and bilateral imports by tariff line for 1983. The Canadian data consisted of 1979 applied rates and imports. Tokyo-Round concessions were applied to obtain 1987 tariffs. Average tariff rates by industry were calculated, for Canada, by calculating import-weighted average tariffs using correspondences first between tariff-line and CITT* categories, and second between CITT and Canadian input-output (M aggregation) categories. The correspondences were provided by Statistics Canada. For the U.S. calculations, correspondences were provided by the U.S. Department of Commerce for relating tariff-line (TSUS) to SITC**, and from Statistics Canada for relating SITC to CITT, and CITT to input-output (M aggregation) industry categories. The resulting tariffs, set out on Table __, are thus import-weighted averages of post-Tokyo-Round tariffs. U.S. rates are bound rates, using 1983 weights, while Canadian rates are essentially applied rates, using 1979 weights.

Data has also been assembled to calculate U.S. pre- and post-Tokyo-Round applied rates, using 1979 weights; value-added weights can also be used in moving from the 602 commodities of the L aggregation of the input-output system to the 59 commodities of the M aggregation.

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* Canadian International Trade Classification
** Standard International Trade Classification

These estimates should be regarded as highly preliminary and embody the following main limitations:

- (i) The basic estimates are for 1976 for the U.S. and 1978 for Canada.
- (ii) Updates have been incorporated for the most significant of the quantitative restrictions, based on IMF and other studies, but also involving judgements of experts in government.
- (iii) All of the above-mentioned conceptual problems in quantifying NTBs apply.

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A detailed setting out of estimates, sources, problems, issues and bibliography is available from OEA/CPE.

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | |
|---|-------------------------------------|------|------|-------|-------|-------|-------|-------|-------|
| *****NATIONAL EXPENDITURES (MM \$1971)***** | | | | | | | | | |
| GNEXP | GNDS NATIONAL PRODUCT | 215. | 405. | 1283. | 2126. | 3070. | 3792. | 4111. | 4222. |
| CCZM | CONSUMPTION | -33. | 7. | 118. | 323. | 623. | 1044. | 1456. | 1794. |
| CCZRM | DURABLES | -13. | -1. | 34. | 100. | 193. | 327. | 436. | 523. |
| CCZTK | AUTOS | -10. | -9. | -4. | 7. | 23. | 54. | 68. | 74. |
| CCZDK | SEMI-DURABLES | 11. | 41. | 87. | 149. | 225. | 301. | 362. | 400. |
| CCZDK | NON-DURABLES | -13. | -8. | 14. | 57. | 115. | 215. | 296. | 360. |
| CCZLK | FOOD | -9. | -8. | 2. | 20. | 46. | 96. | 137. | 169. |
| CCZRM | SERVICES | -17. | -25. | -16. | 20. | 91. | 220. | 362. | 503. |
| CCZRM | BUSINESS INVESTMENT | 70. | 226. | 511. | 910. | 1369. | 1781. | 1941. | 1822. |
| CCZRM | RESIDENTIAL | 2. | 11. | 23. | 45. | 85. | 92. | 85. | 75. |
| CCZRM | INDUSTRIAL | 0. | 1. | 1. | 2. | 3. | 4. | 3. | 3. |
| CCZRM | NON-RESIDENTIAL | 68. | 213. | 486. | 865. | 1303. | 1699. | 1857. | 1777. |
| CCZRM | STRUCTURES | 25. | 73. | 161. | 292. | 445. | 587. | 651. | 629. |
| CCZRM | MACHINERY AND EQUIPMENT | 43. | 142. | 323. | 574. | 858. | 1112. | 1206. | 1148. |
| CCZRM | VALUE PHYSICAL CHANGE IN INVENTORY | 24. | 173. | 241. | 370. | 443. | 400. | 207. | 59. |
| CCZRM | GOVERNMENT EXP. ON GOODS & SERVICES | 21. | 41. | 123. | 193. | 272. | 333. | 389. | 437. |
| CCZRM | CURRENT EXPENDITURES | 16. | 46. | 89. | 139. | 193. | 235. | 275. | 320. |
| CCZRM | FEDERAL | 9. | 25. | 43. | 60. | 72. | 72. | 70. | 79. |
| CCZRM | WAGES AND SALARIES | 4. | 11. | 18. | 23. | 24. | 28. | 13. | 16. |
| CCZRM | NON-FEDERAL | 7. | 21. | 45. | 70. | 121. | 163. | 205. | 241. |
| CCZRM | WAGES AND SALARIES | 4. | 14. | 30. | 51. | 74. | 100. | 120. | 138. |
| CCZRM | CAPITAL EXPENDITURES | 5. | 13. | 35. | 54. | 79. | 98. | 110. | 117. |
| CCZRM | NET EXPORTS OF GOODS AND SERVICES | 103. | 213. | 269. | 337. | 360. | 214. | 130. | 81. |
| CCZRM | EXPORTS OF GOODS AND SERVICES | 214. | 500. | 808. | 1234. | 1721. | 1948. | 2147. | 2339. |
| CCZRM | MERCHANDISE | 210. | 490. | 790. | 1206. | 1681. | 1898. | 2087. | 2264. |
| CCZRM | SERVICES | 4. | 11. | 18. | 27. | 39. | 50. | 60. | 70. |
| CCZRM | IMPORTS OF GOODS AND SERVICES | 111. | 285. | 539. | 897. | 1362. | 1733. | 2024. | 2255. |
| CCZRM | MERCHANDISE | 114. | 334. | 579. | 922. | 1352. | 1639. | 1844. | 1906. |
| CCZRM | SERVICES | -23. | -39. | -40. | -24. | 9. | 94. | 182. | 269. |

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCES)

| | | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
|--|------------------------------------|-------|------|------|-------|-------|-------|-------|-------|
| *****OUTPUT BY KEY SECTIONS (MM \$1971)***** | | | | | | | | | |
| KEY | REAL DOMESTIC PRODUCT | 175 | 568 | 1057 | 1766 | 2530 | 3121 | 3372 | 3450 |
| AGY | AGRICULTURE | 2 | 12 | 21 | 39 | 54 | 66 | 70 | 76 |
| FBY | FISHERIES | 2 | 13 | 21 | 32 | 44 | 46 | 47 | 48 |
| FOY | FORESTRY | 2 | 3 | 8 | 13 | 18 | 20 | 19 | 17 |
| MY | MINING | 12 | 39 | 56 | 86 | 117 | 134 | 139 | 140 |
| MAFY | HANDMAKING | 20 | 259 | 467 | 763 | 1060 | 1201 | 1297 | 1297 |
| MAFY | DURABLE | 50 | 171 | 312 | 517 | 720 | 806 | 916 | 898 |
| MAFY | NON-DURABLE | 20 | 68 | 155 | 248 | 340 | 395 | 401 | 308 |
| MY | UTILITIES | 6 | 13 | 24 | 40 | 50 | 73 | 81 | 86 |
| COY | CONSTRUCTION | 10 | 31 | 66 | 116 | 172 | 230 | 297 | 329 |
| TSY | TRANSPORT, STORAGE & COMMUNICATION | 14 | 42 | 92 | 161 | 205 | 273 | 411 | 424 |
| TRY | TRADE | 14 | 50 | 127 | 217 | 328 | 455 | 497 | 398 |
| FIY | FINANCE, INSURANCE & REAL ESTATE | 5 | 16 | 30 | 50 | 72 | 89 | 95 | 100 |
| LSY | SERVICES | 8 | 33 | 67 | 117 | 182 | 245 | 293 | 310 |
| IOY | INDUSTRY | 0 | 0 | 1 | 3 | 4 | 9 | 11 | 16 |
| ADY | PUBLIC ADMINISTRATION | 9 | 29 | 47 | 74 | 104 | 120 | 150 | 174 |
| *****LABOR FORCE AND EMPLOYMENT (000'S)***** | | | | | | | | | |
| OPDP | POPULATION | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OUPOP | HOUSEHOLDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OLDFOR | LABOR FORCE | 4 | 13 | 27 | 34 | 46 | 61 | 63 | 63 |
| OCDFOR | CIVILIAN SOURCE POPULATION | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OPRATE | PARTICIPATION RATE (FRACTION) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| TEET | TOTAL EMPLOYMENT | 5 | 11 | 19 | 40 | 67 | 94 | 112 | 119 |
| AGET | AGRICULTURE | 0 | 0 | 0 | 0 | 0 | -1 | -1 | -1 |
| FBET | FISHERIES | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FOET | FORESTRY | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| MYET | MINING | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MAEY | HANDMAKING | 2 | 4 | 6 | 6 | 2 | 1 | 1 | 7 |
| MYET | UTILITIES | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| COET | CONSTRUCTION | 0 | 1 | 3 | 5 | 8 | 10 | 12 | 12 |
| TSET | TRANSPORT, STORAGE & COMMUNICATION | 0 | 2 | 5 | 6 | 9 | 12 | 14 | 15 |
| TRYET | TRADE | 0 | 2 | 4 | 8 | 13 | 19 | 23 | 27 |
| FIET | FINANCE, INSURANCE & REAL ESTATE | 0 | 0 | 1 | 3 | 3 | 3 | 3 | 4 |
| LSET | SERVICES | 1 | 3 | 7 | 13 | 20 | 26 | 34 | 40 |
| IOET | INDUSTRY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ADET | PUBLIC ADMINISTRATION | 1 | 3 | 5 | 9 | 14 | 17 | 21 | 26 |
| OUT | UNEMPLOYMENT | -1 | 2 | 4 | 6 | 22 | 43 | 39 | 46 |
| OURATE | UNEMPLOYMENT RATE (%) | -0.04 | 0.03 | 0.02 | -0.04 | -0.17 | -0.32 | -0.43 | -0.47 |

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCES)

| | | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|-----------------------------------|---------------------------------------|-------|-------|-------|-------|-------|--------|--------|
| *****LABOUR COSTS AND PRICES***** | | | | | | | | |
| QWNET | WAGES & SALARIES PER EMPLOYEE (\$C) | -10. | -39. | -109. | -241. | -453. | -726. | -1037. |
| QWVEE | OUTPUT PER EMPLOYEE (\$71) | 8. | 37. | 65. | 98. | 127. | 143. | 139. |
| *****1971 = 100***** | | | | | | | | |
| QPHULC | PRIVATE NON-AGRIC. UNIT LABOUR COSTS | 0.00 | -0.02 | -0.03 | -0.06 | -0.09 | -0.13 | -0.17 |
| QHAULC | MANUFACTURING LABOUR COSTS | 0.03 | -0.02 | -0.03 | -0.08 | -0.11 | -0.16 | -0.19 |
| QIEP | IMPLICIT OUTPUT DEFATOR | 0.08 | -0.01 | -0.03 | -0.06 | -0.10 | -0.14 | -0.19 |
| QNGHE | IMPLICIT ONE DEFATOR | -0.01 | -0.02 | -0.03 | -0.07 | -0.12 | -0.16 | -0.20 |
| QCPID | IMPLICIT DEFATOR OF CONSUMPTION | -0.01 | -0.02 | -0.04 | -0.07 | -0.10 | -0.14 | -0.19 |
| QCPID | (CONSUMER PRICE INDEX) | -0.48 | -1.67 | -3.55 | -6.23 | -9.81 | -13.64 | -17.47 |
| QRI | IMPLICIT DEFATOR OF INVESTMENT | -0.01 | -0.02 | -0.03 | -0.06 | -0.10 | -0.14 | -0.19 |
| QSCURP | IMPLICIT DEFATOR OF GOVT SPENDING | 0.00 | -0.02 | -0.03 | -0.06 | -0.11 | -0.16 | -0.21 |
| QWTFXP | IMPLICIT DEFATOR OF EXPORTS | 0.00 | -0.01 | -0.03 | -0.05 | -0.09 | -0.13 | -0.18 |
| QWTFXP | IMPLICIT DEFATOR OF IMPORTS | 0.00 | 0.00 | -0.01 | -0.03 | -0.07 | -0.11 | -0.16 |
| QWTFXP | CRUDE OIL PRICE AT TORONTO INCL TAX | 0.02 | -0.03 | -0.16 | -0.38 | -0.72 | -1.19 | -1.74 |
| *****FINANCIAL VARIABLES***** | | | | | | | | |
| QCNMCP | PRIME COMMERCIAL PAPER RATE | -0.17 | -0.41 | -0.63 | -0.85 | -1.10 | -1.07 | -0.97 |
| QRIHDB | INDUSTRIAL BOND RATE | -0.02 | -0.16 | -0.27 | -0.40 | -0.53 | -0.58 | -0.51 |
| QREXN | EXCHANGE RATE (%CAN/4U.S.) | 0.00 | 0.00 | 0.00 | -0.01 | -0.02 | -0.03 | -0.04 |
| QREXNC | EXCHANGE RATE (%CAN/4U.S. PER 0 CAN.) | -0.04 | 0.04 | 0.30 | 0.78 | 1.33 | 2.20 | 3.17 |
| QREXDC | EXCHANGE RATE (%CAN/DECD UNIT) | 0.00 | 0.00 | 0.00 | -0.01 | -0.02 | -0.03 | -0.04 |

TABLE. NIP AND PRODUCTIVITY TRENDS

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCES)

| | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | |
|--|---|-------|-------|-------|-------|--------|--------|--------|--------|
| *****SELECTED INCOME VARIABLES***** | | | | | | | | | |
| *****BILLIONS OF CURRENT DOLLARS***** | | | | | | | | | |
| GNP | GRAND NATIONAL PRODUCT | -344 | -1166 | -2906 | -5774 | -10360 | -19996 | -23299 | -30990 |
| PNP | PERSONAL INCOME | -347 | -1204 | -2970 | -5873 | -10607 | -19210 | -23143 | -30775 |
| PNDC | PERSONAL DISPOSABLE INCOME | -799 | -2080 | -3856 | -6311 | -9702 | -12849 | -18329 | -20002 |
| PNDCP | REAL PER CAPITA (1911) | -2 | 1 | 9 | 21 | 38 | 63 | 60 | 93 |
| WTEHA | TOTAL WAGES | 9 | -24 | -848 | -1769 | -3764 | -6793 | -10485 | -14340 |
| CCP | CORPORATE PROFITS | -307 | -622 | -1399 | -3324 | -6908 | -13301 | -17324 | -2200 |
| CCBAL | CURRENT ACCOUNT BALANCE | 215 | 392 | 317 | 199 | -83 | -91 | -1277 | -1393 |
| CCBLN | -AS SHARE OF GNP | 0.06 | 0.07 | 0.05 | 0.03 | -0.01 | -0.12 | -0.17 | -0.10 |
| CHRCBL | MERCHANDISE TRADE BALANCE | 131 | 207 | 49 | -127 | -459 | -1122 | -1479 | -1522 |
| GOBAL | GOVERNMENT BALANCE | 350 | 605 | 1025 | 1340 | 1472 | 907 | 16 | -930 |
| GOBLN | -AS SHARE OF GNP | 0.06 | 0.11 | 0.15 | 0.10 | 0.17 | 0.06 | -0.08 | -0.20 |
| GNEXP | REVENUES | -256 | -724 | -2106 | -3949 | -6834 | -10042 | -13462 | -18279 |
| GNEXP | EXPENDITURES | -207 | -1212 | -3135 | -5313 | -8740 | -11052 | -13304 | -15912 |
| GNCF | -AS SHARE OF GNP | -0.08 | -0.10 | -0.29 | -0.41 | -0.33 | -0.53 | -0.41 | -0.20 |
| GNBAL | FEDERAL BALANCE | 264 | 545 | 941 | 1310 | 1672 | 1243 | 459 | -597 |
| GNBAL | NON-FEDERAL BALANCE | 86 | 139 | 79 | 30 | -101 | -337 | -424 | -314 |
| *****INVESTMENT AND SAVINGS BY SECTOR***** | | | | | | | | | |
| *****BILLIONS OF CURRENT DOLLARS***** | | | | | | | | | |
| PIP | PERSONAL INVESTMENT | -45 | -81 | -117 | -163 | -234 | -377 | -571 | -736 |
| PICYDC | -PERSONAL SAVINGS RATE | 0.00 | 0.04 | 0.14 | 0.28 | 0.35 | 0.44 | 0.48 | 0.43 |
| GI | GOVERNMENT INVESTMENT | 170 | 543 | 1071 | 1658 | 1967 | 1912 | 399 | -1052 |
| GOFCAC | GOVERNMENT INVESTMENT | -18 | -43 | -89 | -102 | -341 | -553 | -822 | -1095 |
| ITIS | TOTAL INVESTMENT-SAVINGS INCLUDING GOV. | 125 | 472 | 853 | 1305 | 1736 | 849 | -602 | -370 |
| ITISN | -AS A SHARE OF GNP | 0.03 | 0.12 | 0.29 | 0.39 | 0.52 | 0.41 | 0.34 | 0.31 |
| PSV | PERSONAL SAVINGS | -74 | -17 | 164 | 422 | 669 | 1016 | 930 | 622 |
| PSV | SUBSIDIZED SAVINGS | 73 | 211 | 04 | -20 | -479 | -1103 | -2330 | -2752 |
| GSV | GOVERNMENT SAVINGS | 373 | 739 | 931 | 1124 | 1120 | 340 | -812 | -2030 |
| GSV | FOREIGN SAVINGS | -216 | -394 | -326 | -220 | 39 | 768 | 1171 | 1259 |

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCES)

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|
| *****NATIONAL EXPENDITURES (IN \$177)***** | | | | | | | | |
| GNP | 4020. | 4042. | 4042. | 4040 | 4102. | 4104. | 4609. | 3034. |
| CONSUMPTION | 2062. | 2273. | 2457. | 2570. | 2650. | 2710. | 2785. | 2910. |
| DURABLES | 500. | 436. | 461. | 401. | 493. | 702. | 751. | 759. |
| AUTOS | 01. | 65. | 92. | 95. | 94. | 94. | 97. | 106. |
| NON-DURABLES | 440. | 441. | 479. | 407. | 493. | 500. | 510. | 570. |
| NON-DURABLES | 405. | 436. | 462. | 471. | 475. | 473. | 479. | 446. |
| FOOD | 192. | 204. | 219. | 221. | 221. | 219. | 220. | 239. |
| SERVICES | 234. | 751. | 655. | 934. | 995. | 1034. | 1075. | 1127. |
| BUSINESS INVESTMENT | 1504. | 1230. | 906. | 813. | 813. | 891. | 1040. | 1287. |
| RESIDENTIAL | 54. | 34. | 14. | 0. | -7. | -8. | -4. | 2. |
| INDUSTRIAL | 2. | 1. | 0. | -1. | -1. | -1. | -1. | 0. |
| NON-RESIDENTIAL | 1529. | 1217. | 971. | 813. | 819. | 899. | 1052. | 1287. |
| STRUCTURES | 977. | 412. | 304. | 210. | 196. | 204. | 230. | 297. |
| MACHINERY AND EQUIPMENT | 552. | 805. | 667. | 603. | 623. | 695. | 814. | 990. |
| VALUE PHYSICAL CHANGE IN INVENTORY | -103. | -89. | -74. | -78. | -23. | -36. | 129. | 192. |
| GOVERNMENT EXP. ON GOODS & SERVICES | 474. | 514. | 544. | 571. | 580. | 582. | 595. | 511. |
| CURRENT EXPENDITURES | 360. | 397. | 420. | 455. | 469. | 473. | 403. | 491. |
| FEDERAL | 89. | 109. | 125. | 144. | 154. | 162. | 177. | 170. |
| WAGES AND SALARIES | 51. | 74. | 44. | 57. | 49. | 76. | 61. | 61. |
| NON-FEDERAL | 271. | 288. | 295. | 311. | 315. | 311. | 306. | 312. |
| WAGES AND SALARIES | 152. | 164. | 173. | 179. | 183. | 183. | 185. | 189. |
| CAPITAL EXPENDITURES | 119. | 116. | 116. | 116. | 162. | 169. | 112. | 121. |
| NET EXPORTS OF GOODS AND SERVICES | -3. | 111. | 149. | 163. | 189. | 40. | 129. | 30. |
| EXPORTS OF GOODS AND SERVICES | 2361. | 2570. | 2754. | 2924. | 3097. | 3118. | 3450. | 3762. |
| MERCHANDISE | 2291. | 2499. | 2674. | 2837. | 3084. | 3027. | 3357. | 3654. |
| SERVICES | 70. | 71. | 80. | 87. | 92. | 91. | 93. | 108. |
| IMPORTS OF GOODS AND SERVICES | 2364. | 2459. | 2605. | 2761. | 2908. | 3078. | 3321. | 3732. |
| MERCHANDISE | 2013. | 2039. | 2125. | 2229. | 2347. | 2470. | 2603. | 3021. |
| SERVICES | 349. | 418. | 480. | 534. | 573. | 608. | 718. | 711. |

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCES)

| | | 1994 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | |
|---|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| ***** (OUTPUT BY KEY SECTORS (MN 01971)) ***** | | | | | | | | | |
| QTEY | REAL DOMESTIC PRODUCT | 3289. | 3357. | 3356. | 3344. | 3458. | 3453. | 3898. | 4163. |
| AOY | AGRICULTURE | 70. | 79. | 80. | 79. | 81. | 75. | 80. | 88. |
| FSY | FISHERIES | 47. | 49. | 50. | 50. | 51. | 47. | 51. | 52. |
| FOY | FORESTRY | 14. | 12. | 10. | 0. | 8. | 7. | 9. | 10. |
| MEY | MINING | 132. | 139. | 141. | 141. | 144. | 141. | 161. | 171. |
| MAY | MANUFACTURING | 1142. | 1173. | 1161. | 1147. | 1208. | 1190. | 1441. | 1545. |
| MAOY | DURABLES | 603. | 629. | 622. | 644. | 714. | 719. | 1135. | 1261. |
| MANOY | NON-DURABLES | 344. | 344. | 329. | 300. | 292. | 271. | 306. | 302. |
| MTY | UTILITIES | 85. | 88. | 89. | 88. | 89. | 87. | 99. | 98. |
| COY | CONSTRUCTION | 195. | 154. | 120. | 94. | 88. | 92. | 108. | 131. |
| TOY | TRANSPORT, STORAGE & COMMUNICATION | 409. | 410. | 402. | 395. | 402. | 404. | 447. | 477. |
| IRY | TRADE | 523. | 528. | 529. | 528. | 541. | 549. | 592. | 637. |
| FIY | FINANCE, INSURANCE & REAL ESTATE | 105. | 124. | 149. | 170. | 192. | 192. | 228. | 242. |
| CSY | SERVICES | 318. | 349. | 380. | 385. | 391. | 391. | 410. | 422. |
| HOY | HOUSING | 19. | 20. | 20. | 19. | 18. | 17. | 15. | 15. |
| ADY | PUBLIC ADMINISTRATION | 194. | 212. | 224. | 238. | 244. | 243. | 251. | 254. |
| ***** (LABOUR FORCE AND EMPLOYMENT (000 '01)) ***** | | | | | | | | | |
| QPOP | POPULATION | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| HOUSING | HOUSEHOLDS | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| QLBFR | LABOUR FORCE | 50. | 49. | 49. | 49. | 49. | 49. | 52. | 56. |
| OCBFR | CIVILIAN BOURGEOISIE POPULATION | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| MPRATE | PARTICIPATION RATE (FRACTION) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| TREY | TOTAL EMPLOYMENT | 115. | 108. | 96. | 95. | 95. | 95. | 103. | 112. |
| AOET | AGRICULTURE | 0. | 0. | 1. | 1. | 1. | 2. | 2. | 2. |
| FSET | FISHERIES | 0. | 0. | 10. | 10. | 10. | 10. | 10. | 10. |
| FOET | FORESTRY | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| MEET | MINING | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. |
| MAET | MANUFACTURING | -18. | -30. | -44. | -44. | -47. | -48. | -45. | -41. |
| MTET | UTILITIES | 1. | 1. | 1. | 1. | 1. | 1. | 1. | 1. |
| COET | CONSTRUCTION | 10. | 8. | 5. | 2. | 0. | -1. | -1. | 0. |
| TOET | TRANSPORT, STORAGE & COMMUNICATION | 14. | 14. | 13. | 12. | 11. | 10. | 10. | 10. |
| IRET | TRADE | 32. | 33. | 35. | 35. | 36. | 36. | 37. | 38. |
| FIET | FINANCE, INSURANCE & REAL ESTATE | 9. | 5. | 3. | 6. | 7. | 8. | 9. | 9. |
| CSET | SERVICES | 41. | 46. | 48. | 49. | 49. | 49. | 52. | 53. |
| HOET | HOUSING | 11. | 13. | 14. | 15. | 16. | 17. | 17. | 18. |
| ADET | PUBLIC ADMINISTRATION | 11. | 13. | 14. | 15. | 16. | 17. | 17. | 18. |
| QUURATE | UNEMPLOYMENT RATE (%) | -0.45 | -0.41 | -0.03 | -0.02 | -0.01 | -0.01 | -0.04 | -0.07 |

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCES)

| | 1994 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | | |
|-----------------------------------|---------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| *****LABOUR COSTS AND PRICES***** | | | | | | | | | |
| Q100ET | | | | | | | | | |
| Q100EI | | | | | | | | | |
| | WAGES & SALARIES PER EMPLOYEE (00) | | | | | | | | |
| | OUTPUT PER EMPLOYEE (1971) | | | | | | | | |
| | | -1416 | -1015 | -1974 | -2094 | -2203 | -2312 | -2439 | -2447 |
| | | 129 | 117 | 144 | 142 | 147 | 146 | 164 | 171 |
| *****1971 = 100***** | | | | | | | | | |
| Q100LC | PRIVATE NON-AGRIC. UNIT LABOUR COSTS | -0.23 | -0.26 | -0.27 | -0.29 | -0.30 | -0.32 | -0.33 | -0.36 |
| Q100LE | MANUFACTURING LABOUR COSTS | -0.26 | -0.29 | -0.32 | -0.34 | -0.35 | -0.37 | -0.38 | -0.40 |
| Q100P | IMPLICIT OUTPUT DEFLATOR | -0.24 | -0.29 | -0.31 | -0.32 | -0.33 | -0.35 | -0.37 | -0.40 |
| Q100NE | IMPLICIT GNP DEFLATOR | -0.20 | -0.20 | -0.22 | -0.23 | -0.25 | -0.26 | -0.28 | -0.32 |
| Q100CB | IMPLICIT DEFLATOR OF CONSUMPTION | -0.25 | -0.27 | -0.28 | -0.29 | -0.30 | -0.31 | -0.33 | -0.36 |
| Q100CI | CONSUMER PRICE INDEX | -24.83 | -26.01 | -27.76 | -28.83 | -29.84 | -30.94 | -32.27 | -33.33 |
| Q100I | IMPLICIT DEFLATOR OF INVESTMENT | -0.31 | -0.33 | -0.36 | -0.38 | -0.40 | -0.42 | -0.44 | -0.48 |
| Q100OB | IMPLICIT DEFLATOR OF GOVT. SPENDING | -0.30 | -0.34 | -0.37 | -0.39 | -0.41 | -0.44 | -0.47 | -0.51 |
| Q100XP | IMPLICIT DEFLATOR OF EXPORTS | -0.29 | -0.33 | -0.36 | -0.39 | -0.41 | -0.44 | -0.46 | -0.50 |
| Q100YD | IMPLICIT DEFLATOR OF IMPORTS | -0.29 | -0.31 | -0.33 | -0.35 | -0.41 | -0.43 | -0.45 | -0.49 |
| Q100YU | GROSS DOM. PRICE AT THROUGH INCL. TAX | -2.94 | -3.40 | -3.40 | -4.32 | -4.49 | -5.07 | -5.39 | -6.04 |
| *****FINANCIAL VARIABLES***** | | | | | | | | | |
| Q100MP | PRIME COMMERCIAL PAPER RATE | -0.55 | -0.55 | -0.18 | 0.02 | 0.06 | 0.06 | -0.04 | -0.27 |
| Q100MD | INDUSTRIAL BOND RATE | -0.41 | -0.27 | -0.18 | -0.09 | -0.04 | -0.02 | -0.03 | -0.12 |
| Q100YB | EXCHANGE RATE (CAN/US \$) | -0.05 | -0.07 | -0.00 | -0.08 | -0.08 | -0.08 | -0.08 | -0.09 |
| Q100YK | EXCHANGE RATE (CENTS U.S. PER £ CAN.) | 4.77 | 5.48 | 6.01 | 6.30 | 6.46 | 6.33 | 6.59 | 6.99 |
| Q100YD | EXCHANGE RATE (CAN/DEU UNIT) | -0.06 | -0.07 | -0.06 | -0.09 | -0.08 | -0.08 | -0.08 | -0.09 |

TARIFF, NRI AND PRODUCTIVITY IMPACT

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCES)

(UNITED STATES DOLLARS)

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | | |
|--|---|--------|--------|--------|--------|--------|--------|--------|--------|
| *****SELECTED INCOME VARIABLES***** | | | | | | | | | |
| *****BILLIONS OF CURRENT DOLLARS***** | | | | | | | | | |
| GNPC | GROSS NATIONAL PRODUCT | -38044 | -44611 | -50128 | -54034 | -57817 | -59971 | -62743 | -64434 |
| GVP | PERSONAL INCOME | -27713 | -30091 | -32117 | -33024 | -34352 | -35059 | -37011 | -43154 |
| QYPC | PERSONAL DISPOSABLE INCOME | -23297 | -25535 | -27596 | -28871 | -30038 | -31168 | -32683 | -35298 |
| QYPCOP | REAL PER CAPITA (1971) | 100 | 105 | 109 | 110 | 111 | 111 | 113 | 119 |
| QIENA | TOTAL WAGES | -18337 | -21503 | -24362 | -26314 | -28013 | -29594 | -30990 | -33853 |
| QCP | CORPORATE PROFITS | -11082 | -11243 | -12254 | -12209 | -12127 | -12338 | -12337 | -14083 |
| SCBAL | CURRENT ACCOUNT BALANCE | -1292 | -1044 | -742 | -565 | -525 | -658 | -857 | -1538 |
| QCMON | -AS SHARE OF GNP | -0.18 | -0.16 | -0.57 | -0.05 | -0.04 | -0.04 | -0.04 | -0.08 |
| QMICDL | MERCHANDISE TRADE BALANCE | -1475 | -974 | -598 | -273 | -180 | -163 | -124 | -694 |
| QBIBAL | GOVERNMENT BALANCE | -2241 | -3278 | -4123 | -4433 | -4408 | -4198 | -3628 | -3837 |
| QCBLOH | -AS SHARE OF GNP | -0.33 | -0.41 | -0.43 | -0.40 | -0.35 | -0.30 | -0.19 | -0.16 |
| QDREV | REVENUES | -18854 | -19943 | -21459 | -21742 | -22313 | -23394 | -24712 | -28821 |
| QDEXP | EXPENDITURES | -18858 | -18997 | -17716 | -17813 | -18748 | -19964 | -21982 | -24007 |
| QOCEGN | -AS SHARE OF GNP | 0.08 | 0.29 | 0.41 | 0.51 | 0.58 | 0.49 | 0.37 | 0.25 |
| QCDALF | FEDERAL BALANCE | -2030 | -3424 | -4566 | -5396 | -5934 | -6326 | -6418 | -6726 |
| QOBALJ | NON-FEDERAL BALANCE | -210 | 194 | 403 | 940 | 1526 | 2128 | 2784 | 2869 |
| *****INVESTMENT AND SAVINGS BY SECTOR***** | | | | | | | | | |
| *****BILLIONS OF CURRENT DOLLARS***** | | | | | | | | | |
| QIP | PERSONAL INVESTMENT | -1438 | -1914 | -2369 | -2742 | -2999 | -3197 | -3285 | -3589 |
| QCYDC | PERSONAL SAVINGS RATE | 0.39 | 0.30 | 0.24 | 0.17 | 0.13 | 0.14 | 0.12 | 0.17 |
| QIB | BUSINESS INVESTMENT | -4668 | -7291 | -9844 | -11745 | -12577 | -13031 | -12986 | -13466 |
| QCFAC | GOVERNMENT INVESTMENT | -1385 | -1611 | -1841 | -2018 | -2193 | -2369 | -2319 | -2170 |
| QI12 | TOTAL INVESTMENT SAVINGS INCLUDING GOV. | -7524 | -10825 | -14056 | -16574 | -17739 | -18663 | -18889 | -19724 |
| QI12ON | -AS A SHARE OF GNP | -0.15 | -0.04 | -0.28 | -0.30 | -0.32 | -0.30 | -0.22 | -0.14 |
| QSP | PERSONAL SAVINGS | 206 | -346 | -1018 | -1631 | -2019 | -2267 | -2349 | -2203 |
| QSB | BUSINESS SAVINGS | -5338 | -6363 | -7599 | -8738 | -9429 | -10152 | -10888 | -12142 |
| QSC | GOVERNMENT SAVINGS | -1231 | -4882 | -6086 | -6466 | -6601 | -6567 | -6148 | -6631 |
| QI12ONDA | FOREIGN SAVINGS | 1230 | 866 | 568 | 360 | 307 | 423 | 607 | 1250 |

TARIFF, NTB AND PRODUCTIVITY IMPACT

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCES)

| | | 2004 | 2005 |
|---|-------------------------------------|-------|-------|
| *****NATIONAL EXPENDITURES (IN \$1971)***** | | | |
| 00NENK | GROSS NATIONAL PRODUCT | 5644. | 6273. |
| 00CZK | CONSUMPTION | 3942. | 3202. |
| 00C00K | DURABLES | 800. | 849. |
| 00C10K | AUTOS | 109. | 113. |
| 00C20K | SEMI-DURABLES | 553. | 501. |
| 00C30K | NON-DURABLES | 514. | 517. |
| 00C40K | FOOD | 237. | 249. |
| 00C50K | SERVICES | 1176. | 1235. |
| 00U10K | BUSINESS INVESTMENT | 1620. | 1999. |
| 00U20K | RESIDENTIAL | 10. | 30. |
| 00U30K | HOUSING STARTS (000'S) | 0. | 1. |
| 00U40K | NON-RESIDENTIAL | 1602. | 1969. |
| 00U50K | STRUCTURES | 376. | 475. |
| 00U60K | MACHINERY AND EQUIPMENT | 1226. | 1493. |
| 00V10K | VALUE PHYSICAL CHANGE IN INVENTORY | 243. | 320. |
| 00V20K | GOVERNMENT EXP. ON GOODS & SERVICES | 448. | 489. |
| 00V30K | CURRENT EXPENDITURES | 517. | 517. |
| 00V40K | FEDERAL | 193. | 201. |
| 00V50K | WAGES AND SALARIES | 69. | 92. |
| 00V60K | NON-FEDERAL | 320. | 336. |
| 00V70K | WAGES AND SALARIES | 196. | 206. |
| 00V80K | CAPITAL EXPENDITURES | 135. | 152. |
| 00X10K | NET EXPORTS OF GOODS AND SERVICES | 88. | 66. |
| 00X20K | EXPORTS OF GOODS AND SERVICES | 4136. | 4577. |
| 00X30K | MERCHANDISE | 4013. | 4440. |
| 00X40K | SERVICES | 120. | 130. |
| 00X50K | IMPORTS OF GOODS AND SERVICES | 4067. | 4513. |
| 00X60K | MERCHANDISE | 3331. | 3719. |
| 00X70K | SERVICES | 736. | 793. |

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCED)

| | | 2004 | 2005 |
|--|------------------------------------|-------|-------|
| *****OUTPUT BY KEY SECTORS (MN \$1971)***** | | | |
| QREV | REAL DOMESTIC PRODUCT | 4657. | 5182. |
| AGV | AGRICULTURE | 56. | 101. |
| FRV | FISHERIES | 54. | 55. |
| FDV | FORESTRY | 12. | 14. |
| MY | MINING | 108. | 206. |
| MAV | MANUFACTURING | 1814. | 2072. |
| MAADV | NON-DURABLE | 1403. | 1724. |
| MAVDV | DURABLE | 327. | 349. |
| UTV | UTILITIES | 107. | 116. |
| COV | CONSTRUCTION | 143. | 200. |
| TRV | TRANSPORT, STORAGE & COMMUNICATION | 532. | 543. |
| TRV | TRADE | 700. | 771. |
| FRV | FINANCE, INSURANCE & REAL ESTATE | 259. | 274. |
| COV | SERVICES | 449. | 479. |
| GOV | GOVERNMENT | 15. | 15. |
| ARV | PUBLIC ADMINISTRATION | 270. | 284. |
| *****LABOUR FORCE AND EMPLOYMENT (000 \$1980)***** | | | |
| OPDP | POPULATION | 0. | 0. |
| OPDPO | POPULATION | 0. | 0. |
| OLBPO | LABOUR FORCE | 59. | 64. |
| OCBPO | CIVILIAN SOURCE POPULATION | 0. | 0. |
| OPHATE | PARTICIPATION RATE (FRACTION) | 0.00 | 0.00 |
| TEET | TOTAL EMPLOYMENT | 127. | 146. |
| AOET | AGRICULTURE | 2. | 1. |
| FOET | FISHERIES | 0. | 0. |
| FOET | FORESTRY | 0. | 0. |
| MYET | MINING | 14. | 13. |
| MAET | MANUFACTURING | -34. | -24. |
| UTEET | UTILITIES | 1. | 1. |
| COET | CONSTRUCTION | 0. | 1. |
| TR1ET | TRANSPORT, STORAGE & COMMUNICATION | 10. | 11. |
| TR2ET | TRADE | 40. | 42. |
| FR1ET | FINANCE, INSURANCE & REAL ESTATE | 10. | 10. |
| CO1ET | SERVICES | 54. | 59. |
| ARE1 | PUBLIC ADMINISTRATION | 19. | 20. |
| UN1 | UNEMPLOYMENT | -28. | -27. |
| UN1RATE | UNEMPLOYMENT RATE (%) | -0.44 | -0.33 |

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCES)

| | 2004 | 2003 | |
|-----------------------------------|--|--------|--------|
| *****LABOUR COSTS AND PRICES***** | | | |
| QTEMET | WAGES & SALARIES PER EMPLOYEE (1971) | -2914 | -3291 |
| QIEVET | OUTPUT PER EMPLOYEE (1971) | 187 | 200 |
| *****1971 = 1 OR 100***** | | | |
| QPRULC | PRIVATE NON-AGRIC. UNIT LABOUR COSTS | -0.40 | -0.44 |
| QMAULC | MANUFACTURING LABOUR COSTS | -0.42 | -0.43 |
| QTEP | IMPLICIT OUTPUT DEFLATOR | -0.44 | -0.50 |
| QPMNE | IMPLICIT PNE DEFLATOR | -0.44 | -0.43 |
| QCPID | IMPLICIT DEFLATOR OF CONSUMPTION | -0.39 | -0.44 |
| QCP1 | (CONSUMER PRICE INDEX) | -38.74 | -43.44 |
| QPI | IMPLICIT DEFLATOR OF INVESTMENT | -0.53 | -0.57 |
| QCCOMP | IMPLICIT DEFLATOR OF GOVT SPENDING | -0.57 | -0.64 |
| QKTRP | IMPLICIT DEFLATOR OF EXPORTS | -0.54 | -0.59 |
| QIHMP | IMPLICIT DEFLATOR OF IMPORTS | -0.52 | -0.57 |
| QOPRYM | CRUDE OIL PRICE AT TOWNHILL INCL TAX | -6.63 | -7.46 |
| *****FINANCIAL VARIABLES***** | | | |
| QCNPCP | PRIME COMMERCIAL PAPER RATE | -0.32 | -0.49 |
| QRTNDB | INDUSTRIAL BOND RATE | -0.18 | -0.27 |
| QEXXN | EXCHANGE RATE (CAN/US \$) | -0.09 | -0.10 |
| QEXXNC | EXCHANGE RATE (CENTS U.S. PER \$ CAN.) | 7.29 | 7.65 |
| QXKXEC | EXCHANGE RATE (CAN/OECD UNIT) | -0.09 | -0.10 |

HAJIRI ECONOMIC INDICATORS
(LEVEL DIFFERENCE)

| | 2004 | 2005 | |
|--|--|--------|--------|
| *****SELECTED INCOME VARIABLES***** | | | |
| *****BILLIONS OF CURRENT DOLLARS***** | | | |
| GNP | GRAND NATIONAL PRODUCT | -76171 | -86132 |
| QVPI | PERSONAL INCOME | -46498 | -52300 |
| QVDC | PERSONAL DISPOSABLE INCOME | -39467 | -44619 |
| QVPRP | REAL PER CAPITA (1971) | 125 | 133 |
| QIENA | TOTAL SALES | -37053 | -46591 |
| QCP | CORPORATE PROFITS | -15604 | -17946 |
| QCBAL | CURRENT ACCOUNT BALANCE | -2119 | -2009 |
| QCB01N | -AS SHARE OF GNP | -0.09 | -0.11 |
| QMCBI | MERCHANDISE TRADE BALANCE | -1036 | -1497 |
| QGBAL | GOVERNMENT BALANCE | -3600 | -4251 |
| QGB01N | -AS SHARE OF GNP | -0.09 | -0.09 |
| QDNEV | REVENUES | -32209 | -30107 |
| QDNEXP | EXPENDITURES | -39797 | -35237 |
| QDCE01N | -AS SHARE OF GNP | 0.16 | 0.06 |
| QDDBAL | FEDERAL BALANCE | -7103 | -6872 |
| QDDBALJ | NON-FEDERAL BALANCE | 3893 | 3021 |
| *****INVESTMENT AND SAVINGS BY SECTOR***** | | | |
| *****BILLIONS OF CURRENT DOLLARS***** | | | |
| QIP | PERSONAL INVESTMENT | -3707 | -4039 |
| QSCVDC | -PERSONAL SAVINGS RATE | 0.21 | 0.26 |
| QID | BUSINESS INVESTMENT | -13162 | -13977 |
| QDFCAG | GOVERNMENT INVESTMENT | -3024 | -3371 |
| QI124 | TOTAL INVESTMENT-SAVINGS INCLUDING QDV | -20076 | -21359 |
| QI120N | -AS A SHARE OF GNP | -0.09 | -0.07 |
| QSP | PERSONAL SAVINGS | -2118 | -1893 |
| QSB | BUSINESS SAVINGS | -13036 | -14276 |
| QSD | GOVERNMENT SAVINGS | -2711 | -2626 |
| QSD01N | FOREIGN SAVINGS | 1793 | 2426 |

MAJOR ECONOMIC INDICATORS
(LEVEL DIFFERENCES)

| | | 2004 | 2005 |
|-----------------------------|---|--------|--------|
| *****MAJOR ASSUMPTIONS***** | | | |
| GNPUS | U.S. GROSS NATIONAL PRODUCT (GNP) | 0. | 0. |
| GNPKUS | U.S. GROSS NATIONAL PRODUCT (GNP) | 0. | 0. |
| GNPCEN | U.S. PERSONAL EXP. ON NON-DURABLES | 0. | 0. |
| GNPCDA | U.S. PERSONAL EXP. ON DURABLES | 0. | 0. |
| GNPUS | U.S. GNP DEFLATOR (1972=100) | 0.00 | 0.00 |
| GNPCEN | U.S. PERSONAL CONSUMP. DEFL. (1972=100) | 0.00 | 0.00 |
| GNPCF | U.S. PRIME COMMERCIAL PAPER RATE (%) | 0.00 | 0.00 |
| GNTR | U.S. TOTAL BOND RATE (%) | 0.00 | 0.00 |
| GIPEEC | INDUSTRIAL PRODUCTION INDEX - EEC | 0.00 | 0.00 |
| GIPIJAP | INDUSTRIAL PRODUCTION INDEX - JAPAN | 0.00 | 0.00 |
| GNPARQ | PERSIAN GULF PRICE OF OIL (\$ U.S.) | 0.00 | 0.00 |
| GNPARC | PERSIAN GULF PRICE OF OIL (\$ CAN.) | -3.79 | -4.53 |
| GNPACB | CANADIAN ENERGY TRADE BALANCE (MM \$) | -2470. | -3144. |
| GNPACL | CANADIAN OIL TRADE BALANCE (MM \$) | -700. | -1013. |
| GNETHM | NET IMMIGRATION ('000) | 0.00 | 0.00 |
| GNFERT | GENERAL FERTILITY RATE | 0.00 | 0.00 |

MAJOR ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCES)

| | 1980 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 95 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| *****NATIONAL EXPENDITURES (IN \$1971)***** | | | | | | | | |
| GNP | 0.13 | 0.40 | 0.73 | 1.17 | 1.53 | 1.98 | 2.10 | 2.54 |
| CONSUMPTION | -0.03 | 0.01 | 0.11 | 0.29 | 0.55 | 0.91 | 1.21 | 1.46 |
| DURABLE | -0.07 | 0.00 | 0.17 | 0.50 | 0.93 | 1.34 | 1.66 | 1.93 |
| NON-DURABLE | -0.19 | -0.17 | -0.06 | 0.19 | 0.40 | 0.58 | 0.78 | 0.96 |
| SERVICES | -0.08 | 0.17 | 0.05 | 0.41 | 0.33 | 0.73 | 0.98 | 1.27 |
| DURABLE | -0.04 | -0.03 | 0.05 | 0.20 | 0.40 | 0.73 | 0.98 | 1.27 |
| NON-DURABLE | -0.00 | -0.07 | 0.01 | 0.16 | 0.34 | 0.74 | 1.03 | 1.35 |
| SERVICES | -0.04 | -0.04 | -0.04 | 0.04 | 0.19 | 0.43 | 0.73 | 0.98 |
| BUSINESS INVESTMENT | 0.23 | 0.70 | 1.55 | 2.46 | 3.05 | 4.00 | 5.03 | 6.08 |
| RESIDENTIAL | 0.04 | 0.20 | 0.47 | 0.83 | 1.25 | 1.66 | 2.09 | 2.51 |
| HOUSING STAIRS (COMM) | 0.10 | 0.39 | 0.80 | 1.36 | 2.10 | 2.55 | 3.29 | 4.29 |
| NON-RESIDENTIAL | 0.27 | 0.80 | 1.74 | 3.01 | 4.34 | 5.50 | 6.61 | 7.52 |
| STRUCTURES | 0.23 | 0.67 | 1.33 | 2.20 | 3.32 | 4.33 | 5.11 | 6.04 |
| MACHINERY AND EQUIPMENT | 0.50 | 0.94 | 0.87 | 3.59 | 5.17 | 4.82 | 4.84 | 6.47 |
| VALUE PHYSICAL CHANGE IN INVENTORY | 2.16 | 7.13 | 14.37 | 17.12 | 20.08 | 26.63 | 35.92 | 46.05 |
| GOVERNMENT EXP. ON GOODS & SERVICES | 0.07 | 0.19 | 0.28 | 0.39 | 0.80 | 0.93 | 1.06 | 1.17 |
| CURRENT EXPENDITURES | 0.06 | 0.17 | 0.28 | 0.30 | 0.68 | 0.81 | 0.92 | 1.03 |
| FEDERAL | 0.13 | 0.33 | 0.54 | 0.74 | 0.90 | 0.98 | 0.93 | 0.91 |
| STATES AND LOCAL | 0.15 | 0.17 | 0.59 | 0.74 | 0.74 | 0.96 | 0.99 | 0.98 |
| NON-FEDERAL | 0.04 | 0.11 | 0.23 | 0.39 | 0.59 | 0.78 | 0.95 | 1.10 |
| CAPITAL EXPENDITURES | 0.04 | 0.12 | 0.25 | 0.42 | 0.82 | 0.80 | 0.84 | 0.87 |
| GOVERNMENT | 0.11 | 0.32 | 0.29 | 1.05 | 1.41 | 1.43 | 1.71 | 1.73 |
| NET EXPORTS OF GOODS AND SERVICES | 3.10 | 10.91 | 20.90 | 17.00 | 19.00 | 14.07 | 9.21 | 7.20 |
| EXPORTS OF GOODS AND SERVICES | 0.45 | 1.01 | 1.73 | 2.39 | 3.21 | 3.34 | 3.79 | 4.01 |
| MERCHANDISE | 0.31 | 1.14 | 1.89 | 2.74 | 3.70 | 4.07 | 4.35 | 4.59 |
| SERVICES | 0.14 | 0.14 | 0.24 | 0.38 | 0.48 | 0.59 | 0.70 | 0.79 |
| IMPORTS OF GOODS AND SERVICES | 0.24 | 0.40 | 1.12 | 1.81 | 2.43 | 3.23 | 4.46 | 5.95 |
| MERCHANDISE | 0.20 | 0.50 | 1.59 | 2.45 | 3.44 | 4.02 | 4.59 | 5.37 |
| SERVICES | 0.20 | 0.33 | 0.34 | 0.20 | 0.08 | 0.73 | 1.17 | 1.97 |

MAJOR ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCES)

REPORT PERIOD: 1987-1994

PAGE: 11

| | | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | |
|---|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| *****OUTPUT BY KEY SECTOR (MM \$1971)***** | | | | | | | | | |
| GDY | REAL DOMESTIC PRODUCT | 0.12 | 0.27 | 0.68 | 1.10 | 1.53 | 1.85 | 1.96 | 1.96 |
| AGY | AGRICULTURE | 0.06 | 0.29 | 0.47 | 0.90 | 1.19 | 1.45 | 1.51 | 1.60 |
| FSY | FISHERIES | 2.42 | 5.04 | 9.31 | 13.63 | 17.97 | 18.21 | 16.13 | 18.10 |
| FDY | FORESTRY | 0.17 | 0.50 | 0.89 | 1.37 | 1.83 | 2.05 | 1.94 | 1.70 |
| MY | MINING | 0.31 | 0.74 | 1.21 | 1.82 | 2.42 | 2.67 | 2.70 | 2.64 |
| MAY | MANUFACTURING | 0.24 | 0.74 | 1.34 | 2.09 | 2.82 | 3.24 | 3.09 | 3.23 |
| MDY | DURABLES | 0.29 | 0.74 | 1.70 | 2.63 | 3.58 | 4.09 | 4.19 | 4.28 |
| MNDY | NON-DURABLES | 0.19 | 0.55 | 0.93 | 1.46 | 1.94 | 2.22 | 2.22 | 2.11 |
| UY | UTILITIES | 0.07 | 0.23 | 0.43 | 0.75 | 0.99 | 1.12 | 1.22 | 1.37 |
| CDY | CONSTRUCTION | 0.14 | 0.40 | 0.83 | 1.40 | 2.00 | 2.40 | 2.63 | 2.46 |
| TSY | TRANSPORT, STORAGE & COMMUNICATION | 0.15 | 0.41 | 0.73 | 1.17 | 1.63 | 1.96 | 2.10 | 2.12 |
| IRY | TRADE | 0.08 | 0.30 | 0.61 | 1.07 | 1.57 | 2.04 | 2.29 | 2.37 |
| FY | FINANCE, INSURANCE & REAL ESTATE | 0.04 | 0.13 | 0.21 | 0.35 | 0.46 | 0.58 | 0.61 | 0.63 |
| ESY | SERVICES | 0.01 | 0.11 | 0.22 | 0.38 | 0.56 | 0.74 | 0.87 | 0.96 |
| HDY | HOUSING | 0.06 | 0.01 | 0.03 | 0.09 | 0.10 | 0.13 | 0.21 | 0.26 |
| ADY | PUBLIC ADMINISTRATION | 0.09 | 0.28 | 0.50 | 0.77 | 1.05 | 1.26 | 1.43 | 1.63 |
| *****LABOUR FORCE AND EMPLOYMENT (000'S)***** | | | | | | | | | |
| POP | POPULATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| HHH | HOUSEHOLDS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| LF | LABOUR FORCE | 0.03 | 0.09 | 0.17 | 0.25 | 0.33 | 0.36 | 0.37 | 0.36 |
| CSPP | CIVILIAN SOURCE POPULATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| PRATE | PARTICIPATION RATE (FRACTION) | 0.03 | 0.09 | 0.17 | 0.25 | 0.33 | 0.36 | 0.37 | 0.36 |
| TE | TOTAL EMPLOYMENT | 0.04 | 0.07 | 0.15 | 0.21 | 0.31 | 0.70 | 0.82 | 0.87 |
| AGE | AGRICULTURE | 0.00 | 0.04 | 0.05 | 0.03 | -0.03 | -0.14 | -0.19 | -0.16 |
| FSE | FISHERIES | 1.83 | 3.94 | 7.60 | 9.85 | 13.08 | 15.49 | 17.84 | 19.12 |
| FD | FORESTRY | 0.06 | 0.20 | 0.35 | 0.52 | 0.66 | 0.69 | 0.50 | 0.41 |
| MY | MINING | 0.17 | 0.40 | 0.88 | 1.41 | 2.04 | 2.53 | 2.86 | 3.07 |
| MFE | MANUFACTURING | 0.08 | -0.14 | -0.37 | -0.33 | -0.10 | 0.02 | -0.03 | -0.29 |
| UT | UTILITIES | 0.01 | 0.03 | 0.09 | 0.20 | 0.38 | 0.58 | 0.77 | 0.91 |
| CD | CONSTRUCTION | 0.06 | 0.18 | 0.41 | 0.74 | 1.12 | 1.48 | 1.68 | 1.66 |
| TSC | TRANSPORT, STORAGE & COMMUNICATION | 0.05 | 0.19 | 0.39 | 0.67 | 1.00 | 1.37 | 1.51 | 1.60 |
| TR | TRADE | 0.03 | 0.07 | 0.18 | 0.34 | 0.55 | 0.80 | 1.01 | 1.18 |
| FR | FINANCE, INSURANCE & REAL ESTATE | 0.01 | -0.06 | 0.12 | 0.20 | 0.29 | 0.30 | 0.43 | 0.47 |
| SR | SERVICES | 0.02 | 0.00 | 0.17 | 0.31 | 0.48 | 0.64 | 0.79 | 0.90 |
| HA | HOUSING | 0.02 | 0.19 | 0.36 | 0.55 | 0.74 | 0.86 | 0.96 | 1.09 |
| PA | PUBLIC ADMINISTRATION | 0.06 | 0.19 | 0.36 | 0.55 | 0.74 | 0.86 | 0.96 | 1.09 |
| UR | UNEMPLOYMENT | -0.07 | 0.46 | 0.39 | -0.44 | -2.74 | -3.74 | -7.03 | -8.51 |
| URATE | UNEMPLOYMENT RATE (%) | -0.10 | 0.36 | 0.23 | -0.89 | -3.06 | -6.08 | -8.17 | -8.84 |

CANADIAN ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCES)

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | |
|-----------------------------------|---------------------------------------|-------|-------|-------|--------|--------|--------|--------|--------|
| *****LABOUR COSTS AND PRICES***** | | | | | | | | | |
| Q1101 | WAGES & SALARIES PER EMPLOYEE (CPI) | -0.04 | -0.15 | -0.29 | -0.03 | -1.50 | -2.29 | -3.10 | -3.79 |
| Q1101 | OUTPUT PER EMPLOYEE (1971) | 0.00 | 0.31 | 0.53 | 0.79 | 1.01 | 1.14 | 1.12 | 1.08 |
| *****[97] = 1 OR 100***** | | | | | | | | | |
| Q1001 | PRIVATE NON-AGRIC. UNIT LABOR COSTS | -0.12 | -0.40 | -0.94 | -1.44 | -2.55 | -3.44 | -4.32 | -4.05 |
| Q1001 | MANUFACTURING LABOR COSTS | -0.17 | -0.61 | -1.55 | -2.49 | -3.58 | -4.56 | -5.37 | -4.10 |
| Q1001 | IMPLICIT OUTPUT DEFATION | -0.08 | -0.36 | -0.85 | -1.55 | -2.44 | -3.43 | -4.34 | -5.07 |
| Q1001 | IMPLICIT GNP DEFATION | -0.19 | -0.54 | -1.20 | -2.01 | -3.03 | -4.01 | -4.89 | -5.59 |
| Q1001 | IMPLICIT DEFATION OF CONSUMPTION | -0.17 | -0.55 | -1.13 | -1.91 | -3.00 | -3.87 | -4.74 | -5.41 |
| Q1001 | (CONSUMER PRICE INDEX) | -0.15 | -0.49 | -1.02 | -1.73 | -2.84 | -3.84 | -4.76 | -5.01 |
| Q1001 | IMPLICIT DEFATION OF INVESTMENT | -0.27 | -0.71 | -1.29 | -2.20 | -3.40 | -4.41 | -5.37 | -4.14 |
| Q1001 | IMPLICIT DEFATION OF GOVT SPENDING | -0.10 | -0.33 | -0.73 | -1.39 | -2.04 | -3.05 | -4.04 | -4.21 |
| Q1001 | IMPLICIT DEFATION OF EXPORTS | -0.02 | -0.24 | -0.44 | -1.24 | -2.12 | -3.18 | -4.23 | -5.21 |
| Q1001 | IMPLICIT DEFATION OF IMPORTS | 0.05 | -0.03 | -0.35 | -0.81 | -1.52 | -2.55 | -3.63 | -4.68 |
| Q1001 | CRUDE OIL PRICE AT TORONTO INCL TAX | 0.05 | -0.10 | -0.43 | -0.97 | -1.70 | -2.85 | -3.97 | -5.02 |
| *****FINANCIAL VARIABLES***** | | | | | | | | | |
| Q1001 | PRIME COMMERCIAL PAID RATE | -2.19 | -4.55 | -7.03 | -10.64 | -14.64 | -19.22 | -24.47 | -29.14 |
| Q1001 | INDUSTRIAL BOND RATE | -0.24 | -0.73 | -0.80 | -1.73 | -2.21 | -3.02 | -4.70 | -2.02 |
| Q1001 | EXCHANGE RATE (CAN/US \$) | 0.05 | -0.07 | -0.37 | -0.06 | 1.60 | 2.58 | 3.43 | 4.44 |
| Q1001 | EXCHANGE RATE (CENTS US PER 1 CAN \$) | -0.05 | 0.07 | 0.37 | 0.06 | -1.60 | -2.58 | -3.43 | -4.44 |
| Q1001 | EXCHANGE RATE (CANDOLLER UNIT) | 0.05 | -0.07 | -0.37 | -0.06 | 1.60 | 2.58 | 3.43 | 4.44 |

TABLE. RTD AND PRODUCTS

MAJOR ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCES)

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 95 |
|--|----------|--------|--------|--------|-------|-------|--------|--------|
| *****SELECTED INCOME VARIABLES***** | | | | | | | | |
| *****MILLIONS OF CURRENT DOLLARS***** | | | | | | | | |
| GNP | -0.06 | -0.20 | -0.48 | -0.84 | -1.44 | -2.11 | -2.89 | -3.60 |
| GNPC | -0.08 | -0.26 | -0.57 | -1.02 | -1.63 | -2.30 | -3.03 | -3.79 |
| QYP | -0.22 | -0.53 | -0.95 | -1.46 | -2.12 | -2.83 | -3.57 | -4.31 |
| QYIC | -0.05 | -0.03 | 0.19 | 0.46 | 0.80 | 1.29 | 1.83 | 2.41 |
| QYDPP | 0.00 | -0.00 | -0.24 | -0.53 | -1.00 | -1.60 | -2.30 | -2.95 |
| QTEWA | | | | | | | | |
| QCP | -0.45 | -0.83 | -1.73 | -2.65 | -4.25 | -5.47 | -7.21 | -8.60 |
| QCP | | | | | | | | |
| QCBAL | -1545.46 | 117.24 | -24.93 | 580.14 | 6.96 | 43.26 | 71.21 | 71.80 |
| QCBAL | -1542.36 | 114.23 | -26.58 | 582.03 | 8.53 | 46.35 | 74.46 | 74.21 |
| QCBAL | | | | | | | | |
| QNCBL | 0.78 | 1.17 | 0.24 | -0.67 | -2.45 | -5.81 | -7.83 | -4.94 |
| QNCBL | | | | | | | | |
| QGBAL | -1.83 | -3.52 | -4.92 | -7.58 | -7.84 | -4.49 | -0.08 | -4.39 |
| QGBAL | -1.77 | -3.33 | -4.44 | -6.78 | -6.48 | -2.43 | -2.98 | 6.29 |
| QGBAL | | | | | | | | |
| QREVEN | -0.13 | -0.39 | -0.84 | -1.48 | -2.42 | -3.33 | -4.17 | -4.70 |
| QREVEN | -0.24 | -0.41 | -1.11 | -1.79 | -2.64 | -3.28 | -3.78 | -4.02 |
| QREVEN | -0.18 | -0.41 | -0.64 | -0.94 | -1.21 | -1.38 | -0.42 | -0.44 |
| QREVEN | -1.14 | -2.20 | -2.58 | -5.44 | -6.50 | -5.02 | -1.79 | 2.38 |
| QREVEN | 2.37 | 2.63 | 1.30 | 0.84 | -1.87 | -7.39 | -11.71 | -8.51 |
| QREVEN | | | | | | | | |
| *****INVESTMENT AND SAVINGS BY SECTOR***** | | | | | | | | |
| *****MILLIONS OF CURRENT DOLLARS***** | | | | | | | | |
| QIP | -0.22 | -0.34 | -0.50 | -0.64 | -0.98 | -1.38 | -2.04 | -3.13 |
| QSCYDC | 0.04 | 0.50 | 1.37 | 2.54 | 3.79 | 5.18 | 5.48 | 5.24 |
| QIB | 0.19 | 0.63 | 1.09 | 1.34 | 1.72 | 1.20 | 0.32 | -1.38 |
| QDFCAC | -0.12 | -0.28 | -0.50 | -0.93 | -1.59 | -2.31 | -3.07 | -3.73 |
| QIB | | | | | | | | |
| QI12 | 0.04 | 0.34 | 0.41 | 0.47 | 0.84 | 0.86 | -0.37 | -2.61 |
| QI12CN | 0.15 | 0.54 | 1.04 | 1.74 | 2.32 | 2.72 | 2.39 | 1.64 |
| QIP | -0.15 | 0.63 | 0.33 | 0.83 | 1.26 | 1.83 | 1.67 | 1.03 |
| QSB | 0.10 | 0.26 | 0.18 | -0.06 | -0.47 | -1.11 | -2.07 | -3.11 |
| QSB | -0.31 | -28.84 | -38.53 | 46.23 | 43.04 | 9.23 | -13.88 | -24.79 |
| QSB | -0.44 | -13.02 | -7.23 | -6.70 | 0.86 | 14.23 | 21.99 | 22.59 |

Free trade causes
the economy to shrink?

-3.60

TABLE 1. NEW AND PRODUCTIVITY GROWTH

MAJOR ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCE)

| | 1994 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 03 | |
|---|-------------------------------------|--------|-------|-------|-------|-------|--------|-------|-------|
| *****NATIONAL EXPENDITURES (IN \$1971)***** | | | | | | | | | |
| GNEXK | GROSS NATIONAL PRODUCT | 1.90 | 1.94 | 1.89 | 1.83 | 1.84 | 1.88 | 2.01 | 2.13 |
| CCZK | CONSUMPTION | 1.45 | 1.79 | 1.90 | 1.93 | 1.99 | 2.01 | 2.04 | 2.10 |
| CCDZK | DURABLES | 2.52 | 2.49 | 2.74 | 2.81 | 2.82 | 2.82 | 2.84 | 2.97 |
| CCF0K | AUTOS | 1.32 | 1.57 | 1.61 | 1.40 | 1.44 | 1.44 | 1.46 | 1.58 |
| CCMDK | SEMI-DURABLES | 1.41 | 1.47 | 1.52 | 1.52 | 1.52 | 1.54 | 1.54 | 1.61 |
| CCN0K | NON-DURABLES | 2.29 | 2.17 | 2.42 | 2.43 | 2.41 | 2.39 | 2.39 | 2.42 |
| CCF0K | FOOD | 1.40 | 1.48 | 1.54 | 1.54 | 1.51 | 1.48 | 1.47 | 1.51 |
| CCLEK | SERVICES | 1.21 | 1.40 | 1.97 | 1.70 | 1.70 | 1.83 | 1.89 | 1.96 |
| QD00K | BUSINESS INVESTMENT | 1.17 | 1.14 | 2.02 | 1.82 | 1.78 | 1.88 | 2.13 | 2.59 |
| QD00K | RESIDENTIAL | 1.11 | 0.66 | 0.28 | 0.00 | 0.13 | 0.59 | 0.53 | 0.11 |
| QD00K | HOUSING STARTS (1000'S) | 1.41 | 0.50 | -0.24 | -0.73 | -0.94 | -0.96 | -0.81 | -0.41 |
| QD00K | NON-RESIDENTIAL | 1.38 | 1.50 | 2.24 | 2.22 | 2.03 | 2.14 | 2.22 | 2.83 |
| QD00K | STRUCTURES | 1.38 | 1.43 | 1.87 | 1.50 | 1.11 | 1.12 | 1.24 | 1.52 |
| QD00K | MACHINERY AND EQUIPMENT | 1.39 | 1.19 | 2.29 | 2.74 | 2.74 | 2.92 | 3.38 | 3.82 |
| QD00K | VALUE PHYSICAL CHANGE IN INVENTORY | -10.90 | -4.35 | -3.07 | -3.62 | -1.37 | -2.97 | 7.11 | 10.00 |
| GOVEXK | GOVERNMENT EXP. IN GOODS & SERVICES | 1.25 | 1.30 | 1.35 | 1.38 | 1.37 | 1.33 | 1.33 | 1.36 |
| GOVEXK | CURRENT EXPENDITURES | 1.15 | 1.24 | 1.31 | 1.34 | 1.37 | 1.35 | 1.35 | 1.34 |
| GOVEXK | FEDERAL | 0.81 | 0.20 | 0.54 | 0.81 | 0.59 | 0.52 | 0.70 | 0.70 |
| GOVEXK | STATES AND LOCALITIES | 0.50 | 0.91 | 1.13 | 1.45 | 1.61 | 1.60 | 1.66 | 1.66 |
| GOVEXK | NON-FEDERAL | 1.21 | 1.26 | 1.29 | 1.30 | 1.38 | 1.34 | 1.38 | 1.38 |
| GOVEXK | STATES AND LOCALITIES | 1.15 | 1.32 | 1.27 | 1.29 | 1.29 | 1.27 | 1.26 | 1.27 |
| GOVEXK | CAPITAL EXPENDITURES | 1.28 | 1.59 | 1.51 | 1.46 | 1.40 | 1.34 | 1.34 | 1.42 |
| QNT0K | NET EXPORTS OF GOODS AND SERVICES | -4.01 | 12.26 | 12.06 | 11.94 | 11.33 | -78.32 | 9.93 | 2.98 |
| QNT0K | EXPORTS OF GOODS AND SERVICES | 4.04 | 4.22 | 4.04 | 4.45 | 4.50 | 4.28 | 4.91 | 5.17 |
| QX00K | MERCHANDISE | 4.29 | 4.84 | 4.97 | 5.09 | 5.25 | 5.20 | 5.24 | 5.93 |
| QX00K | SERVICES | 0.79 | 0.76 | 0.83 | 0.86 | 0.89 | 0.87 | 0.86 | 0.96 |
| QNT0K | IMPORTS OF GOODS AND SERVICES | 4.09 | 4.10 | 4.10 | 4.19 | 4.44 | 4.62 | 4.83 | 5.22 |
| QNT0K | MERCHANDISE | 4.40 | 4.40 | 4.40 | 4.53 | 4.67 | 4.85 | 5.08 | 5.53 |
| QNT0K | SERVICES | 2.50 | 2.90 | 3.24 | 3.52 | 3.70 | 3.83 | 3.88 | 4.20 |

MALAYSIAN ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCES)

| | | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| *****GDP BY KEY SECTOR (IN 61921)***** | | | | | | | | | |
| QREV | REAL DOMESTIC PRODUCT | 1.04 | 1.01 | 1.74 | 1.72 | 1.74 | 1.72 | 1.89 | 1.90 |
| ADY | AGRICULTURE | 1.47 | 1.57 | 1.36 | 1.80 | 1.82 | 1.41 | 1.99 | 1.54 |
| FBY | FISHERIES | 17.44 | 17.35 | 18.97 | 0.86 | 1.34 | 15.83 | 18.27 | 15.41 |
| FDY | FORESTRY | 1.14 | 1.12 | 0.94 | 0.75 | 0.71 | 0.68 | 0.80 | 0.02 |
| MY | MINING | 2.43 | 2.43 | 2.97 | 2.93 | 2.38 | 2.29 | 2.82 | 2.43 |
| MAV | MANUFACTURING | 1.07 | 1.07 | 1.44 | 1.56 | 1.44 | 1.70 | 1.93 | 2.28 |
| MAVBY | METAL FABRICATOR | 3.75 | 3.85 | 5.45 | 4.46 | 3.83 | 4.70 | 4.33 | 4.78 |
| MAVBY | NON-METAL FABRICATOR | 1.05 | 1.05 | 1.47 | 1.47 | 1.41 | 1.40 | 1.40 | 1.51 |
| UTV | UTILITIES | 1.53 | 1.59 | 1.33 | 1.29 | 1.27 | 1.23 | 1.46 | 1.31 |
| CV | CONSTRUCTION | 2.03 | 1.53 | 1.14 | 0.00 | 0.80 | 0.81 | 0.43 | 1.11 |
| TSV | TRANSPORT, STORAGE & COMMUNICATION | 0.00 | 1.94 | 1.45 | 1.77 | 1.72 | 1.74 | 1.07 | 1.98 |
| TV | TRADE | 2.23 | 2.34 | 2.29 | 2.17 | 1.18 | 2.31 | 2.91 | 2.44 |
| FTV | FINANCE, INSURANCE & REAL ESTATE | 0.04 | 0.74 | 0.08 | 0.44 | 1.18 | 1.14 | 1.07 | 1.32 |
| COV | SERVICES | 0.04 | 1.63 | 1.04 | 1.43 | 1.43 | 1.01 | 1.04 | 1.05 |
| DOV | HOUSING | 0.29 | 0.31 | 0.31 | 0.39 | 0.27 | 0.29 | 0.23 | 0.23 |
| ADY | PUBLIC ADMINISTRATION | 1.77 | 1.80 | 1.95 | 2.00 | 2.00 | 1.97 | 1.87 | 1.92 |
| *****LABOUR FORCE AND EMPLOYMENT (000'S)***** | | | | | | | | | |
| UNP | POPULATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UNP | POPULATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UNEMP | LABOUR FORCE | 0.34 | 0.33 | 0.33 | 0.32 | 0.32 | 0.31 | 0.31 | 0.35 |
| UNEMP | CIVILIAN SOURCE POPULATION | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| UNEMP | PARTICIPATION RATE (FRACTION) | 0.34 | 0.33 | 0.33 | 0.32 | 0.32 | 0.31 | 0.31 | 0.35 |
| TEET | TOTAL EMPLOYMENT | 0.83 | 0.74 | 0.67 | 0.63 | 0.63 | 0.64 | 0.69 | 0.74 |
| AREY | AGRICULTURE | -0.06 | 0.03 | 0.13 | 0.19 | 0.24 | 0.20 | 0.30 | 0.30 |
| FBY | FISHERIES | 19.81 | 20.13 | 20.20 | 20.00 | 19.87 | 19.57 | 19.30 | 19.02 |
| FDY | FORESTRY | 0.24 | 0.14 | 0.14 | 0.14 | 0.21 | 0.23 | 0.22 | 0.15 |
| MY | MINING | 3.13 | 3.26 | 3.39 | 3.31 | 3.44 | 3.49 | 3.40 | 4.13 |
| MAV | MANUFACTURING | -1.25 | -1.24 | -1.77 | -1.84 | -1.87 | -1.84 | -1.74 | -1.51 |
| UTV | UTILITIES | 0.94 | 0.94 | 0.84 | 0.77 | 0.48 | 0.42 | 0.40 | 0.60 |
| CV | CONSTRUCTION | 1.41 | 1.02 | 0.43 | 0.27 | 0.04 | -0.07 | -0.11 | -0.06 |
| TSV | TRANSPORT, STORAGE & COMMUNICATION | 1.31 | 1.49 | 1.38 | 1.26 | 1.17 | 1.08 | 1.03 | 1.04 |
| TV | TRADE | 1.30 | 1.34 | 1.36 | 1.37 | 1.36 | 1.39 | 1.42 | 1.41 |
| FTV | FINANCE, INSURANCE & REAL ESTATE | 0.50 | 0.57 | 0.48 | 0.75 | 0.84 | 0.41 | 0.99 | 0.84 |
| COV | SERVICES | 0.95 | 1.06 | 1.03 | 1.01 | 1.02 | 1.01 | 1.03 | 1.04 |
| ADY | PUBLIC ADMINISTRATION | 1.20 | 1.24 | 1.45 | 1.55 | 1.44 | 1.42 | 1.48 | 1.48 |
| UNEMP | UNEMPLOYMENT | -0.82 | -2.49 | -4.27 | -4.04 | -4.22 | -4.49 | -4.37 | -4.97 |
| UNEMP | UNEMPLOYMENT RATE (%) | -8.34 | -7.79 | -6.50 | -6.54 | -6.52 | -6.99 | -6.70 | -7.29 |

TABLES NEW AND PRODUCE (1997)

MAJOR ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCES)

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | | |
|-----------------------------------|--|-------|-------|-------|-------|-------|-------|-------|-------|
| *****LABOUR COSTS AND PRICES***** | | | | | | | | | |
| WTNET | WAGES & SALARIES PER EMPLOYEE (6C) | -4.32 | -4.56 | -4.68 | -4.68 | -4.64 | -4.60 | -4.53 | -4.63 |
| WLEVEI | OUTPUT PER EMPLOYEE (67%) | 1.00 | 1.04 | 1.08 | 1.05 | 1.09 | 1.07 | 1.19 | 1.23 |
| *****1971 = 100***** | | | | | | | | | |
| OPRMLC | PRIVATE NON-AGRIC. UNIT LABOUR COSTS | -3.89 | -5.58 | -5.73 | -5.71 | -5.70 | -5.64 | -5.69 | -5.02 |
| OPMULC | MANUFACTURING LABOUR COSTS | -4.70 | -7.21 | -7.75 | -7.79 | -7.83 | -7.74 | -7.82 | -7.78 |
| QIEP | IMPLICIT OUTPUT DEFLATOR | -5.58 | -5.81 | -5.95 | -5.93 | -5.89 | -5.83 | -5.84 | -4.07 |
| OPONE | IMPLICIT ONE DEFLATOR | -6.07 | -6.34 | -6.45 | -6.43 | -6.40 | -6.35 | -6.36 | -6.60 |
| OCPTD | IMPLICIT DEFLATOR OF CONSUMPTION | -5.91 | -6.11 | -6.23 | -6.17 | -6.09 | -6.01 | -5.98 | -6.55 |
| OCPI | (CONSUMER PRICE INDEX) | -5.47 | -5.44 | -5.77 | -5.72 | -5.65 | -5.58 | -5.58 | -5.74 |
| OCPI | IMPLICIT DEFLATOR OF INVESTMENT | -6.74 | -7.03 | -7.25 | -7.22 | -7.34 | -7.34 | -7.33 | -7.57 |
| OCGDP | IMPLICIT DEFLATOR OF GOVT SPENDING | -6.05 | -6.13 | -6.34 | -6.42 | -6.47 | -6.52 | -6.59 | -6.05 |
| OCPTXP | IMPLICIT DEFLATOR OF EXPORTS | -6.89 | -6.57 | -7.04 | -7.27 | -7.38 | -7.46 | -7.48 | -7.85 |
| OCIMP | IMPLICIT DEFLATOR OF IMPORTS | -5.61 | -6.14 | -6.70 | -7.00 | -7.13 | -7.24 | -7.21 | -7.65 |
| OCPIW | CRUDE OIL PRICE AT TORONTO INCL. TAX | -5.94 | -6.46 | -7.00 | -7.26 | -7.40 | -7.46 | -7.49 | -7.80 |
| *****FINANCIAL VARIABLES***** | | | | | | | | | |
| OCNCP | PRIME COMMERCIAL PAPER RATE | -4.14 | -3.14 | -2.14 | 0.30 | 0.58 | 0.79 | -0.28 | -3.64 |
| OCIND | INDUSTRIAL BOND RATE | -4.29 | -3.19 | -2.19 | -1.03 | -0.47 | -0.14 | -0.38 | -1.31 |
| OCXIN | EXCHANGE RATE (CAN/US \$) | -5.52 | -6.06 | -6.61 | -6.90 | -7.06 | -7.15 | -7.19 | -7.68 |
| OCXIN | EXCHANGE RATE (CENTS U.S. PER \$ CAN.) | 3.85 | 6.45 | 7.00 | 7.41 | 7.60 | 7.70 | 7.75 | 8.22 |
| OCXDEC | EXCHANGE RATE (CAN/USD UNIT) | -5.52 | -6.06 | -6.61 | -6.90 | -7.06 | -7.15 | -7.19 | -7.68 |

MARKET ECONOMY INDICATORS
(PERCENTAGE DIFFERENCES)

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | |
|---|--|-------|--------|--------|--------|--------|--------|--------|--------|
| *****SELECTED INCOME VARIABLES***** | | | | | | | | | |
| *****BILLIONS OF CURRENT DOLLARS***** | | | | | | | | | |
| GNPC | GRAND NATIONAL PRODUCT | -4.22 | -4.99 | -4.69 | -4.72 | -4.46 | -4.43 | -4.40 | -4.41 |
| GNPC | PERSONAL INCOME | -3.28 | -3.97 | -3.73 | -3.59 | -3.49 | -3.46 | -3.51 | -3.51 |
| GNPC | PERSONAL DISPOSABLE INCOME | -4.02 | -4.83 | -4.59 | -4.72 | -4.09 | -4.01 | -3.95 | -4.00 |
| GNPC | REAL PER CAPITA (1971) | -3.01 | -3.00 | -3.19 | -3.13 | -3.13 | -3.12 | -3.16 | -3.26 |
| GNPC | TOTAL WAGES | -3.53 | -3.84 | -4.03 | -4.09 | -4.03 | -3.98 | -3.87 | -3.93 |
| GNP | CORPORATE PROFITS | -9.37 | -8.89 | -8.97 | -8.60 | -8.22 | -8.21 | -7.71 | -8.04 |
| CCBLA | CURRENT ACCOUNT BALANCE | 20.83 | 132.20 | 121.67 | 98.33 | 23.10 | 34.63 | 11.96 | 13.00 |
| CCBLA | -AS SHARE OF GNP | 54.87 | 133.59 | 123.74 | 73.91 | 19.34 | 41.75 | 18.84 | 11.73 |
| CCBLA | MERCHANDISE TRADE BALANCE | -2.79 | -2.60 | -2.02 | -0.84 | -0.29 | -0.30 | -0.30 | -1.31 |
| CCBLA | GOVERNMENT BALANCE | 18.83 | 81.73 | 79.11 | 296.40 | 39.58 | 41.87 | 13.44 | 11.02 |
| CCBLA | -AS SHARE OF GNP | 13.72 | 81.59 | 81.22 | 502.12 | 53.41 | 39.86 | 17.10 | 7.72 |
| CCBEK | REVENUES | -3.83 | -4.93 | -4.98 | -4.61 | -4.43 | -4.31 | -4.17 | -4.44 |
| CCBEK | EXPENDITURES | -4.82 | -5.07 | -5.79 | -5.59 | -5.55 | -5.54 | -5.15 | -4.83 |
| CCBEK | -AS SHARE OF GNP | 8.17 | 8.65 | 8.94 | 1.18 | 1.16 | 1.13 | 0.84 | 0.59 |
| CCBAL | FEDERAL BALANCE | 8.19 | 19.81 | 37.01 | 74.57 | 213.10 | 441.32 | -82.83 | -44.16 |
| CCBAL | NON-FEDERAL BALANCE | -8.13 | 3.91 | 4.07 | 11.80 | 14.24 | 18.48 | 18.07 | 14.04 |
| *****INVESTMENT AND SAVINGS BY SECTION***** | | | | | | | | | |
| *****BILLIONS OF CURRENT DOLLARS***** | | | | | | | | | |
| GNP | PERSONAL INVESTMENT | -4.43 | -3.42 | -4.00 | -6.37 | -4.39 | -4.24 | -6.93 | -3.84 |
| GNP | PERSONAL SAVINGS RATE | 4.83 | 3.73 | 3.95 | 2.07 | 1.24 | 1.44 | 1.20 | 2.26 |
| GNP | BUSINESS INVESTMENT | -3.23 | -4.53 | -9.50 | -4.03 | -3.97 | -5.04 | -5.24 | -9.03 |
| GNP | GOVERNMENT INVESTMENT | -4.27 | -4.57 | -4.78 | -4.86 | -4.94 | -4.90 | -6.94 | -5.85 |
| GNP | TOTAL INVESTMENT-SAVINGS INCLUDING GNP | -3.59 | -4.47 | -5.40 | -5.90 | -9.07 | -9.76 | -9.31 | -9.13 |
| GNP | -AS A SHARE OF GNP | 8.22 | 8.19 | 8.83 | 1.24 | 1.28 | 1.20 | 0.87 | 0.57 |
| GNP | PERSONAL SAVINGS | 0.34 | -0.69 | -1.49 | -2.28 | -2.63 | -3.03 | -3.77 | -4.46 |
| GNP | BUSINESS SAVINGS | -4.14 | -4.53 | -5.82 | -5.43 | -5.53 | -5.70 | -5.51 | -5.83 |
| GNP | GOVERNMENT SAVINGS | 20.87 | 22.10 | 18.27 | 13.07 | 12.41 | 11.39 | 8.20 | 7.37 |
| GNP | FOREIGN SAVINGS | 14.32 | 18.43 | 16.36 | 12.73 | 13.67 | 8.35 | 59.13 | 20.63 |

TABLE. NEW AND PROPOSED BY AREA

MAJOR ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCES)

| | | 2004 | 2005 |
|---|-------------------------------------|-------|-------|
| *****NATIONAL EXPENDITURES (IN \$1978)***** | | | |
| GENERAL | GROSS NATIONAL PRODUCT | 2.33 | 3.54 |
| OCYR | CONSUMPTION | 2.17 | 2.37 |
| OCYRNR | DURABLE | 2.16 | 2.21 |
| OCYROR | AUTOS | 3.81 | 4.63 |
| OCYRNR | SEMI-DURABLE | 3.89 | 2.80 |
| OCYROR | NON-DURABLE | 1.48 | 1.51 |
| OCYRNR | FOOD | 1.31 | 1.20 |
| OCYROR | SERVICES | 2.02 | 3.10 |
| QUOTNR | BUSINESS INVESTMENT | 3.10 | 3.87 |
| QTR | RESIDENTIAL | 0.34 | 0.50 |
| QTR | HOUSING STARTS (000'00) | 0.04 | 0.51 |
| QTRNR | NON-RESIDENTIAL | 3.40 | 3.99 |
| QTROR | STRUCTURES | 1.02 | 1.27 |
| QTRNR | MACHINERY AND EQUIPMENT | 4.54 | 5.27 |
| STVPR | VALUE PHYSICAL CHANGE IN INVENTORY | 15.14 | 10.63 |
| GOVERN | GOVERNMENT EXP. ON GOODS & SERVICES | 1.41 | 1.46 |
| OCYRNR | CURRENT EXPENDITURES | 1.37 | 1.41 |
| OCYROR | FEDERAL | 1.79 | 1.82 |
| OCYRNR | WAGES AND SALARIES | 2.00 | 2.02 |
| OCYROR | NON-FEDERAL | 1.20 | 1.24 |
| OCYRNR | WAGES AND SALARIES | 1.29 | 1.33 |
| OCYROR | CAPITAL EXPENDITURES | 1.52 | 1.74 |
| QTRNR | NET EXPORTS OF GOODS AND SERVICES | 3.13 | 3.09 |
| QTRNR | EXPORTS OF GOODS AND SERVICES | 5.49 | 5.94 |
| QTRNR | MERCHANDISE | 4.30 | 4.41 |
| QTRNR | SERVICES | 1.19 | 1.53 |
| QTRNR | IMPORTS OF GOODS AND SERVICES | 2.36 | 2.85 |
| QTRNR | MERCHANDISE | 3.90 | 4.31 |
| QTRNR | SERVICES | 4.41 | 4.70 |

TABLE: GDP AND ECONOMIC INDICATORS

MAJOR ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCES)

| | | 2004 | 2005 |
|---|------------------------------------|-------|--------|
| *****OUTPUT BY KEY SECTORS (MM \$1971)***** | | | |
| QTEY | REAL DOMESTIC PRODUCT | 2.18 | 2.38 |
| AGY | AGRICULTURE | 1.68 | 1.73 |
| FBY | FISHERIES | 15.74 | 15.22 |
| FDY | FORESTRY | 1.00 | 1.14 |
| MIY | MINING | 2.83 | 3.04 |
| MAFY | MANUFACTURING | 2.64 | 4.08 |
| MAFYH | HABITABLE | 5.39 | 4.18 |
| MAFYN | NON-HABITABLE | 1.47 | 1.54 |
| UTY | UTILITIES | 1.41 | 1.51 |
| COY | CONSTRUCTION | 1.34 | 1.41 |
| TCY | TRANSPORT, STORAGE & COMMUNICATION | 2.14 | 2.37 |
| TCY | TRADE | 2.64 | 2.08 |
| FTY | FINANCE, INSURANCE & REAL ESTATE | 1.39 | 1.45 |
| CSY | SERVICES | 1.10 | 1.14 |
| ICY | INDUSING | 0.21 | 0.21 |
| ADY | PUBLIC ADMINISTRATION | 2.02 | 2.09 |
| *****LABOUR FORCE AND EMPLOYMENT (000'S)***** | | | |
| POP | POPULATION | 0.00 | 0.00 |
| IBHHD | (HOUSEHOLDS) | 0.00 | 0.00 |
| LF | LABOUR FORCE | 0.37 | 0.39 |
| OCPRF | CIVILIAN SOURCE POPULATION | 0.00 | 0.00 |
| PRATE | PARTICIPATION RATE (FRACTION) | 0.37 | 0.39 |
| TEET | TOTAL EMPLOYMENT | 0.84 | 0.95 |
| AGET | AGRICULTURE | 0.26 | 0.21 |
| FSET | FISHERIES | 18.80 | 18.41 |
| FSET | FORESTRY | 0.39 | 0.42 |
| MIET | MINING | 4.41 | 4.75 |
| MAET | MANUFACTURING | -1.35 | -1.02 |
| UJET | UTILITIES | 0.44 | 0.49 |
| COET | CONSTRUCTION | 0.04 | 0.18 |
| TCET | TRANSPORT, STORAGE & COMMUNICATION | 1.87 | 1.12 |
| TCET | TRADE | 1.54 | 1.47 |
| FTET | FINANCE, INSURANCE & REAL ESTATE | 1.10 | 1.15 |
| CSET | SERVICES | 1.00 | 1.13 |
| ABET | PUBLIC ADMINISTRATION | 1.74 | 1.00 |
| UNR | UNEMPLOYMENT | -0.27 | -9.03 |
| URATE | UNEMPLOYMENT RATE (%) | -0.60 | -10.10 |

TARGET NEW AND PRODUCTIVITY IMPROV

MAJOR ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCE)

| | 2004 | 2005 |
|--|-------|-------|
| *****LABOUR COSTS AND PRICES***** | | |
| QIEVEI WAGES & SALARIES PER EMPLOYEE (A4C) | -1.79 | -5.06 |
| QIEVEI OUTPUT PER EMPLOYEE (A7I) | 1.33 | 1.41 |
| *****1971 = 100***** | | |
| QPHUC PRIVATE NON-AGRIC. UNIT LABOR COSTS | -6.03 | -6.39 |
| QMAUC MANUFACTURING LABOR COSTS | -7.42 | -8.08 |
| QTEP IMPLICIT OUTPUT DEFLATOR | -4.35 | -4.77 |
| QDNE IMPLICIT GNP DEFLATOR | -6.08 | -7.11 |
| QCPID IMPLICIT DEFLATOR OF CONSUMPTION | -4.43 | -4.08 |
| QCP1 (CONSUMER PRICE INDEX) | -5.97 | -7.13 |
| QPI IMPLICIT DEFLATOR OF INVESTMENT | -7.01 | -8.20 |
| QCCOMP IMPLICIT DEFLATOR OF GNP SPENDING | -6.15 | -4.50 |
| QPCYK IMPLICIT DEFLATOR OF EXPORTS | -8.10 | -8.53 |
| QIPKP IMPLICIT DEFLATOR OF IMPORTS | -7.63 | -8.31 |
| QOPM5 CRUDE OIL PRICE AT LONDON INCL TAX | -6.12 | -8.53 |
| *****FINANCIAL VARIABLES***** | | |
| QCNCP PRIME COMMERCIAL PAPER RATE | -4.35 | -4.76 |
| QFINO INDUSTRIAL BOND RATE | -1.95 | -2.85 |
| QEXN EXCHANGE RATE (% AN/100 B.) | -7.04 | -8.36 |
| QEXK EXCHANGE RATE (CENTS U.S. PER 1 CAN.) | 0.51 | 7.80 |
| QEXG EXCHANGE RATE (% AN/100 G.) | -7.84 | -8.24 |

TABLE: NEW AND PRODUCTION (1997)

MAJOR ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCES)

| | | 2004 | 2005 |
|---|---|--------|--------|
| *****SELECTED INCOME VARIABLES***** | | | |
| *****BILLIONS OF CURRENT DOLLARS***** | | | |
| GNP | GROSS NATIONAL PRODUCT | -4.71 | -4.95 |
| PI | PERSONAL INCOME | -3.73 | -4.04 |
| PIHC | PERSONAL DISPOSABLE INCOME | -4.24 | -4.51 |
| GDPPCP | REAL PER CAPITA (1971) | 2.56 | 2.50 |
| WAGE | TOTAL WAGES | -5.99 | -4.14 |
| ICP | CORPORATE PROFITS | -8.97 | -9.09 |
| CCURAL | CURRENT ACCOUNT BALANCE | -11.42 | -12.12 |
| CCURLOM | -AS SHARE OF GNP | -10.19 | -10.71 |
| MCURAL | MERCHANDISE TRADE BALANCE | -2.04 | -2.62 |
| GCURAL | GOVERNMENT BALANCE | -7.20 | -6.20 |
| GCURLOM | -AS SHARE OF GNP | -2.70 | -1.31 |
| GRNEV | REVENUES | -4.43 | -5.03 |
| GRNEVP | EXPENDITURES | -4.95 | -4.02 |
| GRNECH | -AS SHARE OF GNP | 0.30 | 0.14 |
| GCBALF | FEDERAL BALANCE | -30.10 | -23.12 |
| GCBALJ | NON-FEDERAL BALANCE | 13.04 | 11.34 |
| *****INVESTMENT AND SAVINGS BY SECTION***** | | | |
| *****BILLIONS OF CURRENT DOLLARS***** | | | |
| PI | PERSONAL INVESTMENT | -5.43 | -5.40 |
| SCYDC | -PERSONAL SAVINGS RATE | 3.81 | 3.67 |
| IB | BUSINESS INVESTMENT | -4.41 | -4.39 |
| GCFCAC | GOVERNMENT INVESTMENT | -3.12 | -3.31 |
| ITIZ | TOTAL INVESTMENT-SAVINGS INCLUDING GOV. | -4.04 | -4.71 |
| ITIZOM | -AS A SHARE OF GNP | -0.14 | 0.25 |
| SP | PERSONAL SAVINGS | -2.25 | -1.91 |
| SB | BUSINESS SAVINGS | -5.93 | -6.00 |
| SD | GOVERNMENT SAVINGS | -4.12 | -5.77 |
| SBNSA | FOREIGN SAVINGS | -19.94 | -19.44 |

TABLE A.100 AND SUPPLEMENTAL TABLES

MAJOR ECONOMIC INDICATORS
(PERCENTAGE DIFFERENCE)

| | | 2004 | 2005 |
|-----------------------------|--|--------|--------|
| *****MAJOR ASSUMPTIONS***** | | | |
| GNPUS | U.S. GROSS NATIONAL PRODUCT (1961) | 0.00 | 0.00 |
| GNPUB | U.S. GROSS NATIONAL PRODUCT (1972) | 0.00 | 0.00 |
| GNPEN | U.S. PERSONAL EXP. IN DURABLES | 0.00 | 0.00 |
| GNCEDA | U.S. PERSONAL EXP. ON AUTOS | 0.00 | 0.00 |
| GNPUB | U.S. GNP DEFLATOR (1972=100) | 0.00 | 0.00 |
| GNPCE | U.S. PERSONAL CONSUM. DEFL. (1972=100) | 0.00 | 0.00 |
| GNCP | U.S. PRIME COMMERCIAL PAPER RATE (2) | 0.00 | 0.00 |
| GNR | U.S. TREASURY BOND RATE (2) | 0.00 | 0.00 |
| GNPECC | INDUSTRIAL PRODUCTION INDEX - ECC | 0.00 | 0.00 |
| GNPJAP | INDUSTRIAL PRODUCTION INDEX - JAPAN | 0.00 | 0.00 |
| GNPAIG | RUSSIAN OIL PRICE OF OIL 16 U.S. | 0.00 | 0.00 |
| GNPAIC | RUSSIAN OIL PRICE OF OIL 16 CAN. | -7.04 | -8.24 |
| GNCDAL | CANADIAN ENERGY TRADE BALANCE (100 \$) | -13.01 | -14.01 |
| GNCDL | CANADIAN OIL TRADE BALANCE (100 \$) | 21.25 | 36.50 |
| GNETH | NET EMIGRATION (1'000) | 0.00 | 0.00 |
| GNFTE | GENERAL FERTILITY RATE | 0.00 | 0.00 |

SUMMARY IMPACT TABLE
(PERCENTAGE DIFFERENCES)

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
|--|--------|--------|---------|---------|---------|---------|----------|----------|
| HOUSEHOLD NATIONAL EXPENDITURE: | | | | | | | | |
| GNMPC VALUE | -0.06 | -0.20 | -0.48 | -0.84 | -1.45 | -2.11 | -2.89 | -3.60 |
| GNMPC PRICE | -0.19 | -0.59 | -1.20 | -2.01 | -3.03 | -4.01 | -4.89 | -5.59 |
| GNMPC VOLUME | 0.13 | 0.40 | 0.73 | 1.17 | 1.63 | 1.98 | 2.10 | 2.11 |
| VOLUMES: | | | | | | | | |
| GCYK CONSUMPTION | -0.03 | 0.01 | 0.11 | 0.29 | 0.55 | 0.91 | 1.31 | 1.46 |
| GCYK DURABLE | -0.07 | 0.00 | 0.17 | 0.50 | 0.93 | 1.34 | 2.00 | 2.33 |
| GCYK OTHER | -0.02 | 0.01 | 0.10 | 0.25 | 0.46 | 0.77 | 1.04 | 1.17 |
| GCYK GOVERNMENT | 0.07 | 0.19 | 0.30 | 0.59 | 0.80 | 0.95 | 0.84 | 1.17 |
| GCYK CURRENT | 0.06 | 0.17 | 0.32 | 0.50 | 0.68 | 0.81 | 0.72 | 0.85 |
| GCYK CAPITAL | 0.11 | 0.32 | 0.49 | 1.05 | 1.41 | 1.63 | 1.71 | 1.73 |
| GCYK BUSINESS INVESTMENT | 0.23 | 0.70 | 1.54 | 2.66 | 3.00 | 4.93 | 5.32 | 4.98 |
| GCYK RESIDENTIAL | 0.04 | 0.28 | 0.47 | 0.83 | 1.25 | 1.56 | 1.69 | 1.51 |
| GCYK NON-RESIDENTIAL | 0.27 | 0.60 | 1.78 | 3.01 | 4.34 | 5.30 | 5.90 | 5.52 |
| GCYK CHANGE IN INVENTORIES (2) | 54.35 | 175.14 | 261.09 | 269.54 | 443.24 | 399.68 | 207.41 | 39.05 |
| GCYK NET EXPORTS | 5.40 | 10.91 | 20.90 | 17.00 | 19.80 | 14.87 | 9.51 | 7.30 |
| GCYK EXPORTS | 0.45 | 1.01 | 1.43 | 2.39 | 3.31 | 3.54 | 3.74 | 4.01 |
| GCYK IMPORTS | 0.24 | 0.60 | 1.12 | 1.81 | 2.43 | 3.23 | 3.44 | 3.95 |
| LABOUR MARKET: | | | | | | | | |
| GLDFON LABOUR FORCE | 0.03 | 0.09 | 0.17 | 0.25 | 0.33 | 0.36 | 0.37 | 0.36 |
| GLDFON EMPLOYMENT | 0.04 | 0.07 | 0.15 | 0.31 | 0.51 | 0.70 | 0.82 | 0.87 |
| GLDFON UNEMPLOYED | -0.07 | -0.46 | -0.39 | -0.64 | -0.74 | -0.74 | -0.83 | -0.51 |
| GLDFON UNEMPLOYMENT RATE (1) | -0.01 | 0.03 | 0.02 | -0.06 | -0.17 | -0.32 | -0.43 | -0.47 |
| RATES AND PRICES: | | | | | | | | |
| GLDFON LABOUR INCOME/EMPLOYED | -0.04 | -0.15 | -0.39 | -0.83 | -1.30 | -2.39 | -2.10 | -3.79 |
| GLDFON LABOUR PRODUCTIVITY | -0.08 | -0.31 | -0.53 | -0.79 | -1.01 | -1.14 | -1.12 | -1.00 |
| GLDFON PRIVATE UNIT LABOUR COSTS | -0.12 | -0.48 | -0.96 | -1.66 | -2.55 | -3.44 | -4.22 | -4.85 |
| GLDFON IMPORT PRICE OF G & B | 0.05 | -0.05 | -0.35 | -0.81 | -1.56 | -2.55 | -3.63 | -4.68 |
| GLDFON IMPLICIT OUTPUT DEFATOR | -0.00 | -0.36 | -0.85 | -1.35 | -2.46 | -3.45 | -4.34 | -4.87 |
| GLDFON CONSUMER PRICE INDEX | -0.15 | -0.49 | -1.02 | -1.73 | -2.64 | -3.54 | -4.36 | -5.01 |
| INCOMES: | | | | | | | | |
| GLDFON DISPOSABLE INCOME/CAPITA | -0.05 | 0.02 | 0.19 | 0.46 | 0.80 | 1.29 | 1.63 | 1.86 |
| GLDFON CORPORATE PROFITS | -0.45 | -0.83 | -1.73 | -2.63 | -4.25 | -5.47 | -7.21 | -8.60 |
| GLDFON ALL-GOVERNMENT BALANCE (2) | 350.23 | 604.56 | 1020.77 | 1348.16 | 1571.75 | 906.96 | 15.70 | -970.31 |
| GLDFON FEDERAL (2) | 363.07 | 545.35 | 941.47 | 1317.66 | 1571.62 | 1242.69 | 339.80 | -597.19 |
| GLDFON NON-FEDERAL (2) | 05.00 | 119.19 | 79.30 | 30.49 | -101.05 | -336.52 | -423.53 | -334.30 |
| GLDFON CURRENT-ACCOUNT BALANCE (2) | 215.44 | 341.75 | 316.72 | 198.70 | -82.61 | -841.20 | -1277.88 | -1393.38 |
| FINANCIAL: | | | | | | | | |
| GLDFON EXCHANGE RATE (US/CAN) (1) | -0.04 | 0.06 | 0.30 | 0.70 | 1.33 | 2.20 | 3.17 | 4.14 |
| GLDFON PRIME COMMERCIAL PAPER RATE (1) | -0.19 | -0.41 | -0.61 | -0.86 | -1.10 | -1.07 | -0.97 | -0.78 |
| GLDFON MONEY SUPPLY | 0.40 | 1.05 | 1.78 | 2.75 | 3.61 | 3.52 | 3.49 | 0.74 |

(1) LEVEL DIFFERENCES
(2) LEVEL DIFFERENCES IN MILLIONS OF CURRENT DOLLARS
(3) LEVEL DIFFERENCES IN MILLIONS OF 1971 DOLLARS

SUMMARY IMPACT TABLE
(PERCENTAGE DIFFERENCES)

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| GROSS NATIONAL EXPENDITURE: | | | | | | | | |
| GNP | -4.22 | -4.44 | -4.49 | -4.72 | -4.44 | -4.43 | -4.48 | -4.41 |
| GNP | -4.09 | -4.31 | -4.45 | -4.41 | -4.40 | -4.38 | -4.36 | -4.40 |
| GNP | 1.98 | 1.94 | 1.89 | 1.81 | 1.82 | 1.88 | 1.81 | 1.83 |
| USE OF GDP: | | | | | | | | |
| CONSUMPTION | 1.25 | 1.79 | 1.90 | 1.95 | 1.99 | 2.01 | 2.04 | 2.10 |
| DURABLE | 1.25 | 1.79 | 1.90 | 1.95 | 1.99 | 2.01 | 2.04 | 2.10 |
| OTHER | 1.25 | 1.79 | 1.90 | 1.95 | 1.99 | 2.01 | 2.04 | 2.10 |
| GOVERNMENT | 1.25 | 1.79 | 1.90 | 1.95 | 1.99 | 2.01 | 2.04 | 2.10 |
| CURRENT | 1.25 | 1.79 | 1.90 | 1.95 | 1.99 | 2.01 | 2.04 | 2.10 |
| CAPITAL | 1.25 | 1.79 | 1.90 | 1.95 | 1.99 | 2.01 | 2.04 | 2.10 |
| INVESTMENT | 1.25 | 1.79 | 1.90 | 1.95 | 1.99 | 2.01 | 2.04 | 2.10 |
| RESIDENTIAL | 1.25 | 1.79 | 1.90 | 1.95 | 1.99 | 2.01 | 2.04 | 2.10 |
| NON-RESIDENTIAL | 1.25 | 1.79 | 1.90 | 1.95 | 1.99 | 2.01 | 2.04 | 2.10 |
| CHANGE IN INVENTORIES (1) | -102.62 | -80.51 | -73.82 | -78.22 | -25.09 | -33.93 | -33.23 | 191.50 |
| NET EXPORTS | -46.01 | 13.33 | 12.04 | 11.72 | 11.55 | 78.93 | 83.83 | 191.50 |
| EXPORTS | 4.09 | 4.10 | 4.14 | 4.45 | 4.44 | 4.44 | 4.44 | 4.44 |
| IMPORTS | 4.09 | 4.10 | 4.14 | 4.45 | 4.44 | 4.44 | 4.44 | 4.44 |
| LABOUR MARKET: | | | | | | | | |
| LABOUR FORCE | 0.34 | 0.33 | 0.33 | 0.32 | 0.32 | 0.31 | 0.33 | 0.35 |
| EMPLOYMENT | 0.34 | 0.33 | 0.33 | 0.32 | 0.32 | 0.31 | 0.33 | 0.35 |
| UNEMPLOYED | -0.03 | -0.49 | -0.27 | -0.24 | -0.32 | -0.44 | -0.69 | -0.74 |
| UNEMPLOYMENT RATE (%) | -0.13 | -0.46 | -0.31 | -0.32 | -0.36 | -0.38 | -0.34 | -0.37 |
| MONEY AND PRICES: | | | | | | | | |
| LABOUR INCOME/EMPLOYED | -4.32 | -4.54 | -4.68 | -4.60 | -4.64 | -4.60 | -4.53 | -4.63 |
| LABOUR PRODUCTIVITY | -1.00 | -1.04 | -1.00 | -1.04 | -1.09 | -1.07 | -1.19 | -1.23 |
| PRIVATE WAGE/COEFF | -3.29 | -3.50 | -3.73 | -3.71 | -3.70 | -3.65 | -3.60 | -3.63 |
| IMPLICIT PRICE OF G & B | -1.14 | -1.14 | -1.14 | -1.14 | -1.14 | -1.14 | -1.14 | -1.14 |
| IMPLICIT OUTPUT DEFATOR | -3.58 | -3.81 | -3.95 | -3.93 | -3.97 | -3.93 | -3.84 | -3.87 |
| CONSUMER PRICE INDEX | -3.47 | -3.44 | -3.77 | -3.72 | -3.64 | -3.58 | -3.54 | -3.74 |
| INCOME: | | | | | | | | |
| DISPOSABLE INCOME/CAPITA | 2.01 | 2.08 | 2.13 | 2.13 | 2.13 | 2.12 | 2.14 | 2.24 |
| CORPORATE PROFITS | 0.37 | 0.09 | 0.97 | 0.60 | 0.22 | 0.29 | 0.71 | 0.86 |
| ALL-GOVERNMENT BALANCE (2) | -2380.01 | -2247.54 | -4162.04 | -3433.34 | -4407.84 | -4197.29 | -3670.30 | -3856.80 |
| FEDERAL (2) | 2030.40 | 2464.36 | 4363.54 | 3893.89 | 3934.44 | 4326.02 | 4409.23 | 4725.72 |
| NON-FEDERAL (2) | 2097.81 | 1975.80 | 4034.41 | 4407.19 | 6526.13 | 3128.13 | 2701.09 | 2028.50 |
| CURRENT-ACCOUNT BALANCE (2) | -1391.70 | -1044.31 | -747.13 | -564.80 | -524.91 | -438.13 | -657.84 | -1537.94 |
| FINANCIAL: | | | | | | | | |
| EXCHANGE RATE (100/UNIT 100) | 4.97 | 3.40 | 6.01 | 6.30 | 4.44 | 4.33 | 4.39 | 4.79 |
| PRIME COMMERCIAL PAPER RATE (%) | -0.55 | -0.35 | -0.14 | 0.02 | 0.04 | 0.06 | 0.02 | 0.27 |
| MONEY SUPPLY | -1.21 | -2.79 | -3.82 | -4.48 | -5.00 | -5.29 | -5.82 | -6.37 |

(1) LEVEL DIFFERENCES
(2) LEVEL DIFFERENCES IN MILLIONS OF CURRENT DOLLARS
(3) LEVEL DIFFERENCES IN MILLIONS OF 1971 DOLLARS

TARIFF, RTD AND PRODUCTIVITY IMPACT

BIMINARY IMPACT TABLE
(PERCENTAGE DIFFERENCES)

REPORT PERIOD: 1994-1995

| | 2004 | 2005 |
|---------------------------------------|----------|----------|
| GROSS NATIONAL EXPENDITURE: | | |
| GNPFC VALUE | -4.71 | -4.99 |
| GNPFC PRICE | -2.86 | -7.31 |
| GNPFC VOLUME | 2.33 | 2.54 |
| VOLUME: | | |
| QCTK CONSUMPTION | 2.17 | 2.27 |
| QCDURK DURABLES | 3.10 | 3.24 |
| QDTHK OTHER | 1.97 | 2.04 |
| QDVEVM GOVERNMENT | 1.41 | 1.44 |
| QDCURM CURRENT | 1.37 | 1.31 |
| QDFICK CAPITAL | 1.55 | 1.71 |
| QDINM BUSINESS INVESTMENT | 3.10 | 3.67 |
| QIR RESIDENTIAL | 0.34 | 0.58 |
| QCTM NON-RESIDENTIAL | 3.40 | 3.99 |
| QVICK CHANGE IN INVENTORIES (1) | 245.07 | 319.69 |
| QNTPK NET EXPORTS | 3.13 | 3.04 |
| QKPK EXPORTS | 3.49 | 4.94 |
| QTHPK IMPORTS | 3.54 | 6.03 |
| LABOUR MARKET: | | |
| QDFR LABOUR FORCE | 0.37 | 0.39 |
| TEY EMPLOYMENT | 0.64 | 0.45 |
| QUT UNEMPLOYED | -0.27 | -0.03 |
| QURATE UNEMPLOYMENT RATE (1) | -0.44 | -0.53 |
| WAGES AND PRICES: | | |
| QWNET LABOUR INCOME/EMPLOYED | -4.79 | -3.04 |
| QWLEY LABOUR PRODUCTIVITY | 1.33 | 1.61 |
| QWLEK PRIVATE UNIT LABOUR COSTS | -1.05 | -1.19 |
| QWHPK IMPORT PRICE OF U.S.G. | -7.85 | -8.23 |
| QWPK IMPLICIT OUTPUT DEFATOR | -2.33 | -2.77 |
| QWPI CONSUMER PRICE INDEX | -5.97 | -6.33 |
| INCOME: | | |
| QYDPP DISPOSABLE INCOME/CAPITA | 2.36 | 2.30 |
| QCP CORPORATE PROFITS | -0.97 | -0.09 |
| QDUAL ALL-GOVERNMENT BALANCE (2) | -3400.30 | -4250.63 |
| QDUALF FEDERAL (2) | -7181.94 | -8071.50 |
| QDUALJ NON-FEDERAL (2) | 3493.04 | 3020.01 |
| QDUAL CURRENT-ACCOUNT BALANCE (2) | -2118.50 | -2008.30 |
| FINANCIAL: | | |
| QREXNC EXCHANGE RATE (US/CAN) (1) | 7.33 | 7.65 |
| QBNPC PRIME COMMERCIAL PAPER RATE (1) | -0.32 | -0.49 |
| QNIC MONEY SUPPLY | -3.84 | -3.31 |

(1) LEVEL DIFFERENCES

(2) LEVEL DIFFERENCES IN MILLIONS OF CURRENT DOLLARS

(3) LEVEL DIFFERENCES IN MILLIONS OF 1971 DOLLARS

TABLE 1. NEW AND PROPOSED EXPORTS

TABLE 1. NEW AND PROPOSED EXPORTS
 TRADE SECTION - EXPORTS & IMPORTS
 BILLIONS OF CURRENT DOLLARS
 (LEVEL DIFFERENCES)

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|--|-------|-------|-------|-------|--------|--------|--------|
| EXPORTS - LIVE ANIMALS | 17 | 37 | 58 | 83 | 109 | 104 | 102 |
| EXPORTS - FOOD, FEED & BEVERAGES | 211 | 452 | 492 | 1010 | 1206 | 1206 | 1058 |
| EXPORTS - RAW MATERIALS | 13 | 9 | 78 | 208 | 413 | 734 | -1119 |
| EXPORTS - SEMI-PROCESSED MATERIALS | 218 | 401 | 423 | 853 | 958 | 1400 | 71 |
| EXPORTS - END PRODUCTS | 237 | 448 | 488 | 750 | 780 | 590 | -139 |
| EXPORTS - SPECIAL TRANS. & RE-EXPORTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL MERCHANDISE EXPORTS | 705 | 1407 | 1049 | 2490 | 2747 | 1570 | -97 |
| TOTAL SERVICES EXPORTS | 20 | 1 | 19 | 219 | 459 | 813 | -1232 |
| BALANCE OF PAYMENTS ADJUSTMENT | 0 | 0 | 0 | 2 | 4 | 7 | 10 |
| EXPORTS OF GOODS & SERVICES (NA BASIS) | 727 | 1408 | 1064 | 2731 | 2210 | 433 | -1437 |
| IMPORTS - LIVE ANIMALS | 13 | 31 | 53 | 82 | 117 | 126 | 124 |
| IMPORTS - FOOD, FEED & BEVERAGES | 44 | 127 | 184 | 236 | 270 | 500 | 111 |
| IMPORTS - RAW MATERIALS | 70 | 102 | 145 | 239 | 205 | 247 | 168 |
| IMPORTS - SEMI-PROCESSED MATERIALS | 145 | 336 | 517 | 703 | 861 | 816 | 416 |
| IMPORTS - END PRODUCTS | 314 | 403 | 420 | 1257 | 1310 | 1222 | 549 |
| IMPORTS - SPECIAL TRANSACTIONS | 1 | 2 | 9 | 31 | 39 | 49 | 92 |
| TOTAL MERCHANDISE IMPORTS | 577 | 1197 | 1030 | 2578 | 3112 | 2541 | 1215 |
| TOTAL SERVICES IMPORTS | 70 | 200 | 372 | 582 | 890 | 1137 | -1508 |
| BALANCE OF PAYMENTS ADJUSTMENT | 1 | 0 | 3 | 0 | 18 | 27 | 30 |
| IMPORTS OF GOODS & SERVICES (NA BASIS) | 507 | 997 | 1442 | 3002 | 2230 | 1411 | -283 |
| | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| EXPORTS - LIVE ANIMALS | 90 | 94 | 94 | 94 | 95 | 98 | 100 |
| EXPORTS - FOOD, FEED & BEVERAGES | 941 | 700 | 727 | 457 | 616 | 657 | 644 |
| EXPORTS - RAW MATERIALS | -1533 | -1902 | -2152 | -2741 | -3100 | -3409 | -3650 |
| EXPORTS - SEMI-PROCESSED MATERIALS | -502 | -1116 | -1017 | -2377 | -2797 | -3130 | -3415 |
| EXPORTS - END PRODUCTS | -718 | -1208 | -1604 | -1950 | -1997 | -1764 | -1330 |
| EXPORTS - SPECIAL TRANS. & RE-EXPORTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL MERCHANDISE EXPORTS | -1793 | -2713 | -4947 | -6316 | -7153 | -7356 | -7664 |
| TOTAL SERVICES EXPORTS | -1892 | -2156 | -2573 | -3020 | -3380 | -3716 | -3957 |
| BALANCE OF PAYMENTS ADJUSTMENT | 13 | 16 | 10 | 19 | 20 | 21 | 21 |
| EXPORTS OF GOODS & SERVICES (NA BASIS) | -3753 | -4607 | -7920 | -9832 | -11053 | -11041 | -12240 |
| IMPORTS - LIVE ANIMALS | 820 | 103 | 140 | 147 | 133 | 164 | 172 |
| IMPORTS - FOOD, FEED & BEVERAGES | 15 | -81 | -146 | -231 | -271 | -309 | -377 |
| IMPORTS - RAW MATERIALS | -100 | -313 | -453 | -634 | -770 | -901 | -940 |
| IMPORTS - SEMI-PROCESSED MATERIALS | -118 | -757 | -1212 | -1494 | -2011 | -2135 | -2260 |
| IMPORTS - END PRODUCTS | -397 | -1460 | -2597 | -3703 | -4369 | -4703 | -4992 |
| IMPORTS - SPECIAL TRANSACTIONS | -622 | -180 | -174 | -190 | -216 | -232 | -240 |
| TOTAL MERCHANDISE IMPORTS | -1502 | -2479 | -4481 | -6293 | -7406 | -8116 | -8369 |
| TOTAL SERVICES IMPORTS | -1904 | -2315 | -2608 | -2948 | -3209 | -3416 | -3604 |
| BALANCE OF PAYMENTS ADJUSTMENT | 50 | 63 | 70 | 78 | 84 | 91 | 98 |
| IMPORTS OF GOODS & SERVICES (NA BASIS) | -2444 | -4912 | -4979 | -9162 | -10609 | -11442 | -11716 |

TABLE 1. TRADE DATA (2002-2009)

TABLE: HTB200 0
 TRADE SECTOR - EXPORTS & IMPORTS
 BILLIONS OF CURRENT DOLLARS
 (LEVEL DIFFERENCES)

| | 2002 | 2003 | 2004 | 2009 |
|--|--------|--------|--------|--------|
| LVANHC | | | | |
| BEC2HC | | | | |
| BEC3HC | | | | |
| BEC4HC | | | | |
| BEC5HC | | | | |
| BEC6HC | | | | |
| TCY0HC | | | | |
| IBRVHC | | | | |
| DDPAYC | | | | |
| IMPTHC | | | | |
| LVANHC | | | | |
| BEC2HC | | | | |
| BEC3HC | | | | |
| BEC4HC | | | | |
| BEC5HC | | | | |
| BEC6HC | | | | |
| TCY0HC | | | | |
| IBRVHC | | | | |
| DDPAYC | | | | |
| IMPTHC | | | | |
| EXPORTS - LIVE ANIMALS | 108 | 106 | 108 | 107 |
| EXPORTS - FOOD, FEED & BEVERAGES | 288 | 305 | 305 | 361 |
| EXPORTS - RAW MATERIALS | -4021 | -4502 | -5114 | -5026 |
| EXPORTS - SEMI-PROCESSED MATERIALS | -3634 | -4007 | -5089 | -6142 |
| EXPORTS - END PRODUCTS | -283 | -375 | 524 | 1835 |
| EXPORTS - SPECIAL TRANS. & IE-EXPORTS | 0 | 0 | 0 | 0 |
| TOTAL MERCHANDISE EXPORTS | -7545 | -8629 | -8987 | -9565 |
| TOTAL SERVICES EXPORTS | -4343 | -4916 | -5465 | -6202 |
| BALANCE OF PAYMENTS ADJUSTMENT | 21 | 23 | 23 | 24 |
| EXPORTS OF GOODS & SERVICES (NA BASIS) | -12550 | -14291 | -14297 | -14791 |
| LVANHC | | | | |
| BEC2HC | | | | |
| BEC3HC | | | | |
| BEC4HC | | | | |
| BEC5HC | | | | |
| BEC6HC | | | | |
| TCY0HC | | | | |
| IBRVHC | | | | |
| DDPAYC | | | | |
| IMPTHC | | | | |
| IMPORTS - LIVE ANIMALS | 183 | 192 | 201 | 211 |
| IMPORTS - FOOD, FEED & BEVERAGES | -363 | -454 | -526 | -641 |
| IMPORTS - RAW MATERIALS | -909 | -1143 | -1157 | -1170 |
| IMPORTS - SEMI-PROCESSED MATERIALS | -2102 | -2224 | -2157 | -2151 |
| IMPORTS - END PRODUCTS | -4646 | -4067 | -4938 | -5027 |
| IMPORTS - SPECIAL TRANSACTIONS | 262 | 209 | -314 | -349 |
| TOTAL MERCHANDISE IMPORTS | -8100 | -6786 | -8070 | -9127 |
| TOTAL SERVICES IMPORTS | -3746 | -4234 | -4572 | -5074 |
| BALANCE OF PAYMENTS ADJUSTMENT | 98 | 107 | 119 | 125 |
| IMPORTS OF GOODS & SERVICES (NA BASIS) | -11828 | -12913 | -13328 | -14076 |

TOTALS MAY NOT ADD DUE TO ROUNDING OR OMISSION OF RESIDUAL

TABLE 18. SECTION D.
TRADE DEFICIT - EXPORTS & IMPORTS
BILLIONS OF CONSTANT DOLLARS
(LEVEL DIFFERENCE)

| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 |
|--------|---------------------------------------|---------------|-------|-------|-------|-------|-------|
| LVANXX | EXPORTS | -LIVE ANIMALS | 0. | 0. | 0. | 0. | 0. |
| BEC2XX | -FOOD, FEED & BEVERAGES | 70. | 157. | 237. | 370. | 497. | 319. |
| BEC3XX | -RAW MATERIALS | 1. | 3. | 5. | 7. | 9. | 10. |
| BEC4XX | -SEMI-PROCESSED MATERIALS | 45. | 156. | 352. | 391. | 537. | 437. |
| BEC5XX | -END PRODUCTS | 72. | 172. | 209. | 400. | 419. | 731. |
| HEB2XX | -SPECIAL TRANS. & RE-EXPORTS | 0. | 0. | 0. | 0. | 0. | 0. |
| TC20XX | TOTAL MERCHANDISE EXPORTS | 214. | 409. | 798. | 1206. | 1662. | 1699. |
| IBANXX | TOTAL SERVICES EXPORTS | 4. | 11. | 18. | 27. | 40. | 50. |
| OBPAAX | BALANCE OF PAYMENTS ADJUSTMENT | 0. | 0. | 0. | 0. | 0. | 0. |
| XPYTX | EXPORTS OF GOODS & SERVICES (NA DARI) | 214. | 509. | 808. | 1234. | 1721. | 2147. |
| LVANXX | IMPORTS | -LIVE ANIMALS | 5. | 10. | 17. | 26. | 39. |
| BEC2XX | -FOOD, FEED & BEVERAGES | 16. | 34. | 53. | 75. | 99. | 104. |
| BEC3XX | -RAW MATERIALS | 3. | 15. | 28. | 42. | 60. | 73. |
| BEC4XX | -SEMI-PROCESSED MATERIALS | 37. | 87. | 141. | 224. | 315. | 354. |
| BEC5XX | -END PRODUCTS | 75. | 182. | 362. | 556. | 843. | 1072. |
| HEB2XX | -SPECIAL TRANSACTIONS | 0. | 0. | 0. | -1. | -1. | -3. |
| TC20XX | TOTAL MERCHANDISE IMPORTS | 134. | 324. | 580. | 923. | 1352. | 1640. |
| IBANXX | TOTAL SERVICES IMPORTS | 21. | 39. | 40. | 24. | 9. | 182. |
| OBPAAX | BALANCE OF PAYMENTS ADJUSTMENT | 0. | 0. | 0. | 0. | 0. | 0. |
| XPYTX | IMPORTS OF GOODS & SERVICES (NA DARI) | 111. | 305. | 628. | 898. | 1362. | 2022. |
| | | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| LVANXX | EXPORTS | -LIVE ANIMALS | 0. | 0. | 0. | 0. | 0. |
| BEC2XX | -FOOD, FEED & BEVERAGES | 577. | 626. | 644. | 653. | 644. | 672. |
| BEC3XX | -RAW MATERIALS | 10. | 0. | 0. | 7. | 4. | 3. |
| BEC4XX | -SEMI-PROCESSED MATERIALS | 769. | 773. | 830. | 872. | 890. | 910. |
| BEC5XX | -END PRODUCTS | 917. | 981. | 1109. | 1243. | 1378. | 1510. |
| HEB2XX | -SPECIAL TRANS. & RE-EXPORTS | 0. | 0. | 0. | 0. | 0. | 0. |
| TC20XX | TOTAL MERCHANDISE EXPORTS | 2264. | 2390. | 2490. | 2675. | 2808. | 3004. |
| IBANXX | TOTAL SERVICES EXPORTS | 70. | 71. | 71. | 80. | 87. | 92. |
| OBPAAX | BALANCE OF PAYMENTS ADJUSTMENT | 0. | 0. | 0. | 0. | 0. | 0. |
| XPYTX | EXPORTS OF GOODS & SERVICES (NA DARI) | 2335. | 2361. | 2570. | 2754. | 2924. | 3097. |
| LVANXX | IMPORTS | -LIVE ANIMALS | 39. | 40. | 41. | 42. | 43. |
| BEC2XX | -FOOD, FEED & BEVERAGES | 119. | 133. | 135. | 135. | 139. | 144. |
| BEC3XX | -RAW MATERIALS | 83. | 81. | 81. | 87. | 89. | 93. |
| BEC4XX | -SEMI-PROCESSED MATERIALS | 362. | 349. | 343. | 363. | 385. | 423. |
| BEC5XX | -END PRODUCTS | 1305. | 1431. | 1444. | 1504. | 1576. | 1666. |
| HEB2XX | -SPECIAL TRANSACTIONS | -3. | -1. | -1. | -6. | -5. | -4. |
| TC20XX | TOTAL MERCHANDISE IMPORTS | 1904. | 2014. | 2040. | 2125. | 2220. | 2366. |
| IBANXX | TOTAL SERVICES IMPORTS | 269. | 349. | 410. | 483. | 534. | 572. |
| OBPAAX | BALANCE OF PAYMENTS ADJUSTMENT | 0. | 0. | 0. | 0. | 0. | 0. |
| XPYTX | IMPORTS OF GOODS & SERVICES (NA DARI) | 2255. | 2363. | 2450. | 2608. | 2743. | 2941. |

TABLE: HTR200 0
TRADE SECTOR - EXPORTS & IMPORTS
(PERCENTAGE DIFFERENCE)

| | 1988 | 1987 | 1990 | 1991 | 1992 | 1993 | 1994 | | |
|---------|--|---------------|--------|--------|--------|--------|--------|--------|-------|
| LVANNC | EXPORTS | -LIVE ANIMALS | 3.37 | 4.43 | 10.30 | 13.93 | 17.91 | 14.94 | |
| BEC2NC | -FOOD, FEED & BEVERAGES | 1.72 | 3.47 | 4.89 | 8.74 | 8.20 | 14.09 | 15.86 | |
| BEC3NC | -RAW MATERIALS | 0.06 | -0.44 | -0.31 | -0.76 | -1.45 | -2.36 | -3.37 | |
| BEC4NC | -SEMI-PROCESSED MATERIALS | 0.50 | 0.92 | 0.28 | 1.52 | 1.41 | 0.10 | 0.17 | |
| BEC5NC | -END PRODUCTS | 0.34 | 0.73 | 0.96 | 1.12 | 1.09 | 0.52 | 0.69 | |
| NEB6NC | -SPECIAL TRANS. & RE-EXPORTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| TC10NC | TOTAL MERCHANDISE EXPORTS | 0.47 | 0.92 | 1.21 | 1.46 | 1.31 | 0.82 | 0.01 | |
| TSR0NC | TOTAL SERVICES EXPORTS | 0.07 | 0.00 | -0.25 | -0.67 | -1.31 | -2.19 | -3.11 | |
| QOPAKC | BALANCE OF PAYMENTS ADJUSTMENT | 0.13 | -0.17 | -0.88 | -1.92 | -3.45 | -5.40 | -7.39 | |
| NP1TKC | EXPORTS OF GOODS & SERVICES (NA BASIS) | 0.43 | 0.77 | 0.96 | 1.10 | 1.02 | 0.27 | -0.59 | |
| LVANNC | IMPORTS | -LIVE ANIMALS | 10.41 | 22.14 | 35.52 | 51.08 | 68.49 | 45.48 | |
| BEC2NC | -FOOD, FEED & BEVERAGES | 0.67 | 1.41 | 2.20 | 2.64 | 2.84 | 1.99 | 1.03 | |
| BEC3NC | -RAW MATERIALS | 0.35 | 0.46 | 1.36 | 1.68 | 1.81 | 1.44 | 0.50 | |
| BEC4NC | -SEMI-PROCESSED MATERIALS | 0.57 | 1.33 | 1.79 | 2.43 | 2.72 | 2.21 | 1.46 | |
| BEC5NC | -END PRODUCTS | 0.30 | 0.40 | 1.01 | 1.30 | 1.47 | 1.11 | 0.47 | |
| SPEC6NC | -SPECIAL TRANSACTIONS | 0.07 | -0.00 | -0.46 | -1.00 | -1.04 | -1.48 | -4.14 | |
| TC10NC | TOTAL MERCHANDISE IMPORTS | 0.45 | 0.47 | 1.20 | 1.67 | 1.88 | 1.44 | 0.53 | |
| TSR0NC | TOTAL SERVICES IMPORTS | -0.16 | -0.12 | -0.74 | -1.11 | -1.59 | -1.44 | -2.38 | |
| QOPAKC | BALANCE OF PAYMENTS ADJUSTMENT | 0.03 | -0.01 | -0.13 | -0.32 | -0.61 | -1.02 | -1.45 | |
| IMP1NC | IMPORTS OF GOODS & SERVICES (NA BASIS) | 0.30 | 0.35 | 0.77 | 0.98 | 1.02 | 0.60 | -0.10 | |
| | | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | |
| LVANNC | EXPORTS | -LIVE ANIMALS | 13.67 | 12.37 | 11.82 | 11.14 | 10.73 | 10.47 | 10.32 |
| BEC2NC | -FOOD, FEED & BEVERAGES | 4.87 | 3.46 | 3.27 | 2.74 | 2.49 | 2.34 | 2.21 | |
| BEC3NC | -RAW MATERIALS | -4.30 | -3.13 | -3.41 | -5.10 | -4.36 | -4.51 | -6.58 | |
| BEC4NC | -SEMI-PROCESSED MATERIALS | -0.79 | -1.43 | -2.10 | -2.53 | -2.75 | -2.83 | -2.95 | |
| BEC5NC | -END PRODUCTS | -0.05 | -1.17 | -1.70 | -1.91 | -1.61 | -1.51 | -1.14 | |
| NEB6NC | -SPECIAL TRANS. & RE-EXPORTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| TC10NC | TOTAL MERCHANDISE EXPORTS | -0.02 | -1.41 | -1.94 | -3.11 | -2.42 | -2.59 | -2.34 | |
| TSR0NC | TOTAL SERVICES EXPORTS | -3.97 | -4.42 | -5.32 | -5.75 | -5.94 | -6.07 | -6.16 | |
| QOPAKC | BALANCE OF PAYMENTS ADJUSTMENT | -9.31 | -10.36 | -11.74 | -12.47 | -13.14 | -13.42 | -13.53 | |
| NP1TKC | EXPORTS OF GOODS & SERVICES (NA BASIS) | -1.43 | -2.34 | -2.73 | -3.01 | -3.14 | -3.14 | -3.13 | |
| LVANNC | IMPORTS | -LIVE ANIMALS | 43.91 | 42.35 | 41.72 | 40.97 | 40.48 | 40.59 | 40.53 |
| BEC2NC | -FOOD, FEED & BEVERAGES | 0.13 | -0.40 | -1.14 | -1.45 | -1.49 | -1.04 | -2.10 | |
| BEC3NC | -RAW MATERIALS | -0.49 | -1.40 | -1.98 | -3.53 | -3.69 | -3.07 | -3.09 | |
| BEC4NC | -SEMI-PROCESSED MATERIALS | -0.37 | -1.40 | -2.42 | -3.08 | -3.37 | -3.35 | -4.36 | |
| BEC5NC | -END PRODUCTS | -0.32 | -1.13 | -1.84 | -2.45 | -2.49 | -2.35 | -2.55 | |
| SPEC6NC | -SPECIAL TRANSACTIONS | -3.23 | -4.31 | -4.00 | -7.46 | -7.80 | -8.75 | -10.35 | |
| TC10NC | TOTAL MERCHANDISE IMPORTS | -0.29 | -1.35 | -1.95 | -3.53 | -3.61 | -3.55 | -4.76 | |
| TSR0NC | TOTAL SERVICES IMPORTS | -2.01 | -3.30 | -3.54 | -3.55 | -3.59 | -3.58 | -3.53 | |
| QOPAKC | BALANCE OF PAYMENTS ADJUSTMENT | -1.07 | -2.34 | -2.54 | -2.83 | -3.01 | -3.14 | -3.22 | |
| IMP1NC | IMPORTS OF GOODS & SERVICES (NA BASIS) | -0.92 | -1.74 | -2.30 | -2.60 | -2.61 | -2.63 | -2.96 | |

TABLE: MERCHANDISE
 TRADE SECTION - EXPORTS & IMPORTS
 (PERCENTAGE DIFFERENCE)

| | 2002 | 2003 | 2004 | 2005 |
|---|-------|-------|-------|-------|
| LVANHC EXPORTS - LIVE ANIMALS | 10.14 | 9.42 | 9.27 | 8.70 |
| BEC2HC - FOOD, FEED & BEVERAGES | 2.14 | 1.75 | 1.57 | 1.15 |
| BEC3HC - RAW MATERIALS | 2.63 | 1.91 | 2.25 | 1.45 |
| BEC4HC - SEMI-PROCESSED MATERIALS | 3.00 | 1.11 | 3.32 | 1.17 |
| BEC5HC - END PRODUCTS | 0.54 | 0.20 | 0.36 | 0.20 |
| BEC6HC - SPECIAL TRANS. & RE-EXPORTS | 0.00 | 0.00 | 0.00 | 0.00 |
| TC2CHC TOTAL MERCHANDISE EXPORTS | 2.10 | 1.33 | 2.15 | 1.13 |
| TC3CHC TOTAL SERVICES EXPORTS | 2.23 | 1.23 | 1.71 | 0.09 |
| TC4CHC BALANCE OF PAYMENTS ADJUSTMENT | 11.66 | 11.10 | 15.10 | 14.03 |
| TC5CHC EXPORTS OF GOODS & SERVICES (NA BASIS) | 2.97 | 1.99 | 3.06 | 3.12 |
| LVANHC IMPORTS - LIVE ANIMALS | 64.57 | 40.03 | 59.02 | 59.24 |
| BEC2HC - FOOD, FEED & BEVERAGES | 2.12 | 1.42 | 1.11 | 0.03 |
| BEC3HC - RAW MATERIALS | 2.22 | 1.12 | 1.95 | 0.86 |
| BEC4HC - SEMI-PROCESSED MATERIALS | 2.04 | 1.10 | 1.46 | 0.51 |
| BEC5HC - END PRODUCTS | 2.43 | 1.14 | 2.34 | 1.13 |
| BEC6HC - SPECIAL TRANSACTIONS | 0.36 | 0.46 | 0.31 | 0.42 |
| TC2CHC TOTAL MERCHANDISE IMPORTS | 2.35 | 1.18 | 1.31 | 0.31 |
| TC3CHC TOTAL SERVICES IMPORTS | 2.46 | 1.40 | 1.74 | 1.91 |
| TC4CHC BALANCE OF PAYMENTS ADJUSTMENT | 1.10 | 1.10 | 1.73 | 1.02 |
| TC5CHC IMPORTS OF GOODS & SERVICES (NA BASIS) | 2.78 | 1.43 | 2.73 | 2.70 |

TOTALS MAY NOT ADD DUE TO ROUNDING OR DISTRIBUTION OF RESIDUAL

TABLE: NITRODA 0

TABLE: NITRODA 0
 TRADE SECTOR - EXPORTS & IMPORTS
 BILLIONS OF CONSTANT DOLLARS
 (LEVEL DIFFERENCES)

| | 2002 | 2003 | 2004 | 2005 |
|--|-------|-------|-------|-------|
| LVANXK EXPORTS -LIVE ANIMALS----- | 0. | 0. | 0. | 0. |
| BEC2XK -FOOD, FEED & BEVERAGES----- | 579. | 581. | 604. | 615. |
| BEC3XK -RAW MATERIALS----- | 4. | 1. | 3. | 4. |
| BEC4XK -SEMI-PROCESSED MATERIALS----- | 900. | 1033. | 1083. | 1153. |
| BEC5XK -END PRODUCTS----- | 1791. | 2021. | 2325. | 2676. |
| NEB6XK -SPECIAL TRANS. & IE-EXPORTS----- | 0. | 0. | 0. | 0. |
| TCT0XK TOTAL MERCHANDISE EXPORTS----- | 2255. | 2655. | 4015. | 4447. |
| ISAVXK INITIAL SERVICES EXPORTS----- | 93. | 101. | 120. | 130. |
| BOPANX BALANCE OF PAYMENTS ADJUSTMENT----- | 0. | 0. | 0. | 0. |
| XP1YXK EXPORTS OF GOODS & SERVICES (NA DAB10)- | 2450. | 2756. | 4136. | 4577. |
| LVANXK IMPORTS -LIVE ANIMALS----- | 46. | 47. | 48. | 49. |
| BEC2XK -FOOD, FEED & BEVERAGES----- | 133. | 140. | 145. | 174. |
| BEC3XK -RAW MATERIALS----- | 105. | 111. | 127. | 141. |
| BEC4XK -SEMI-PROCESSED MATERIALS----- | 310. | 391. | 472. | 727. |
| BEC5XK -END PRODUCTS----- | 1867. | 2111. | 2326. | 2597. |
| OP6CHK -SPECIAL TRANSACTIONS----- | -2. | -7. | -0. | -9. |
| TCT0XK TOTAL MERCHANDISE IMPORTS----- | 2610. | 3021. | 3331. | 3718. |
| ISAVXK INITIAL SERVICES IMPORTS----- | 442. | 691. | 736. | 793. |
| BOPANX BALANCE OF PAYMENTS ADJUSTMENT----- | 0. | 0. | 0. | 0. |
| XP1YXK IMPORTS OF GOODS & SERVICES (NA DAB10)- | 3225. | 3711. | 4067. | 4512. |

TOTALS MAY NOT ADD DUE TO ROUNDING OR OMISSION OF MINORIAL

(UNIT: MILION AND PERCENTAGE) (1) (2) (3)

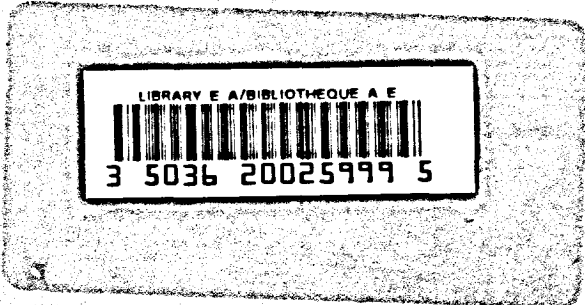
TABLE D: EXPORTS & IMPORTS
TRADE SECTION - EXPORTS & IMPORTS
(PERCENTAGE DIFFERENCES)

| | | 1988 | 1987 | 1990 | 1991 | 1992 | 1993 | 1994 |
|--------|--|-------|-------|-------|-------|-------|-------|-------|
| LVANK | EXPORTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| BEC2KK | - LIVE ANIMALS | 1.94 | 4.33 | 6.51 | 6.33 | 42.19 | 47.12 | 41.49 |
| BEC3KK | - FOOD, FEED & BEVERAGES | 0.04 | 0.08 | 0.08 | 0.19 | 0.00 | 0.24 | 0.31 |
| BEC4KK | - RAW MATERIALS | 0.57 | 1.32 | 2.14 | 3.17 | 4.54 | 4.91 | 5.48 |
| BEC5KK | - SEMI-PROCESSED MATERIALS | 0.35 | 0.81 | 1.36 | 1.99 | 2.71 | 3.12 | 3.48 |
| BEC6KK | - END PRODUCTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| BEC7KK | - SPECIAL TRANS. & RE-EXPORTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| YCT0KK | TOTAL MERCHANDISE EXPORTS | 0.52 | 1.17 | 1.90 | 2.77 | 3.71 | 4.09 | 4.37 |
| ISAVKK | TOTAL SERVICES EXPORTS | 0.04 | 0.14 | 0.24 | 0.35 | 0.46 | 0.59 | 0.76 |
| DDPAYK | BALANCE OF PAYMENTS ADJUSTMENT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| XP1TKK | EXPORTS OF GOODS & SERVICES (NA BASIS) | 0.45 | 1.01 | 1.63 | 2.39 | 3.21 | 3.54 | 3.79 |
| LVANK | IMPORTS | 0.06 | 22.24 | 26.02 | 82.39 | 71.44 | 71.60 | 71.73 |
| BEC2KK | - LIVE ANIMALS | 0.71 | 4.47 | 3.27 | 5.13 | 4.03 | 4.51 | 4.27 |
| BEC3KK | - FOOD, FEED & BEVERAGES | 0.24 | 0.79 | 0.56 | 0.85 | 3.74 | 3.04 | 3.43 |
| BEC4KK | - RAW MATERIALS | 0.21 | 1.26 | 1.14 | 1.14 | 4.10 | 4.54 | 4.51 |
| BEC5KK | - SEMI-PROCESSED MATERIALS | 0.00 | 0.71 | 1.33 | 2.12 | 4.10 | 4.70 | 4.20 |
| BEC6KK | - END PRODUCTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| BEC7KK | - SPECIAL TRANSACTIONS | 0.02 | -0.02 | -0.04 | -0.14 | -0.24 | -0.41 | -0.52 |
| YCT0KK | TOTAL MERCHANDISE IMPORTS | 0.98 | 0.88 | 1.54 | 2.46 | 3.38 | 3.95 | 4.36 |
| ISAVKK | TOTAL SERVICES IMPORTS | 0.20 | 0.33 | 0.34 | 0.20 | 0.08 | 0.73 | 1.33 |
| DDPAYK | BALANCE OF PAYMENTS ADJUSTMENT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| XP1TKK | IMPORTS OF GOODS & SERVICES (NA BASIS) | 0.24 | 0.60 | 1.12 | 1.81 | 2.63 | 3.23 | 3.66 |
| | | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 |
| LVANK | EXPORTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| BEC2KK | - LIVE ANIMALS | 1.47 | 1.44 | 11.53 | 11.34 | 11.12 | 10.93 | 10.62 |
| BEC3KK | - FOOD, FEED & BEVERAGES | 0.22 | 0.19 | 0.17 | 0.14 | 0.11 | 0.09 | 0.00 |
| BEC4KK | - RAW MATERIALS | 0.55 | 0.53 | 5.16 | 5.60 | 5.53 | 5.46 | 5.32 |
| BEC5KK | - SEMI-PROCESSED MATERIALS | 0.81 | 0.86 | 4.35 | 4.64 | 4.96 | 5.16 | 5.74 |
| BEC6KK | - END PRODUCTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| BEC7KK | - SPECIAL TRANS. & RE-EXPORTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| YCT0KK | TOTAL MERCHANDISE EXPORTS | 4.41 | 4.71 | 4.84 | 4.97 | 5.11 | 5.27 | 5.40 |
| ISAVKK | TOTAL SERVICES EXPORTS | 0.79 | 0.77 | 0.74 | 0.63 | 0.62 | 0.89 | 0.87 |
| DDPAYK | BALANCE OF PAYMENTS ADJUSTMENT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| XP1TKK | EXPORTS OF GOODS & SERVICES (NA BASIS) | 4.01 | 4.89 | 4.22 | 4.34 | 4.45 | 4.58 | 4.68 |
| LVANK | IMPORTS | 71.90 | 71.97 | 72.15 | 72.33 | 72.58 | 72.76 | 72.89 |
| BEC2KK | - LIVE ANIMALS | 4.53 | 4.45 | 4.74 | 4.84 | 4.90 | 4.95 | 4.99 |
| BEC3KK | - FOOD, FEED & BEVERAGES | 3.44 | 3.36 | 3.33 | 3.31 | 3.31 | 3.33 | 3.37 |
| BEC4KK | - RAW MATERIALS | 4.33 | 4.48 | 3.01 | 3.80 | 3.87 | 4.13 | 4.26 |
| BEC5KK | - SEMI-PROCESSED MATERIALS | 4.59 | 4.72 | 4.59 | 4.60 | 4.65 | 4.70 | 5.00 |
| BEC6KK | - END PRODUCTS | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| BEC7KK | - SPECIAL TRANSACTIONS | -0.23 | -0.77 | -0.79 | -0.93 | -1.07 | -1.17 | -1.30 |
| YCT0KK | TOTAL MERCHANDISE IMPORTS | 4.50 | 4.51 | 4.40 | 4.41 | 4.44 | 4.60 | 4.79 |
| ISAVKK | TOTAL SERVICES IMPORTS | 1.47 | 2.50 | 2.40 | 2.26 | 2.32 | 3.70 | 3.83 |
| DDPAYK | BALANCE OF PAYMENTS ADJUSTMENT | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| XP1TKK | IMPORTS OF GOODS & SERVICES (NA BASIS) | 3.95 | 4.09 | 4.16 | 4.19 | 4.29 | 4.44 | 4.62 |

TABLE HT900K 0
 TRADE SECTOR - EXPORTS & IMPORTS
 (PERCENTAGE DIFFERENCES)

| | 2002 | 2003 | 2004 | 2005 |
|--------|--|-------|-------|-------|
| LVANKK | | | | |
| SEC2KK | | | | |
| SEC3KK | | | | |
| SEC4KK | | | | |
| SEC5KK | | | | |
| NEG6KK | | | | |
| YCTGKK | | | | |
| ISNVKK | | | | |
| BOPAKK | | | | |
| XPTTKK | | | | |
| | EXPORTS | | | |
| | -LIVE ANIMALS | 0.00 | 0.00 | 0.00 |
| | -FOOD, FEED & BEVERAGES | 10.46 | 10.28 | 10.20 |
| | -RAW MATERIALS | 0.07 | 0.06 | 0.06 |
| | -SEMI-PROCESSED MATERIALS | 5.44 | 5.53 | 5.41 |
| | -END PRODUCTS | 6.27 | 6.00 | 7.50 |
| | -SPECIAL TRANS. & RE-EXPORTS | 0.00 | 0.00 | 0.00 |
| | TOTAL MERCHANDISE EXPORTS | 5.27 | 5.95 | 6.34 |
| | TOTAL SERVICES EXPORTS | 0.06 | 0.96 | 1.04 |
| | BALANCE OF PAYMENTS ADJUSTMENT | 0.00 | 0.00 | 0.00 |
| | EXPORTS OF GOODS & SERVICES (NA BASIS) | 4.91 | 5.17 | 5.49 |
| LVANKK | | | | |
| SEC3KK | | | | |
| SEC4KK | | | | |
| SEC5KK | | | | |
| NEG6KK | | | | |
| YCTGKK | | | | |
| ISNVKK | | | | |
| BOPAKK | | | | |
| IMPYKK | | | | |
| | IMPORTS | | | |
| | -LIVE ANIMALS | 73.01 | 73.19 | 73.42 |
| | -FOOD, FEED & BEVERAGES | 5.04 | 5.13 | 5.20 |
| | -RAW MATERIALS | 3.53 | 3.77 | 4.06 |
| | -SEMI-PROCESSED MATERIALS | 4.73 | 5.22 | 5.72 |
| | -END PRODUCTS | 5.18 | 5.66 | 6.04 |
| | -SPECIAL TRANSACTIONS | -1.25 | -1.46 | -1.63 |
| | TOTAL MERCHANDISE IMPORTS | 5.01 | 5.45 | 5.93 |
| | TOTAL SERVICES IMPORTS | 3.90 | 4.20 | 4.41 |
| | BALANCE OF PAYMENTS ADJUSTMENT | 0.00 | 0.00 | 0.00 |
| | IMPORTS OF GOODS & SERVICES (NA BASIS) | 4.02 | 5.22 | 5.54 |

TOTALS MAY NOT ADD DUE TO ROUNDING OR OMISSION OF RESIDUAL



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