Assessing the FTA: Design of a Framework

Prepared for:

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The principal conclusions of the study are the following.

1. It is not possible to provide a complete, professionally qualified assessment of the FTA's effect on economic performance in 1989 on January 1, 1990, or shortly thereafter. In fact, it will be some years before such an evaluation is possible.

2. It is possible to:

   - o document that the FTA measures are taking place -- namely, tariff reductions have occurred, non-tariff barriers are changing, institutions are established, and required negotiation processes are started;
   - o examine trade flows of those categories with significant reductions for possible indications of an FTA effect; and
   - o assess investment intentions compared to expected industry patterns of response to the FTA.

The principal recommendation is that an annual review of the FTA should be prepared, bringing together synopses and other information that focus on, over time, increasingly sophisticated analyses of the trade data, industrial restructuring, employment turnover, etc.

Analysis and monitoring should be undertaken by departments who have the appropriate technical expertise and continuing mandates to monitor the economy. This should incorporate inputs from private sector groups, who, with the departments, would report their results to the producer of the annual reveiev.

The study presumes that the FTA is a significant policy initiative of the Government of Canada, which, therefore, has a responsibility to monitor and report on its effects. This should be accomplished in an open, balanced setting, alloving for reviev and discussion by all Canadians.

Because the FTA is a long-term, structural policy, with effects on relative prices, allocation of activity, and trade, with particular implications for manufacturing, the analysis of its effects will require a detailed examination of economic data. It cannot be accomplished through a focus on broad macroeconomic indicators, since at that level, the effects will be indistinguishable from other policies and events.

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The Canada-United States Free Trade Agreement is approaching its first anniversary. Supporters, critics, journalists, and others will be reporting their assessments of the first year of the Agreement, using impressions, anecdotes, and pointing at data which may or may not be relevant.

Monitoring the FTA on an ongoing basis, with continuity and sufficient resources, is more likely to yield the information required to answer the question, "Is it working?".

1 WHY MONITOR?

The FTA was a major initiative of the federal government; there is a responsibility to measure its effects. Analysis prior to the Agreement suggested that certain effects would occur. Did they occur? Are there other, unanticipated events that can be linked to the Agreement? Do these require policy responses?

The tools of analysis used to study the Agreement before the fact, can benefit from the ex-post monitoring, either to corroborate the expected effects, or to suggest the need for improvement in the analytical techniques.

2 GENERAL DIFFICULTIES OF EX-POST POLICY ANALYSIS

When a new policy is enacted, the public generally assumes that it is immediately effective. But there can be lags before those affected take advantage of a new opportunity or begin to change their behavior; for example, smaller firms may wait for advice from their accountants or trade associations. The focus of an organization may initially result in no reaction; only at some indeterminate time in the future may it be appropriate to take advantage of the new program or environment.

A policy change may not be effective in full at any one point in time. If phased in, the initial effects may be small, but with a tendency for the effects to be cumulative over time. Structural economic policies (e.g., de-regulation, tax reform, UI reform) have this characteristic, since they may have provisions for the phasing in of new measures or the phasing out of old measures.

Even if the policy effect happened at a specific point in time, and was immediately effective, some time might lapse before the statistical system measures the economic activity occurring. Data lags are short for certain surveys (e.g., Labour Force Survey), but it may be a year or more before data from corporate and personal tax returns becomes available for statistical purposes. For example, it will be 1991 before information on 1989 becomes available for processing. In the case of the Census of

Manufacturers (now a survey), there is a two-year lag before the data are available for analysis. The Input-Output Tables for 1986 are the current set, since they depend on these other sources being available.

Even if the data are available, it may be the case that they are not helpful in assessing the particular policy change. It is unusual for data to be collected only for the purpose of evaluating a policy change, and rarely is a data collection and analysis system included as part of a government program.

The analysis of a policy package can be confounded by the effects of other policy packages implemented either at the same time, or with effects that are moving in the same direction. In some cases, policy moves in other countries, or other economic developments, will also mask the effects of a specific policy move.

3 SPECIFIC FTA DIFFICULTIES

The FTA is a long-term, structural policy with a ten-year phase-in of tariff reductions. Some tariffs were removed immediately, some over five years, others over the full ten years. The timing of certain parts remains uncertain (e.g., the development of a new subsidy code). Changes may accelerate the effects (e.g., the recently-announced tariff eliminations on an additional package of goods).

The nature of the FTA implies that the evaluation must be an ongoing activity, with the changes being incorporated into the analysis as they become part of the package, and as data become available.

The world is not standing still. Exchange rate movements, economic volatility, changes in macroeconomic policy, new trade liberalization initiatives (multilateral tariff negotiations), and new industries and products are continually emerging. The separation of the FTA effects from these other influences will be an ongoing challenge.

The FTA is an agreement between Canada and the United States. This means that disaggregation of data by country, rather than the domestic/foreign split, is necessary. This is not a problem with trade data, but most industry-oriented information simply distinguishes between domestic shipments, and total exports and imports. Even with trade data, it may be important to distinguish between imports from a country and imports by the country of origin.

4 IS IT HOPELESS?

By focusing on the problems, it is easy to conclude that nothing can be done. But that is not the case. By analogy, when the Automotive Products Agreement was signed on January 16, 1965, there was much uncertainty regarding both the direction and magnitude of its impacts on the Canadian economy. By the early 1970s it was possible for the Economic

Council of Canada to undertake a detailed empirical study of the first seven years, which established major positive impacts on the auto sector and the economy.

No doubt a similar study will be performed within the next ten years, with the objective of determining the impacts of the FTA on the overall economy. But what about the period between then and now?

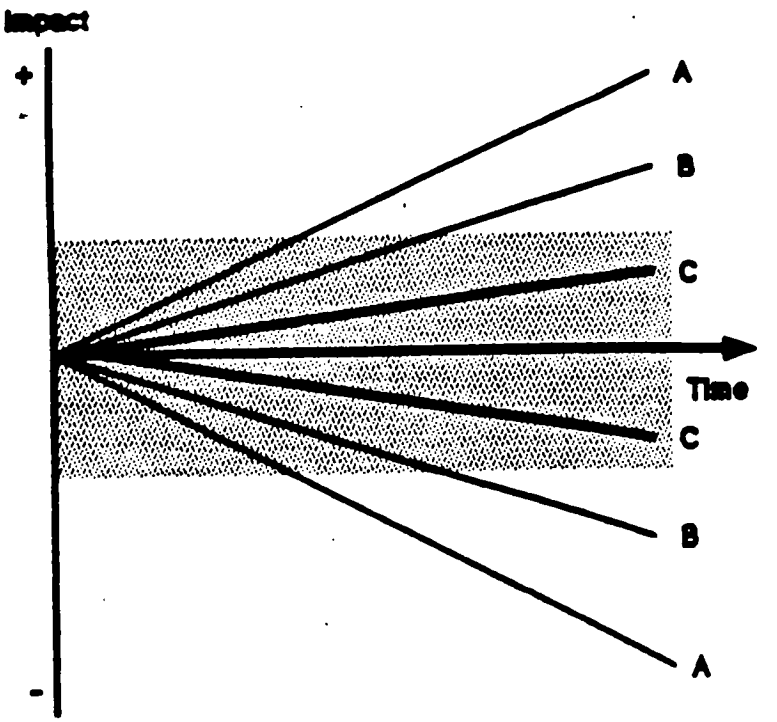
The FTA is principally an agreement concerning trade in goods and selected services between Canada and the United States. Most of the goods on which tariffs existed prior to the FTA are manufactured goods. This implies that the initial focus should be on trade data and the manufacturing sector.

There are also provisions dealing with direct investment by Canadians in the United States and U.S. entities in Canada. The spirit of these changes is passive, essentially ensuring that future barriers will not be erected. Whether there will be a discernible effect on direct investment flows in the near future is uncertain.

In monitoring the FTA, the advice is simple -- start looking where you expect to see the direct effects. Trade flows, the manufacturing sector, and direct investment are good starting points.

This strategy is also likely to be useful in the early years of the Agreement, since cumulative influences will not be evident, and induced effects on other parts of the economy will be difficult to identify.

The challenge will be to see "the trends through the clouds". The problem is depicted in Figure 1, in which the "clouds" represent the effects of other policies, fluctuations in the Canadian and global economies, and other sources of "noise". A specific change in a particular industry or trade category may be evident much earlier (Case A), than a more aggregative sectoral or macroeconomic effect (Case B). It is also possible that some impacts will remain "clouded" for many years (Case C).



5 WHAT TO DO?

What monitoring activities should be undertaken? When? The major activities are grouped by time frame: those actions that can begin now, activities which could begin within the next year (soon), and finally those areas of research that may require several years (later) before data are available or effects emerge. The word "begin" is important to note; initial information may be scanty and effects muted. Nevertheless, establishing a base is important, and the "search" for information will encourage others to produce it.

5.1 Begin Now

5.1.1 Evidence Of Implementation -

One of the first questions that arises is whether the FTA has been implemented in particular areas. Have the tariffs been reduced or eliminated according to the schedule? This should have happened unless exporters or importers did not seek proper documentation for Certificates of Origin. Confirmation of tariff reductions for U.S. exporters can be done from Canadian trade data; it is not clear that the same is possible from U.S. trade data. Anecdotes suggested that some Canadian firms were not taking up the opportunities for tariff reduction yet. Is this evident? Or is it exceptional?

Two provisions of the FTA allowed for the importation into Canada of used cars and aircraft. Is this happening? Note that used car imports should grow with time since the program initially provides that cars must be at least eight years old in 1989, with the age reduced by two years each year for the next four. From 1993 on there will be no age limits.

5.1.2 International Trade -

An analysis of monthly trade flows is currently possible, with data available through October 1989 as of December 14, 1989. With the volatility of monthly trade data, it is recommended that year-to-date figures be used, with simple calculations of the value of exports and imports to the U.S. compared to the value of exports and imports to the rest-of-world. This can be done for the categories with large tariff reductions as of 1 January 1989. If the take up of the tariff reductions has been slow, or if other factors have influenced the trade patterns during the year, no clear picture may emerge.

As more data become available, the analysis can be extended to various sub-groups. The items with immediate tariff elimination (A), can be compared to the groups with five-year elimination (Group B), ten-year (Group C), and items currently duty-free (Group D). A comparison with similar calculations for 1988 would also be helpful.

The purpose of such calculations will be to note whether the trade flows appear to be affected, to test the hypothesis that the relative performance of trade with the U.S. is enhanced by the tariff reductions to date, and also to spot any anomalies that might require closer study. This activity should be ongoing, with periodic reports (quarterly or annually).

5.1.3 Business Investment -

Statistics Canada surveys some 28,000 establishments twice a year, regarding their investment intentions. (The results are published in **Private and Public Investment in Canada**, Catalogue 61-205 and 61-206.) The first survey is conducted near the beginning of the year (November through early February) and the second survey in the middle of the year (May through early July). The second survey is usually referred to as the "Revised Intentions".

Since one of the major areas that is expected to be affected by the FTA is business investment, particularly in manufacturing, this survey would be directly relevant to assessing the FTA impact. The 1989 surveys provide a unique opportunity, since the first survey was largely completed before the FTA was passed by Parliament, whereas the second survey took place some months after the event. This suggests that the magnitude and pattern of the revisions may have special import, providing at least an indication of the marginal effect of the FTA on investment for the same year.

The analysis of the FTA should include the increases in 1989 from 1988, compared to the increases in 1988 from 1987. The revisions should also be analyzed. Simply observing that investment is "up" or "down" is not sufficient. From the various studies of the FTA in 1988 and 1989, it should be possible to assemble a list of industries, particularly within manufacturing, which are expected to be positively affected by the FTA, negatively affected, or little affected. By comparing the investment patterns for these three groups and the magnitude of revisions, it should be possible to obtain some idea if investment responses correspond to the expectations or not.

Investment is affected by many factors - interest rates, capacity utilization, expected profitability, corporate cash flow, and other international influences. But some of these factors at a point in time, will be common across industries, allowing differentials across groups to be attributed, at least in part, to the FTA. This activity should also be an ongoing one, since the investment response to the FTA will occur over a number of years.

5.1.4 Partial Lists -

To date, a common approach has been to rely on anecdotes about investment decisions, plant openings and closings, new hires and layoffs, or other changes and to attribute them to the FTA. This approach can be used, but it should only be done if some attempt is made to classify the partial information into categories that include the FTA effect as one of several possible explanations.

Plants open and close all of the time - for all kinds of reasons. For all industries, about 15 per cent or 100,000 firms "die" each year, and are replaced with roughly the same number of "births". In manufacturing, 10 per cent or 4,000 openings and 4,000 closings occur each year.

It would be useful to have a grouping of the various openings and closings by industry, with an indication of whether that industry was expected to be positively affected by the FTA, negatively affected, or little affected. If reasons for the plant opening or closing were provided, these should be included in the listing. Similar lists for years before the FTA would also be helpful, providing some guide as to whether the direction or pace of change is similar or distinctly different. Since data for more rigorous examination may not be available for several years, this tabulation of partial information in an organized manner should be undertaken with adequate resources. Results will also help to guide more in-depth research later.

Similar lists with the same caveats could be maintained for expansions and contractions of employment, mergers and acquisitions, changes in ownership, etc.

The interpretation of such changes is also important. The FTA is a structural policy, implying changes (both positive and negative) for different industries. Determining the "net effect" of such changes is likely to require more sophisticated techniques and the availability of more detailed information (see below).

5.2 **Begin Soon**

In 1990 and 1991, several additional activities can be undertaken to extend the information available on the FTA. (At the same time, activities noted above would be continued.) With the passage of time both the visible effects may emerge more clearly and the supporting database will be richer.

5.2.1 International Trade -

The data on exports and imports can be exploited further by analyzing the data:

- o for shifts in direction of trade,
- o for increased intraindustry trade indicating specialization and rationalization, and
- o for identification of sectors with substantial changes in either exports or imports.

The recent shift to the Harmonized System (HS) for trade data makes it difficult to conduct analysis over a longer period of time at the detailed trade category. It is possible, however, to use more aggregated data to study the trends over a number of years. As well, estimates in both current dollars and constant dollars with associated price indexes are available, allowing for more sophisticated analysis.

The trade data can be converted to an industry basis, allowing for the updating of export orientation and import penetration calculations. It would be useful if this work was extended in order to distinguish between U.S. and rest-of-world trade.

5.2.2 Industry Dimensions -

Other industry data can be analyzed for effects on investment, output growth, employment changes, profitability, and productivity growth. The distinction between industries affected by the FTA or not should be maintained in order to determine if different trends are evident.

One effect of the FTA is expected to be an increase in the competitiveness of Canadian industry. This will lead to increased pressure on industry prices in Canada relative to those in the United States as a result of the tariff removals. A comparison over time of U.S. industry price trends with the comparable Canadian prices, with adjustment for the exchange rate and tariff changes should indicate whether this is happening or not. Price detail at the industry level is available in both countries on a time-series basis, allowing for the development of econometric testing of the effects.

5.2.3 Market Access -

A major benefit from the FTA will be improved market access, particularly for Canadian firms exporting to the United States. There is no simple "market access index" that can be observed. But there are three dimensions that can be documented and that would provide some sense of possible changes.

The number of trade disputes each year, by type (antidumping, countervail, other), by commodity or industry that arise in the United States and are directed at Canada or affect Canada would be a useful set of

data. Comparison to actions against other countries would provide further context. Adding weights related to the value of trade affected would allow for comparison to the total value of trade.

If there are fewer disputes, affecting less of the total value of trade, then it would be indicative of more "market access". Extension of the information back into the early 1980s would also be helpful in signaling whether the access is improved only with respect to recent years, or represents a better environment than at the beginning of the decade.

With the "deepening" of trade between the two countries it is conceivable that the number of disputes might actually increase, particularly in areas that are "new" to each. The distribution by industry or commodity group may help to distinguish the nature of the increase.

For disputes that do take place, a systematic tracking of the time period required for resolution would be an interesting dimension for regular publication. Again this can be disaggregated by type of dispute, by industry, and with both the historical context and treatment of other countries indicated. A reduction in the time for resolution would be another indicator of improved "market access".

The resolution of the disputes can take many forms. Nevertheless, it is expected that the FTA will result in a more balanced process, implying that Canada will "lose" a smaller proportion of disputes.

5.3 Later

Within five years most of the major changes should be in place. Tariffs will have been eliminated for all of the Group B categories; those for Group C will be halved. The major investment effects will have occurred, and most other adjustments should be evident. From 1992 on it should be possible to obtain micro-data for the period from 1989, allowing for the study of the detailed process of restructuring of Canadian industry. Studies of restructuring through 1988 can provide a benchmark for comparison.

5.3.1 Formal Econometric Studies -

Models of the Canadian economy and specific industries will probably have to incorporate aspects of the FTA into the equations in order to "fit" the data. If this is done, then it is possible for the "counter-factual" case to be simulated, namely what would be the effect without the FTA implementation. A comparison of the two cases can help identify the FTA impact as well as to distinguish it from other structural changes that may occur.

5.3.2 Restructuring And Changes In Employment -

There is a growing capacity at Statistics Canada and Employment and Immigration Canada for the analysis of micro data on the behavior of groups of individuals and firms over time. For example, it is possible to trace the movements of people who have been laid off by firms to determine where they are re-hired or otherwise end up.

The gross changes in firm structures in an industry can also be studied. The entry and exit of firms, the growth, mergers, and down-sizing processes can be monitored by industry. The key will be to identify those firms which are most involved in the adjustment under the FTA.

6 HOW TO DO IT?

The monitoring process of the FTA should be as open as possible, both with respect to the results and the methodologies. There is wide interest in information about the effects of the FTA in all sectors of the economy - governments, business, labour unions, the media, and individual Canadians.

The reporting should be balanced, with positive and negative results included. Areas that do not appear to be affected should be noted as well.

It should be recognized in the analysis and reporting that the FTA is taking place in the context of a continually changing economy. Measures should emphasize the relative performance or behavior, relative to other industries or trade categories, relative to past trends, or relative to developments in the United States or rest-of-world.

If specific surveys are undertaken to determine the response of various sectors to the FTA it is important that they be well designed to produce statistically significant findings. In some cases it may be desirable to plan from the beginning to repeat the surveys periodically.

7 WHO SHOULD DO IT?

The study of detailed economic data is a major task, requiring experienced, professional resources. Fortunately, there are a large number of such resources in place within the federal government departments, who are monitoring the economy now.

7.1 Additions To Current Monitoring Activities

A useful addition to current monitoring activities would include the addition of a "filter" or "sensitization" related to the possible effects of the FTA. For example, if those at Industry, Science and Technology Canada (ISTC) who monitor the developments in Canadian industries would add a "section" to their reports focusing on possible FTA effects that are being observed, then timely insights would likely result. In some cases, current activities might need to be extended, for example to look at trade disaggregated by country, or to add measures to existing monitoring systems to highlight possible FTA effects.

7.2 Private Sector Activities

Other potential sources of information include:

- Trade associations - through member feedback, surveys, monitoring of their industry data.

- o Research institutes - through conferences, analytical studies, surveys.
- o Provincial governments - through their monitoring activities and special studies.
- o Universities - through independent research, student theses.

As the FTA matures, it should be expected that the information base will grow exponentially, at least until someone has said the "final vord". Some of the sources will also be in the United States, particularly in those universities with a Canadian studies program or the trade associations with a strong international trade focus.

7.3 Bringing It Together

The FTA is of sufficient importance that an effort to bring the findings together periodically would be vorthvhile. The suggested approach is an annual reviev of the FTA, with a common framevork over time, augmented by special reports on different facets of the Agreement.

The reviev should include a synopsis of other efforts to assess the FTA, and drav heavily on the ongoing monitoring and research done by the various government departments, noted above.

By necessity, the first annual reviev will be sketchy; over time both the completeness and quality should improve. If more timely reporting is a requirement then a Quarterly Update could be added.

8 AN INTERIM REPORT AS OF JANUARY, 1990

As of January 1, 1990 the available database will be very limited. Trade flows through October, 1989 will have just been released. Can anything useful be said? The basic content will have to focus on the early stages of the implementation of the Agreement. It can also serve to set up the information base for subsequent reports.

This interim report on the FTA might include:

- Confirmation that tariff reductions have occurred as scheduled.
- A list of reductions in non-tariff barriers (NTBs), per the Agreement.
- Indications of takeup of program through administrative records dealing with forms provided, queries handled, temporary movements of people to the extent possible.
- Issues handled by the Canada-United States Trade Commission.
- Appointments to Panels and other groups that have been made.

Another useful compilation would be a chronology of events related to FTA that occurred during the year. This provides some sense of the activity over the last year, and will be useful in the future as researchers look back to the early years of the FTA.

Economic indications will be limited by lack of data and the fact that the FTA is just beginning. Nevertheless, useful economic information can be provided by including:

- Analysis of trade flows through October, 1989, for those categories with large tariff reductions.
- Analysis of Private and Public Investment for 1989.
- Provision of lists of anecdotal information about plant openings and closings by industry, if it is possible to identify the various reasons for the changes.

Some information about future monitoring plans and an admonition to be patient may be a useful closing note to the Interim Report.

Assessing the FTA: Design of a Framework

1 THE CHALLENGE

1.1 What Is The Free Trade Agreement?

At the beginning of the coming year, the Free Trade Agreement (FTA) between Canada and the United States will have been in effect for one year. At that point, as there has been throughout 1989, governments, opposition political parties, journalists and members of the public will issue summaries of the FTA's effect on the economy, and doubtless, on Canadian sovereignty and culture. Such summaries can be expected to continue after that, conceivably through to 1998, and beyond, when historians will look back over the decade of 1989-98 to determine the agreement's impact. Commentary will vary from a focus on some particular aspect of the agreement to many that will attempt to "add up" its net effects.

Can net, overall, effects be measured? Indeed, can descriptions of partial effects be reliably determined?

There have been, and will continue to be, many disputes about what the FTA is, but there should be no dispute that it is, at least, an agreement about rules for trading between the two countries. In this sense, then, standard economic analysis was, and should be in the future, applicable to assessing its impact on the economy.

Beyond the rules for trading and settling disputes regarding trade, provisions in the Agreement also affect the status of Party nationals as investors under the other country's laws, and establish rules for temporary labour movement between the two countries. In this sense, the FTA is also an agreement about the mobility of two traditional economic factors of production, capital and labour. Again, assessment of the impacts of these elements of the Agreement are susceptible to the application of standard economic analyses, and descriptive tools.

For some, debates about the FTA have focused on its role as an expression of a particular economic philosophy. We regard this as a legitimate perspective, but what the boundaries of the "particular" economic philosophy are, whether it is more or less effective in achieving goals of Canadians than contrasting economic philosophies, and whether the philosophy is tied to any particular government or political organization would all be highly contentious. Put another way, this perspective is not easily susceptible to standard economic (or, possibly, other) analyses.

Accordingly, this assessment of the measurability of the impact of the FTA focuses on the applicability of analytic and descriptive tools that can be used to measure economic impacts. While this may be too narrow a scope for some, we assume that broader perspectives would still require measures that this economic focus may provide.

The FTA is also a legal document, drafted in contractual language so that disputes about its implementation can be tested in domestic and international courts of law and other dispute-settlement forums, some of which are established by the Agreement. The articles of the FTA will cause auditable changes in government legislation, regulations, and taxes and expenditures with effect on economic performance. They may also alter the behavior of private persons, and both private and public organizations with effects on economic performance. Changes of this kind are unlikely to be directly auditable, but must be inferred from, always disputable, analytical procedures. In short, because the FTA is a legal document, translating its effect into measurable economic terms will be a non-trivial task.

It also has to be recognized that the FTA is an agreement that will be contextually bound. (In this sense, it is an expression of a philosophy.) Important to that is Canada's current and future participation in such international agreements as the General Agreement on Tariffs and Trade (GATT), the International Monetary Fund (IMF), and the Agreement on an International Energy Program (IEP). The GATT binds Canada to a vide variety of provisions affecting trade, dispute settlement, treatment of foreign investors and government procurement rules. The IMF binds Canada to particular rules affecting the flovs of funds between countries, including those of foreign investors. The IEP binds Canada to particular rules about trade in energy in the event of international shortages.

The Agreement also has been reached against a context of domestic policies in the tvo countries. Recently, but prior to signing the Agreement, Canada had "deregulated" its energy, transportation and financial sectors for a variety of domestic and international reasons. Current national rules for operating the economy are "grandfathered" throughout the Agreement. Indeed, the capacity to extend the general philosophy of operating a mixed, public and private, ownership of the economy is explicitly recognized in the FTA in the form of a right to develop nev crown corporations. There are also rules that restrain the right of the state to intervene in markets.

Impact measures must recognize both the international and domestic policy context, making explicit, in impact jargon, the Base Case against vhich an FTA future is compared.

Finally, it should be recognized that in many respects the FTA, at the margin, is a sectoral agreement. Elements of the agreement will have general sectoral implications, and effects on any sector have implications for other sectors and, overall, on macroeconomic performance. There are, hovever, chapters covering, specifically, agriculture, energy, automotive products, and a number of services. Further, changes in tariffs, and non-tariff barriers (NTBs) will have highly concentrated sectoral effects.

Each of these attributes of the FTA - that it is a legal document, agreed to contextually, vith significant sectoral impact, and it explicitly alters rules for trading and movement of factors of production - poses a challenge to the development of any monitoring system. They suggest a system that draws on a vide variety of approaches, and significant information and analytical resources.

1.2 Sources Of Noise

As a general statement, assessment of an impact can be thought of as attempting to decompose the "causes" of an event into constituent elements. With perfect understanding and data that accurately describes what has happened, each of the elements would be properly weighted, and taken together, would "explain" the event perfectly, every time. But this almost never happens, and some "noise", or unexplained residual element, is always present to confuse the issue. This noise can follow from a variety of factors, including improper measurement of either the event, or one of the "causative" elements, or mis-specification of the relationship between the event and those things that are thought to explain it. The object of rigorous research is to reduce the amount of noise. Assessment of the economic effects of the FTA will be confronted with classic causes of such noise.

A rigorous assessment of the FTA's effects on the Canadian economy will have to start with a determination of what was changed in each year (much of which will be couched in legal and other, non-economic, terms), and an evaluation of how this directly influences the economy at the margin in that year, and beyond. For example, the FTA includes an agreement to reduce Canadian and American tariffs, beginning on January 1, 1989. In Canada, this should directly reduce the price of American-originated goods imports, and raise the quantities imported, the amount depending on whether tariffs, quantitative or other restrictions were previously effective in restricting imports. Canada's exports and export prices will also be directly affected by the reduction of U.S. tariffs (and customs user fees).

As a second example, changes in tariffs, and in investment rules, access to market rules, or other provisions of the FTA may also directly alter changes in behavior of Canadian, U.S. and other-foreign investors in productive plant and equipment. Such provisions may "cause" a Canadian (or foreign) investor to judge that the strategic setting in which operations occur has changed, leading to altered intentions about what products to produce, how production in an enterprise will be carried out and at what scale, and for these reasons intentions about how much to invest, and where. Both negative and positive effects on output, employment and incomes can be expected.

Thus, the first point at which "noise" can be introduced into any analysis will be the extent to which events have occurred, and what these directly mean in economic (market-measured) terms.

Using tariff effects as an example, it is possible to audit the changes in tariffs as the starting point for evaluating direct effects. Notice that the FTA cannot itself be considered to necessarily document what can be expected here, since Article 4.1.1 provides for an acceleration in the schedule of tariff reductions. Further, importers may neglect to take advantage of a tariff reduction. And, of course, GATT agreements about tariffs (and NTBs) will be changing over time.

Given an appropriate audit of events, a second source of "noise" is introduced when attempts are made to translate them into fairly directly measurable consequences. Thus, any change in tariffs collected will have

effects on import prices and volumes. Such effects may be inferred from careful inspection of statistics that describe changes in patterns between those commodities that appear to be most directly affected, and others, by review of changes over time, and by comparison to changes in the United States and other countries.

Inferences derived from reviews of changing trends described statistically cannot, however, isolate the extent to which the changing patterns were caused by the FTA, or by other unrelated events. Typically, economic "models" are required for this.

Nor can models provide an unambiguous isolation of effects, even at this "early point" of any analysis where the focus is on partial evaluation of trade or price effects. Models represent the behavior of thousands of decision-makers, and necessarily portray the aggregate effects of such decisions imperfectly. The price faced at the border by a Canadian importer will depend on whether pre-FTA prices were influenced solely by perfect market conditions and the extent to which the federal government imposed a revenue cost to the good, or whether this, and quantitative restrictions imposed by the federal or provincial government, or the nature of the market has also influenced price. If the latter, then the tariff effect on price will be difficult to determine. In some instances, the nature of the market will be highly sector-specific, requiring detailed institutional knowledge of the sector.

Further, given some impact on import prices, the effect on the volume of imports will vary with price elasticity. Once again, model representation of behavior will be imperfect, and varies among researchers. For example, the long-run elasticities used by Informetrica Limited in its early 1989 studies were 0.8 for exports and 0.7 for imports. (If exogenous categories are excluded, these figures rise to 1.6 and 1.0, respectively.) In contrast, Department of Finance results reported a trade price elasticity of 4.1 for exports and 2.7 for imports. Any trade diversion effects would compound the measurement problem.

Similar difficulties exist in measuring the impacts on Canadian exports to the U.S. While reductions of U.S. government revenues will occur, it is not immediately clear whether this will provide a benefit to Canadian producers in the form of increased export volumes, or simply provide an opportunity for the Canadian exporter to increase his selling price with no change in the volume of exports. The actual effects will vary from commodity to commodity.

Finally, it needs to be noted that FTA-related impacts on the volume and price of exports and imports will also be influenced indirectly by other impacts on the economy, and will themselves have effects on other segments of the economy. In addition to the direct tariff effects outlined above, import volumes will also respond to the degree to which the output of Canadian industries is affected, and in degree as the real income and savings of Canadian households are affected. These will be affected by the commodity and tariff on which partial analysis may focus, but also by all other tariff changes, and indeed, by all other direct impacts on the economy. Both export and import volumes will also be sensitive to the degree to which the FTA affects the costs of labour and capital, and

material inputs that go into the production of exports, or import-competing commodities. Uncertainties about these effects will also impede precise measurement.

Even more difficult problems will be confronted in trying to estimate the extent to which the FTA has directly altered private, including investor, behavior. Statistics Canada reports annual investment in private and public plant and equipment each year. Thus, reports of changes in these flows from year-to-year will tempt proponents and opponents of the FTA to use them as indicators of the extent to which the FTA has affected the economy, and, notably, employment.

Measurement problems are severe in this area. First, investment data for each year are subject to comparatively large revisions from estimates that are first reported; indeed, initial, detailed estimates for any year are typically available only after nine months have passed following the close of the year. Put another way, detailed sectoral information on investment flows for 1989 will likely be available only after September 1990. Moreover, data reported at that time are likely to be revised by Statistics Canada subsequently.

Second, assessing the direct effect of the FTA on investment in plant and equipment will again require application of models of investment behavior. Procedurally, one would use the models to predict investment, given actual industry activity prices, interest rates and other costs of capital, and compare this prediction with what actually occurred. A positive difference would indicate a positive FTA influence, although other causes could also explain this. (Negative impacts are also possible, of course.) Further research, using detailed case studies of investment could help to reduce the uncertainty about the real "cause" of the difference. But a completely, unambiguous explanation cannot be expected. There will be considerable dispute about the underlying explanations of investment behavior in the models, and supplementary investigations can only reduce, not eliminate, the ambiguity of results. In short, patterns in the results will be defensible, but clear, unambiguous results cannot be expected.

Third, in cases such as government procurement, some of the articles of the FTA simply affirm GATT obligations already in place. If this is the case, then it is not immediately clear that the FTA has effect unless the affirmation causes some change in behavior. Notice, as well, that the GATT context may also change.

Again, determination of this direct impact is likely to be crucial to any overall examination. Virtually all FTA analyses produced in 1988-89 assumed there would be (net) a positive influence on overall investment. Our own estimates of the likely impacts suggested that the FTA would lead to additional investment (and associated productivity gains), that would double the impacts on overall output provided by tariff and non-tariff barrier changes in the FTA.

1.3 The Base Case Issue, Or Similar And Competing Trends

Explanatory noise can also come from failure to include all elements that explain what has happened. Early indications for 1989 suggest that investment in manufacturing sectors has been especially strong. There may also be indications that the number of "quits" and "starts" in the labour market has accelerated; and the number of one-day trips from Canada to the U.S. appears to have increased.

Is the apparent increase in investment real or not, and if it is, is it an early sign of investment associated with FTA-related specialization and economies-of-scale effects, or is it simply part of the normal, cyclical acceleration of investment? Are the accelerated number of "quits" part of an FTA-related shake out of comparatively weak Canadian industries, and the increased number of one-day trips part of an "attitude" effect on Canadian consumer expectations about a "bonanza" to be found across the border, or are these explained by decelerating U.S. and Canadian consumer growth, the especially strong Canadian dollar, and an extraordinarily high interest rate spread that have characterized the year?

For each of the next ten years, any analysis designed to provide a wrap-up of that year's FTA effects on the economy will be confounded by similar problems. And efforts to look back in 1993, or 1998, and determine what the effects of the FTA were on all previous years will face similar issues. Many of the events cannot be foreseen; some can.

Before 1998, there is a better-than-even chance that a Goods and Services Tax (GST) will be introduced. While most analyses of the FTA indicated a positive effect (through real income impacts) on services sectors, the GST is likely to have, at the margin, some negative effect on this part of production (and employment). Before 1998 arrives, major action on the natural environment is highly likely. Many Canadian analyses of the FTA suggested especially beneficial effects for primary producers, and early-stage manufacturing related to primary production. Business and political support in Canada tended to mirror this expectation, as did the little opposition to the FTA that emerged in the U.S. (in the form of senators from states with heavy concentrations of primary industries). Action on the environment, however, is likely to have its most concentrated negative effects on these sectors. In 1998, it will be very difficult to look back over the previous ten years and decompose these competing influences on the performance of the primary sectors.

Many such events will be unrelated to the FTA in the sense that the FTA does not cause them, or reduce or improve the country's capacity to respond to them. As we noted earlier, however, a broad political-economy perspective will suggest that the capacity to respond is affected by the FTA in some instances. While there is a significant element of truth to this, there is little capacity to describe what the Base Case economic performance without an FTA would have looked like. Indeed, descriptions of that performance would face the same requirement for detailed analysis as does the marginal effect of the FTA. Thus, technical analysis will have to focus on isolating FTA effects against a background of what otherwise did occur in the international economy and in domestic policy development.

It should be acknowledged that any monitoring system that is established will be limited, given this inability to establish the counterfactual Base Case. It should, however, provide sufficient information so that those who are brave enough to posit an alternative Base Case can make the contrast between an FTA world and their own. Those who do put forward such alternatives (which could range from an even more integrated North American profile to ones with much more limited economic relations between the two countries) should be required to provide equivalent, rigorous analysis.

1.4 The Real Challenge

As the short review above illustrates, lags in availability of reliable data, difficulties in isolating FTA from other effects on the economy, and the uncertain nature of results provided by models of behavior, all point to great difficulties in developing any systematic evaluation of the effects of the FTA on the economy. If this is true, then evaluations of broader social impacts are also uncertain.

Evaluations will be provided, however. If one acknowledges that there will always be ambiguity in results, the real challenge is to provide assessments that are based on the application of procedures that bear some relation to the "facts" of the case, and apply statistical and analytical procedures that are rigorous, and revievable. Our view is that both descriptive statistical approaches, and analysis based on assessments of causality can be used. There are some solid information foundations available to support these efforts. They include well-developed statistical information at Statistics Canada, the expectation that responsible government officials can document what FTA events have transpired, and not least, a database of rigorous analyses about the likely effects of the FTA on Canada that were developed in late 1988 and early 1989.

These studies used a variety of analytical approaches, and were performed by a wide range of organizations with varying institutional imperatives. Because they were rigorous, they provide a solid foundation for establishing expectations about where the effects should be felt in the economy. Because they were developed by such a wide range of institutions, there is some reason to credit them, as a whole, with some sense of objectivity. Unfortunately, an equivalent "database" of likely effects on the U.S. economy does not exist. Given that there are feedbacks from the U.S. to the Canadian economy, this is a missing link.

This report focuses on a subset of the monitoring challenge - establishment of an information system that produces rigorous measurement of economic impacts. Such a system will have to monitor what has happened (e.g., which tariffs come off, which non-tariff barriers have been changed), how these are initially transmitted into the economy, and how, in the final analysis, all of these effects interact in the interdependent Canadian, North American, and, indeed, the world economy. Some monitoring elements can likely evaluate implications in "real time" (i.e., as events unfold). These will, however, be limited to pieces of the puzzle.

A fully integrated evaluation of the net effects will always have substantial lags. Data availability on the performance of the industries in the manufacturing sector and other parts of the economy, can only be assembled, with any completeness, after the input-output tables become available. At the present time, the latest table is for the year 1986. Thus, for example, an assessment of the impact of the FTA on the total economy for the year 1989 is technically feasible only in late 1992 or early 1993.

This analysis focuses on the "technical" side of the question. But beyond that, it should be acknowledged that the direction of the information system is also a challenge since rigorous technical procedures are applied to particular questions. Deciding on which questions to ask is equally important. How that would be administered is important, but lies beyond the scope of our commission.

2 MONITORING THE DIRECT EFFECTS

2.1 What Is The Agreement, Including Its Details?

Identifying and then measuring the direct impacts of the FTA are the starting point for any rigorous analysis of the FTA impact. While we anticipate that the direct effects of most FTA changes will be difficult to measure, we, nevertheless, anticipate that some useful analyses can be conducted. In Appendix B a synopsis of the FTA articles is provided.

The starting point for defensible, detailed analyses of the FTA will have to include auditable lists of events that follow from the articles of the Agreement. The main items will include the following. (It needs to be emphasized that for almost all of these, information on changes in the United States, as well as in Canada, would be desirable.)

Measurement of the tariff effects will have to start from a by-commodity, by direction-of-trade view of tariff revenues collected. While seemingly straightforward, given normal collection in statistical systems, there are likely to be some problems in reporting this over time as Statistics Canada converts to the Harmonized System. As well, country-of-origin considerations can muddy any analysis since tariffs for goods imported from the U.S. that do not qualify as American are ineligible for tariff reductions under the FTA. Similar problems will exist for Canadian exports to the U.S. Current databases provide no basis for distinguishing between products that meet or do not qualify for country-of-origin tests.

The FTA will reduce or eliminate some non-tariff barriers (NTBs) on both sides of the border. Both sector-specific chapters, and the general chapters of the Agreement (Four through Six) should have this effect. As a general rule, reductions of NTBs will be expressed in legal or other non-market terms. A proper information base should include an auditable list of changes made to quantitative restrictions, technical standards that were formerly used as a barrier to trade, "national security" restrictions, etc. as they are negotiated. Conversion of these to direct, market-measured effects (as tariff equivalents, or in some other form) will also be required.

Articles 404-405, and the automotive chapter provide restraints, or directly reduce the use of duty drawbacks, waivers and remissions. An auditable list of information should include flows of payments, including information by detailed sector and firm. Ideally, this should be available for some past, as well as current, time periods, and should be linkable to information on investment. If the number of firms is not too large, it may be possible to identify them for "tracking" in the Statistics Canada micro database.

National treatment provisions, and some specific articles, place restraints on the use of domestic marketing and pricing systems as trade restraints. Auditable information will have to include the extent to which price differentials between domestic and imported goods sold in domestic markets are reduced. Linkage to trade flows will be crucial. Even with this information, as the case of wine illustrates, analysis will have to

distinguish between the effects of FTA and other (in this instance, GATT) decisions.

An auditable list of changes to government procurement effects would include details, by commodity and government purchasing segments, on purchases in both those price ranges affected by the FTA, as well as others. Distinction between competitive (affected by the FTA) and non-competitive bids would be important. Ideally, this information base would also attempt to estimate the degree to which procurement prices have been affected at the margin. It would also be useful to record the number of challenges, if any, that occur.

Information on a catch-all of provisions affecting specific commodities, while likely of small overall effect, will be important to specific sectoral concerns. These include provisions affecting used autos, used aircraft, lottery-related printing, payments for use of over-the-air transmission, and effects of changes in the Canadian Income Tax Act that allow deductibility of advertising expenditures in U.S. newspapers and periodicals. Similarly, provisions affecting financial institutions would seem to require documentation, including whether Canadian banks under U.S. federal law receive national treatment, and what has happened with respect to U.S. ownership of financial institutions in Canada.

The collection of information on the temporary movement of people under FTA terms is warranted and should have links with measures of business performance, it having been argued that this provision would provide a relatively strong (for Canada) impact since previous inhibitions to movement were considered to be mainly those of the U.S.

The number and details of direct and indirect investments affected by the FTA should be documented, and likely contrasted to non-U.S. investment flows.

Interpretation of the effects of institutional provisions will be difficult, but documentation of what has occurred, and its contrast with performance, in say, the period since 1980 (i.e., under the rules established at the GATT Tokyo Round) would seem to be warranted. Since some part of the "security of access" benefits to Canada follow from these, linkage to investment performance (including that of establishments owned by Canadians, Americans and other foreigners), and the nature of the investment (indicating specialization, scale of production, etc.) would be required if a test of expectations is to be carried out.

3 CATEGORIES OF INDUCED EFFECTS

Seen in broad terms, the FTA's economic impacts can be characterized as impacts on the trade flows of Canada and the United States, and as a consequence of this and other elements of the Agreement, a policy instrument designed to promote industrial restructuring. From a Canadian perspective, the hope is that this will provide net benefits in the form of increased real incomes of Canadians through more efficient use of labour and capital resources, and reduced costs of operations and domestic prices.

At the same time, it can be expected to cause more "churning" in labour markets and in the birth and death of enterprises. In the long term, it could well increase Canadian ownership of capital (both in Canada, the U.S. and elsewhere), which would be reflected in a positive effect on the current account balance, and, if the economy is made more "efficient", some modest upward pressure on the exchange rate and possibly some reduction in the spread between Canadian and American interest rates.

These macroeconomic effects can be expected to be reflected in a variety of ways. In the following sections, we document how these effects are expected to show up in key indicators of economic performance, where the FTA net effect is a combination of both direct impacts and those that are induced by the interactions in the economy's expenditure, income and production sectors.

Both the expectations and our sensitivity to the indicators that require monitoring reflect a series of interviews we have conducted with government and private organizations. These have necessarily been limited by the resources and time available to complete this project, but were undertaken with a view that analytical groups, and organizations that focus on production or factor markets of special significance should be consulted. These are documented in Appendix A.

Following our review of expectations and interview results, each section provides an outline of recommendations for measurement, and discussion of data opportunities and limitations, and analytical approaches. Both descriptive analysis and causal approaches are recommended. A variety of research techniques, including surveys, econometric models, statistical analysis and case studies are recommended.

3.1 Trade Flows

3.1.1 Expected Effects -

For specific commodities, Canadian tariff reductions should lead to increased imports from the United States, along with a reduction in imports from the rest-of-world. U.S. tariff reductions should lead to increased imports from Canada (increase in exports to the U.S.) and a possible reduction in U.S. imports from the rest-of-world.

With both sets of tariff changes in place, it is possible that both exports and imports for the same commodity group will increase. This would be the case if there is rationalization or specialization in products within the commodity group.

The removal of non-tariff barriers and the reduction in the threat of contingent protection should increase Canadian exports to the U.S., including commodities that were not subject to tariffs in the U.S. To the extent that U.S. market access to Canada has been improved at the same time, U.S. exports to Canada would increase.

3.1.2 Interview Opinions -

The expectation is for more "openness" of the Canadian economy, with increased Canadian exports and imports, reflecting the tariff changes as well as rationalization and specialization by Canadian firms. It should not be presumed that the FTA effects only started in 1989; market access in 1986-88 may have been enhanced by the fact that negotiations were underway.

Very rapid import penetration is a concern. Monitoring of detailed trade flows for areas where trends might require "emergency action" is considered desirable. A special watch is warranted for areas where there are big direct, tariff or NTB shocks (e.g., white goods, shoes, after-market auto parts, furniture).

A monitoring system should include the industry "context", with export orientation, import penetration, value-added attributable to international trade, etc.

There is also a "story" to be told about "what is not happening". Canada avoided the application of "voluntary export restraints" (VERs) in steel. This is one example of improved market access.

There is still lots of room for disagreement between Canada and the U.S. When disputes appear they should be "cataloged", with the amounts involved. A current list should be available. The business view is that we need a system to monitor whether there is an improvement in the security of access to the U.S. market.

Concerns about trade in specific areas were noted during the interviews, even though this was not the purpose of the discussions. They are summarized here, since they illustrate some of the additional

information requirements that a trade monitoring system might need to include.

- Agriculture - watch agriculture trade carefully, with link to pressures on supply management. Red meat benefits that had been expected show no evidence of improvement yet. Several issues still need to be worked out.

- Metals - Concern about possible 409-B actions against non-ferrous metals. There are not many quantitative restrictions affecting minerals, but duty drawbacks are significant for minerals processing. Ferro-alloys and zinc alloys with significant tariffs should be watched. The U.S. zinc industry appears to be in trouble, and Canadian exports are likely to increase. Specialty metals should benefit from the FTA.

- Energy - general view that the FTA will do little to affect trade flows in energy since we were already in post-NEP period. In natural gas, Canada is already much more deregulated than the U.S. which still has lots of inter-state barriers to be worked out. Some rumblings from U.S. natural gas producers are being heard.

  A major area to watch for in energy is conflicts about regulation between Canada and the U.S. The NEB use of "vanilla" benefit/cost analysis is being challenged in a Canadian court by Midland/Cogeneration group as state interference in a market price. FERC does not use benefit-cost, but the state of Maine has interfered in purchase of Quebec electricity since full review of alternatives was judged not to have been done.

  Bill C-23, currently before Parliament, may affect NEB regulation of electric power; responds to Quebec Hydro's desire to have little interference in its plans. In the energy area, the FTA requires the federal government to ensure regulatory compliance by non-federal agencies. Is there an emerging conflict with provincial utilities? The monitoring of AD/CV actions regarding energy subsidies should be included.

3.1.3 Data Support Systems -

Statistics Canada maintains a detailed trade database, updated monthly, revised with new information, and capable of producing special-purpose tabulations as required. Detailed trade tapes are also available from the U.S.

Statistics Canada has also assembled from UN data, a comparable international database of trade flows, with 800 commodities by 165 countries. The Economic Council of Canada plans to use it for its analysis.

Industry, Science and Technology Canada (ISTC) maintains a database of trade data organized by industry groupings with a breakdown by direction of trade for Canada's major trading partners. A publication, **Commodity Trade by Industrial Sector** is produced annually. (The most recent publication covers the period from 1981 through 1988.)

ISTC also incorporates the trade data with shipments by industry and calculates indexes of import penetration, export orientation, etc. This is published annually as **Manufacturing Trade and Measures**. (The most recent issue covers 1981 through 1987.)

There seems to be some uncertainty about the continuation of the ISTC publications. It is important that the information continue to be available and, indeed, extended. A resolution of this matter should be done soon so as to avoid a gap in the information.

3.1.4 Recommended Indicators And Approaches -

One of the first questions that arises is whether the FTA has been implemented in particular areas. Have the tariffs been reduced or eliminated according to the schedule? This should have happened unless exporters or importers did not seek proper documentation for Certificates of Origin. Confirmation from published trade data can be provided. Some anecdotes suggested that some firms were not taking up the opportunities for tariff reduction yet. Is this evident? Exception to the rule?

Two provisions of the FTA allowed for the importation into Canada of used cars and aircraft. Is this happening? Note that used car imports should grow with time, since the program initially provides that cars must be at least eight years old in 1989, with the age reduced by two years each year for the next four. From 1993 on there will be no age limits.

An analysis of monthly trade flows is currently possible, with data available through October 1989 as of December 14, 1989. With the volatility of monthly trade data, it is recommended that year-to-date figures be used, with simple calculations of the value of exports and imports to the U.S. compared to the value of exports and imports to the rest-of-world. This can be done for the categories with large tariff reductions as of 1 January 1989. If the take up of the tariff reductions has been slow, or if other factors have influenced the trade patterns during the year, no clear picture may emerge.

As more data become available, the analysis can be extended to various sub-groups. The items with immediate tariff elimination (A), can be compared to the groups with five-year elimination (Group B), ten-year (Group C), and items currently duty-free (Group D). A comparison with similar calculations for 1988 would also be helpful.

The purpose of such calculations will be to note whether the trade flows appear to be affected, to test the hypothesis that the relative performance of trade with the U.S. is enhanced by the tariff reductions to date, and also to spot any anomalies that might require closer study. This

activity should be ongoing, with periodic reports (quarterly or annually).

The data on exports and imports can be exploited further by analyzing the data:

- o for shifts in direction of trade,
- o for increased intraindustry trade indicating specialization and rationalization, and
- o for identification of sectors with substantial changes in either exports or imports.

The recent shift to the Harmonized System (HS) for trade data makes it difficult to conduct analysis over a longer period of time at the detailed trade category level. It is possible, however, to use more aggregated data to study the trends over a number of years. As well, estimates in both current dollars and constant dollars with associated price indexes are available from Statistics Canada at a higher level of aggregation, alloving for more sophisticated analysis.

It would seem to be possible to extend the ISTC industry analysis to distinguish between trade with the U.S. and other countries, alloving for a monitoring of export and import shares by country for each industry.

A major benefit from the FTA will be **improved market access**, particularly for Canadian firms exporting to the United States. There is no simple "market access index" that can be observed. But there are three dimensions that can be documented and that would provide some sense of possible changes.

The **number of trade disputes** each year, by type (antidumping, countervail, other), by commodity or industry that arise in the United States and are directed at Canada or affect Canada would be a useful set of data. Comparison to actions against other countries would provide further context. Adding weights related to the value of trade affected would allov for comparison to the total value of trade.

If there are fever disputes, affecting less of the total value of trade, then it would be indicative of more "market access". Extension of the information back into the early 1980s would also be helpful in signaling whether the access is improved only with respect to recent years, or represents a better environment than at the beginning of the decade.

With the "deepening" of trade between the two countries it is conceivable that the number of disputes might actually increase, particularly in areas that are "new" to each. The distribution by industry or commodity group may help to distinguish the nature of the increase.

For disputes that do take place, a systematic tracking of the time **period required for resolution** would be an interesting dimension for regular publication. Again this can be disaggregated by type of dispute, by industry, and with both the historical context and treatment of other

countries indicated. A reduction in the time for resolution would be another indicator of improved "market access".

The resolution of the disputes can take many forms. Nevertheless, it is expected that the FTA will result in a more balanced process, implying that Canada will "lose" a smaller proportion of disputes.

3.2 Domestic Producer And Consumer Prices

3.2.1 Expected Effects -

A tariff is an indirect tax on imports. A tariff reduction should show up as a lower price for imported goods, measured at the point of purchase within Canada. This should be evident at the consumer level, and should reduce the input costs for those industries which use imported goods in their production process.

With lower import prices, the domestic producers of the same commodities or close substitutes will face increased competition. This should lead to some reduction in domestic prices as well.

U.S. tariff reductions on their imports from Canada (Canada's exports to the U.S.) may or may not affect Canadian domestic prices. If the U.S. market price for the particular commodity remains unchanged then the Canadian supplier will be able to raise the export price by the amount of the tariff reduction. At the same time, the domestic price for that commodity might also increase for Canadians since the option to export the commodity would determine the price. This kind of price behavior would be expected in those commodities in which Canada is a "price-taker" in international trade. It is most likely in areas in which we supply a small part of the U.S. market, where other countries export to the U.S., and the products tend to be homogeneous.

In the cases where the U.S. market price becomes lower as the result of the tariff removal, then the Canadian export price will remain unchanged, leading to an increased volume of exports. In the short run, the increased demand may put upward pressure on the Canadian price. In the longer run, it may offer the opportunity for economies of scale and lower prices.

3.2.2 Interview Opinions -

The focus should be on those commodities with large direct tariff reductions. Effects through lower input costs on materials entering the production process are not likely to be detectable. Both producer and consumer prices should be examined. It may be fruitful to compare the Canadian prices to U.S. prices in order to detect differences that can be attributed to the tariff changes.

The increased competition from imports suggests some narrowing of profit margins of Canadian industries; the export price changes will go in the other direction.

The shake-out in the domestic vine industry is being carefully monitored. Gallo now appears to be going for market share; vine imports are up sharply but remember GATT is part of this. Agriculture Canada appears to be the most highly geared-up group of those with a specific sectoral problem.

There is no current worry in energy-consuming provinces about the impact of the FTA (or domestic deregulation) on natural gas prices, given the general collapse of energy prices.

Ontario is changing Hydro's legislation to force the export price of electricity to be higher than the domestic price; this would seem to be a direct challenge to the FTA, although the volume of exports is small and their nature tends to be interruptible or a seasonal swap.

3.2.3 Data Support Systems -

Statistics Canada maintains time series on a number of different prices, including:

- consumer price indexes (CPI) - (monthly, with lag of one month)
- industry product price indexes (IPPI) - (monthly, with two-month lag)
- machinery and equipment prices, by commodity - (quarterly, with two-month lag)
- raw material price indexes - (monthly, with two-month lag)
- import and export prices - (monthly, with two-month lag)

Similar price information is available for the U.S.

The basic problem is that the detailed industry prices refer only to the prices charged by domestic producers. Other prices are a blend of imported and domestic prices, with taxes, customs duties, and distribution margins included. The import prices are before any duty has been applied, and are prices f.o.b. in the exporting country.

Thus it is not possible directly to observe the landed import price for a commodity and a comparable price for the domestically-produced commodity. At an industry level, implicit import prices can be calculated from the information in the input-output tables available from Statistics Canada. (The latest information is for the year 1986.)

3.2.4 Recommended Indicators And Approaches -

One effect of the FTA is expected to be an increase in the competitiveness of Canadian industry. This will lead to increased pressure on industry prices in Canada relative to those in the United States as a result of the tariff removals. A comparison over time of U.S. industry price trends with the comparable Canadian prices, with adjustment for the exchange rate and tariff changes should indicate whether this is happening or not. Price detail at the industry level is available in both countries on a time-series basis, alloving for the development of econometric testing of the effects.

Another option would be to use the Canadian import prices and to compare them to the Canadian industry prices. Evidence of a gap opening up after the FTA would suggest downward pressure from tariff removal.

Export prices could also be compared with U.S. industry prices, adjusted for exchange rate changes. If major deviations occur, then this could be indicative of Canadian export prices being affected by U.S. tariff reductions. Within the IPPI database there are some industry prices for which a distinction is made between export and domestic prices. If these items were affected by U.S. tariff changes, then the export price index might rise more rapidly than the domestic price index.

Although no distinction is made between imports and domestically-produced goods in the published CPI information, it may be possible for Statistics Canada to provide a special tabulation for some selected areas.

3.3 Investment Response

3.3.1 Expected Effects -

The term "capital investment" is used here to denote the purchases of machinery and equipment and nonresidential construction by a firm to enhance its productive capacity. "Financial investment" will be used to refer to the financial flows, particularly from abroad, that may be used to finance new capital investment, to acquire an interest in an existing firm, or to acquire financial instruments. When these transactions occur with a firm in which the investor has at least a 10 per cent equity interest they are referred to as a "direct investment".

With the FTA, and particularly as a result of improved access to the U.S. market, it is expected that capital investment will increase, particularly in those industries within manufacturing that are expected to increase their exports.

Other provisions of the FTA have provided for national treatment for financial investments made by Canadians into the U.S. and vice versa. This should lead to increased financial investment flows in both directions.

With companies owned by nationals of third countries, but located in either the United States or Canada, having access to the North American market comparable to that of U.S. or Canadian nationals, there will be an attraction for foreign direct investment from third countries to locate somewhere in North America.

3.3.2 Interview Opinions -

Capital Investment

The possibility of a joint survey about capital investment and other FTA effects was discussed with the U.S.-based National Association of Manufacturers (NAM) and with the Canadian Manufacturers Association (CMA).

There was general agreement that a Canadian location to serve the North American market has been improved as a result of the FTA, through both cost and "access" considerations. This should favor capital investment in Canada.

In more detailed studies of capital investment, it would be useful to distinguish the intentions or actual investments by firms controlled by the U.S., Canadians, and other foreigners. If possible a further distinction could be made (particularly in a joint survey) between:

- o U.S. firms with plants in Canada and the U.S.,
- o Canadian firms with plants in both countries,

- o U.S. firms located only in the U.S., and
- o Canadian firms operating only in Canada.

The timing of the positive investment "shock" is also important. Will most of the effect occur early on with little later, or not? Can the distribution be determined?

Foreign Financial Investment

To date, there have been no third-party complaints about U.S. investment advantages, and only one U.S. investment in the threshold area where the FTA was specifically mentioned.

The desirability of a list of mergers and acquisitions was mentioned several times. Case studies and surveys of planners and CEO opinions was suggested. Others think that case studies focused on an individual firm will tell nothing; they suggest a focus on industry sectors.

With the increased sensitivity to Japanese investment in the U.S., and with the improved access to the U.S. market in Canada, there should be some disproportionate benefit to Canada as a location for Japanese investment. This could well end up with a dilution of American dominance as a foreign investor in Canada (an irony for anti-American fears, but still a "nationalist" concern).

There are some indications of a change in avareness about Canada within the U.S. with "chamber of commerce" missions coming to Canada to attract Canadian investment into the U.S. Some indications that the Toronto "hot-house" is spilling over into benefits for Buffalo rather than investors going to Montreal, etc. A tracking of the success of this activity might be useful to compare with Canadian efforts to attract U.S. firms into Canada. The issue here, hovever, is whether the FTA has improved U.S. security of market access into Canada.

3.3.3 Data Support Systems -

Statistics Canada surveys some 28,000 establishments twice a year, regarding their investment intentions. (The results are published in **Private and Public Investment in Canada**, Catalogue 61-205 and 61-206, with further details provided in **Capital and Repair Expenditures - Manufacturing Sub-industries**, Catalogue 61-214.) The first survey is conducted near the beginning of the year (November through early February) and the second survey in the middle of the year (May through early July). The second survey is usually referred to as the "Revised Intentions".

Industry, Science and Technology Canada (ISTC) is planning a survey of large corporations in Spring 1990, including a particular focus on the impact of the FTA on their level of investment in Canada, the U.S., and elsevhere. Reasons for the change will be requested, along with a question about the effect of the FTA on their competitiveness.

Investment Canada is maintaining an administrative focus on foreign investment inflows, and will have reports on volumes and amounts of foreign investment in threshold areas; database back to July 1, 1985.

Statistics Canada (Catalogue 67-001) publishes quarterly direct foreign investment flovs by major country, vhich allov for a timely monitoring of nev investment flovs into Canada and by Canadians abroad. A more complete picture can be obtained by reference to **Canada's International Investment Position**, Statistics Canada, (Catalogue 76-202) in vhich the cumulative flovs and retained earnings provide a measure of the value of the financial investments by foreigners in various Canadian industries, and Canadian investments abroad.

Another source of similar information is the annual CALURA report on corporations, Statistics Canada (Catalogue 61-210) vith information on the relative performance of Canadian and foreign enterprises by industry.

3.3.4 Recommended Indicators And Approaches -

Since one of the major areas that is expected to be affected by the FTA is business investment, particularly in manufacturing, this survey vould be directly relevant to assessing the FTA impact. The 1989 surveys provide a unique opportunity, since the first survey vas largely completed before the FTA vas passed by Parliament, vhereas the second survey took place some months after the event. This suggests that the magnitude and pattern of the revisions may have special import, providing at least an indication of the marginal effect of the FTA on investment for the same year.

The analysis of the FTA should include the increases in 1989 from 1988, compared to the increases in 1988 from 1987. The revisions should also be analyzed. Simply observing that investment is "up" or "dovn" is not sufficient. From the various studies of the FTA in 1988 and 1989, it should be possible to assemble a list of industries, particularly vithin manufacturing, vhich are expected to be positively affected by the FTA, negatively affected, or little affected. By comparing the investment patterns for these three groups and the magnitude of revisions, it should be possible to obtain some idea if investment responses correspond to expectations or not.

Investment is affected by many factors - interest rates, capacity utilization, expected profitability, corporate cash flov, and other international influences. But some of these factors at a point in time, will be common across industries, alloving differentials across groups to be attributed, at least in part, to the FTA. This activity should also be an ongoing one, since the investment response to the FTA will occur over a number of years.

In 1987 Statistics Canada analyzed the PPI data by country of control of the establishments making the investments. The publication (Catalogue 61-215) has been discontinued, but presumably the capacity to do it is still in place. It vould be useful to follov up on the further

exploitation of the PPI survey, since there is much interest in the behavior of foreign-controlled companies in Canada as regards their investment intentions.

The ISTC survey of large corporations will be a useful addition to the information base. Consideration should be given to repeating this survey for a number of years, perhaps with additional questions about the corporation's responses to the FTA.

If the NAM and CMA carry out a joint survey, it would be useful to compare their results to that of the ISTC survey.

The financial investment flows can be tracked, with a particular eye to detecting any changes in the trends of Canadian direct investment abroad and foreign direct investment into Canada that coincide with the FTA introduction. Many other factors are at work in determining these flows, including interest rates, industry growth, and competitive pressures. Nevertheless, increased flows in both directions would be expected from the FTA.

3.4 Productivity Effects

3.4.1 Expected Effects -

With increased investment in some industries, an expectation of specialization and rationalization, and the possibility of economies of scale from an expansion of market from the Canadian to the North American, the productivity of Canadian firms should increase as a result of the FTA. Most studies assumed that these gains would occur, often by examining the productivity gaps between Canadian and U.S. industries or by estimating cost curves in Canada and considering the room for improvement by changes in scale.

These productivity gains do not occur overnight. Rather they should follow from the investment and restructuring activities of the firms. Thus measurements in these other areas should help judge the timing of the productivity gains.

3.4.2 Interview Opinions -

There is an expectation that capital-output ratios in Canada will converge towards those of the U.S. In comparison studies the contrasts should be made with respect to Canada and U.S., but also with other countries since the FTA will affect Canada's relative productivity versus third parties as well.

3.4.3 Data Support Systems -

The Economic Council of Canada (ECC) is developing a highly detailed database for inter-country productivity comparisons. There are some time lags in this activity and there is a need to ensure that it is kept up to date over time.

The ECC is also working on technology adoption and research and development issues. Part of the activity is the development of a patent database.

Statistics Canada produces measures of labour productivity and provides the necessary data for compilations at a fairly detailed level within manufacturing. It has been announced that more elaborate productivity measures, including total factor productivity, will be produced, starting in 1990.

3.4.4 Recommended Indicators And Approaches -

Both the ECC and Statistics Canada should be encouraged to expand their work in productivity measurement, including the publication on a regular basis of trends in Canada, the U.S., and other countries with substantial industrial disaggregation.

Labour productivity and total factor productivity for at least the 20 sub-industries in manufacturing should be analyzed after data for several years (1989 through 1991) become available to determine if there are noticeable shifts occurring when comparing the period before 1989 and afterwards.

3.5 Employment Changes

3.5.1 Expected Effects -

The overall employment effects from the FTA were generally modest, with most of the net gains induced by higher incomes and occurring throughout the economy. Manufacturing was expected to show either no net gains, or some in the early years as investment occurred, and less longer term as the productivity gains set in. Within manufacturing, the variations ranged from minus eight per cent to plus five per cent after ten years. But these changes may not be visible against the backdrop of other employment changes due to "normal" expansion, restructuring in response to other causes, demand shifts, etc.

The employment effects of most concern will be those that are covered under the rubric of "adjustment", essentially movements of people from one job to another. There are substantial flows from one job to another every year, for many reasons. The analytical difficulty will be in identifying those that are FTA-related from others.

3.5.2 Interview Opinions -

It will be important to analyze gross as well as net flows of workers. Proponents suggest not to run away from this area because if there is no churning, there are likely no structural gains.

Employment and Immigration Canada is focused on the FTA only as part of regular labour market monitoring. Some plans are being made to follow people through a longitudinal file. (See Appendix C for further information.)

There is interest in an early-warning system regarding plant closures and layoffs.

"Sensitive" groups that should be monitored closely include women, older workers, and the "creative" components of the "cultural industry".

The ECC will have a focus on the GST/FTA and labour adjustment in the next Annual Review (November, 1990).

Other labour market dimensions should be explored. Are real wage gains getting through to labour in sectors where this is expected? Is there pressure for harmonization in workplace regulations, practices, wage rates, etc.?

Wage rate comparisons between Canada and the U.S. can be tricky. Are comparisons made on minimum wages for inter-state trade, on averages by industry and occupation? How do these adjust over time? If we become more productive, but start from a lower level (since income measures suggest we are lower), then there should be convergence. If wage rates in Canada are currently higher, do they converge downwards? Or do U.S. wages rise more rapidly?

Other supplementary labour costs and conditions need to be considered. The Canadian health care system is cheaper for business than that in the U.S. Could this draw investment into Canada, or lead to changes in the U.S. system?

There will be pressures on the food processing industry and supply management. Will the two-price recommendation of deGrandpre work? Or will there be major adjustment problems in this area?

3.5.3 Data Support Systems -

The Labour Force Survey provides timely information on the state of employment and changes occurring by industry. Gross flows in and out of employment are maintained, although not regularly published.

The Survey of Employment, Payrolls, and Hours (SEPH) also provides timely data on employment by industry and region, based on a survey of employers.

Linkage of employment changes and firms are done at the micro level. (These are described in greater detail in Appendix C.)

3.5.4 Recommended Indicators And Approaches -

With the indirect linkages between the FTA and employment, it is not likely that an independent monitoring operation is necessary. It may be useful to provide information on known instances of FTA-related employment changes (layoffs or new hires) so that some tracking can be done of the affected group. Information on trade movements, investment changes, and other FTA effects would also be useful background for labour market analysts in order to alert them to areas for possible changes.

Other studies of labour market adjustments can be incorporated as part of the studies of changes in industrial structure. (See the next section.)

3.6 Changes In Industrial Structure

3.6.1 Expected Effects -

Within five years most of the major changes triggered by the FTA should be in place. Tariffs will have been eliminated for all of the Group B categories, those for Group C will be halved. The major investment effects will have occurred, and most other adjustments should be evident. From 1992 on it should be possible to obtain micro-data for the period from 1989, allowing for the study of the detailed process of restructuring of Canadian industry. Studies of restructuring through 1988 can provide a benchmark for comparison.

Restructuring is a complex phenomenon. It may include one or more of the following:

- o changes in the number and size of firms in an industry,
- o a change in the number of products produced by a firm,
- o changes in the number of employees,
- o changes in the occupations of the employees,
- o adoption of new processes for production,
- o changes in the scale of operations,
- o changes in supplier linkages,
- o changes in the corporate organization, number of plants or offices, or in the financial makeup of the firm (ownership, debt-equity mix, etc.).

3.6.2 Interview Opinions -

General sense that intra-industry effects are likely to be the big story. (This implies that micro data will be needed to be used.)

A soft indicator of firms thinking about restructuring would be their hiring of more corporate planners, using management consultants, etc.

The Canadian steel industry is vertically integrated, but most of the rest of metals processing is not. This may have lead to problems with U.S. industry which is highly integrated. Currently, there are very mixed signals from corporate policies with Noranda unbundling in the U.S., Arrov Metals closing Canadian plant.

The concern was expressed that Canadian business is not ready to take advantage of opportunities with a poor record in adopting new technology and relatively (to U.S. firms) weak in marketing.

In developing new technologies, a problem is keeping its advantages in Canada. Does the FTA have an effect here, since now it is easier to buy out a Canadian entrepreneur? (This may be an unnecessary worry, since sale of technology has been possible in the past through licencing agreements, etc. If all that is wanted is the technology, it is probably not worth buying the firm to get it.)

Substantial impacts are expected to occur in petro-chemicals, given the large effective barriers on both sides of the border. Look at indicators of specialization and scale. A major shake-out in electrical and electronic products is expected.

3.6.3 Data Support Systems -

Changes over time in Statistics Canada's input-output tables may serve as indicators of changes in industrial structure. Comparisons with equivalent U.S. tables would also be useful.

There is a growing capacity at Statistics Canada and Employment and Immigration Canada for the analysis of micro data on the behavior of groups of individuals and firms over time. For example, it is possible to trace the movements of people who have been laid off by firms to determine where they are re-hired or otherwise end up. (A more detailed discussion of the systems for such analysis is provided in Appendix C.)

3.6.4 Recommended Indicators And Approaches -

To date, a common approach has been to rely on anecdotes about investment decisions, plant openings and closings, new hires and layoffs, or other changes and to attribute them to the FTA. This approach can be used, but it should only be done if some attempt is made to classify the partial information into categories that include the FTA effect as one of

several possible explanations.

Plants open and close all of the time - for all kinds of reasons. Typical turnover rates for the Canadian manufacturing sector, based on a ten-year span, suggest 40 per cent of the number of plants will exit, with 25 per cent doing so through a plant closing. Plant openings will account for about 19 per cent of the establishments at the end of the period, with an additional 14 per of new entrants occurring through acquisition or an establishment switching from another industry within manufacturing.

For all firms in the economy, about 15 per cent of firms "die" each year, or about 100,000. At the same time, "births" of at least this number occur. For manufacturing, the "death rate is about 10 per cent, implying about 4,000 closings each year, with a roughly comparable "birth rate".

It would be useful to have a grouping of the various openings and closings by industry, with an indication of whether that industry was expected to be positively affected by the FTA, negatively affected, or little affected. If reasons for the plant opening or closing were provided, these should be included in the listing. Similar lists for years before the FTA would also be helpful, providing some guide as to whether the direction or pace of change is similar or distinctly different. Since data for more rigorous examination may not be available for several years, this tabulation of partial information in an organized manner should be undertaken with adequate resources. Results will also help to guide more in-depth research later.

Similar lists with the same caveats could be maintained for expansions and contractions of employment, mergers and acquisitions, changes in ownership, etc.

The interpretation of such changes is also important. The FTA is a structural policy, implying changes (both positive and negative) for different industries. Determining the "net effect" of such changes is likely to require more sophisticated techniques and the availability of more detailed information.

The gross changes in firm structures in an industry can also be studied. The entry and exit of firms, the growth, mergers, and down-sizing processes can be monitored by industry. The key will be to identify those firms which are most involved in adjustment under the FTA. Heavy use of the micro-files would be helpful here.

3.7 Changes In Financial Organizations

3.7.1 Expected Effects -

With a provision to remove the asset ceiling on U.S. bank subsidiaries in Canada, there should be some expansion. Canadian banking subsidiaries and their affiliated investment dealers may now underwrite and deal in Canadian government securities in the U.S. market. Again there should be some modest benefits.

Any major innovations by Canadian banks in the U.S. market must await changes to the Glass-Steagall Act. What has been assured is national treatment in the U.S. market for Canadian financial institutions.

3.7.2 Interview Opinions -

There may be some effects on ownership of financial institutions. Develop a list of what is happening and note whether the changes that occur deviate from the rules applicable to other foreign financial entities.

3.7.3 Data Support Systems -

The Office of the Superintendent of Financial Institutions is probably in the best position to monitor and report on any changes.

3.7.4 Recommended Indicators And Approaches -

A simple compilation of asset distribution by type of bank - Canadian, Schedule B (U.S.), and other Schedule B - would appear to be sufficient to determine if any major shifts are occurring. This can be done annually, starting with the year 1989, and with some historical context provided. (This information should be available during the year 1990.)

Activities of Canadian financial institutions in the United States in securities transactions could be part of the same report.

If the U.S. market opens up, some monitoring of Canadian bank assets in the United States may be useful to size the additional activity created.

4 POSSIBLE APPROACHES TO MONITORING

The study of detailed economic data is a major task, requiring experienced, professional resources. Fortunately, there are a large number of such resources in place within the federal government departments, who are monitoring the economy now.

4.1 Additions To Current Monitoring Activities

A useful addition to current monitoring activities would include the addition of a "filter" or "sensitization" related to the possible effects of the FTA. For example, if those at ISTC who monitor the developments in Canadian industries would add a "section" to their reports focusing on possible FTA effects that are being observed, then timely insights would likely result. In some cases, current activities might need to be extended, for example to look at trade disaggregated by country, or to add measures to existing monitoring systems to highlight possible FTA effects.

Major economic monitoring activities that are likely to include several aspects of the FTA are done by:

- Bank of Canada,
- Consumer and Corporate Affairs Canada,
- Economic Council of Canada,
- Employment and Immigration Canada,
- External Affairs and International Trade Canada,
- Finance Canada,
- Industry Science and Technology Canada,
- Revenue Canada, Customs and Excise, and
- Statistics Canada.

Other departments that can contribute information in particular areas would include:

- Agriculture Canada,
- Canadian International Trade Tribunal,
- Communications Canada,
- Energy, Mines, and Resources Canada,

- Fisheries and Oceans Canada,
- Investment Canada,
- National Energy Board,
- Office of the Superintendent of Financial Institutions Canada,
- Standards Council of Canada,
- Status of Women Canada, and
- Supply and Services Canada.

4.2 Private Sector Activities

Other potential sources of information include:

- Trade associations - through member feedback, surveys, monitoring of industry data.
- Research institutes - through conferences, analytical studies, surveys.
- Provincial governments - through their monitoring activities and special studies.
- Universities - through independent research, student theses.

As the FTA matures, it should be expected that the information base will grow exponentially, at least until someone has said the "final word". Some of the sources will also be in the United States, particularly in those universities with a Canadian studies program or the trade associations with a strong international trade focus.

4.3 Bringing It Together

The FTA is of sufficient importance that an effort to bring the findings together periodically would be worthwhile. The suggested approach is an annual review of the FTA, with a common framework over time, augmented by special reports on different facets of the Agreement.

The review should include a synopsis of other efforts to assess the FTA, and draw heavily on the ongoing monitoring and research done by the various government departments, noted above.

By necessity, the first annual review will be sketchy; over time both the completeness and quality should improve. If more timely reporting is a requirement then a Quarterly Update could be added.

5 AN INTERIM REPORT AS OF JANUARY, 1990

As of January 1, 1990 the available database will be very limited. Trade flows through October, 1989 will have just been released. Can anything useful be said? The basic content will have to focus on the early stages of the implementation of the Agreement. It can also serve to set up the information base for subsequent reports.

This interim report on the FTA might include:

- Confirmation that tariff reductions have occurred as scheduled.
- A list of reductions in non-tariff barriers (NTBs), per the Agreement.
- Indications of take up of program through administrative records dealing with forms provided, queries handled, temporary movements of people to the extent possible.
- Issues handled by the Canada-United States Trade Commission.
- Appointments to Panels and other groups that have been made.

Another useful compilation would be a chronology of events related to FTA that occurred during the year. This provides some sense of the activity over the last year, and will be useful in the future as researchers look back to the early years of the FTA.

Economic indications will be limited by lack of data and the fact that the FTA is just beginning. Nevertheless, useful economic information can be provided by including:

- Analysis of trade flows through October, 1989, for those categories with large tariff reductions.
- Analysis of Private and Public Investment for 1989.
- Provision of lists of anecdotal information about plant openings and closings by industry, if it is possible to identify the various reasons for the changes.

Some information about future monitoring plans and an admonition to be patient may be a useful closing note to the Interim Report.

APPENDIX A

INTERVIEWS

Banks, Sandra	Grocery Products Mfg. Assn. of Canada
Dymond, William	Canadian Embassy, Washington
Grant, John	Wood Gundy Inc.
Iwaasa, David	Department of Finance
Jackson, George	Employment and Immigration
Jorgenson, Sally	Agriculture Canada
Kirkpatrick, Norman	Apple Canada, Inc.
Magun, Sundar	Economic Council of Canada
McCambly, James	Canadian Federation of Labour
McVey, John	Statistics Canada
Miller, George	Mining Association of Canada
Moroz, Sandy	External Affairs
Morris, R.K.	National Association of Manufacturers (US)
Rochon, Paul-Andre	Energy Mines and Resources
Romanko, Dan	Canadian Steel Producers Association
Rove, Chip	US Trade Representative
Rugman, Alan	Ontario Centre for International Business
Rutley, Todd	Canadian Manufacturers Association
Schalkwyk, Joanna	Status of Women Canada
Segal, Marc	National Energy Board
Sharma, Ram	Industry, Science and Technology Canada
Sidvell, Keith	Canadian Standards Association
Smith, Murray	Institute for Research on Public Policy
Sourani, Sam	Supply and Services Canada
Stewart, Ian	Consultant to Senate Foreign Relations Committee
Taylor, Duncan	Ontario Ministry of Energy
Turner, Len	Ontario Ministry of Industry Trade and Technology

Valade, Andre	Energy Mines and Resources
Walmsley, Christopher	Electrical and Electronic Mfg. Assn. of Canada
Wells, J.S.	Statistics Canada
Verdun, Emmy	Investment Canada
York, Robert	C.D. Howe Institute

APPENDIX B

SYNOPSIS OF THE FTA

A Synopsis of the Free Trade Agreement

Chapter One establishes the free-trade area and sets out the major objectives including:

- o the elimination of barriers to trade in goods and services between Canada and the United States,
- o facilitation of fair competition with the free-trade area,
- o liberalization of investment,
- o the establishment of procedures for the joint administration and resolution of disputes, and
- o national treatment with respect to investment and trade in goods and services.

Chapter Two contains general definitions applicable throughout the Agreement.

Chapter Three on Rules of Origin and Articles 401-403 of Chapter Four covering tariffs and U.S. customs fees provide the basis for an examination of tariff impacts. A detailed examination of which tariffs are changing can be a guide to detailed case studies. It is important to note that these articles include provisions that could lead to accelerated reductions (and there has been some discussion of this already).

Articles 404-405 cover duty dravbacks, vaivers and remissions. While actions in this area tend to be delayed for several years, anticipation of this by producers could influence investor behavior in 1989.

Article 407 reaffirms GATT restrictions on quantitative restrictions, and minimum import- and export-price requirements. Canada specifically eliminated restrictions on used or second-hand aircraft, on January 1, 1989, while the U.S. removes embargoes on lottery tickets and related commodities, but only on January 1, 1993.

Articles 408 and 409 provide the general articles restricting domestic initiatives that restrict exports through taxes, duties, or other charges. These articles conform with similar GATT provisions and reflect past behavior by Canadian and U.S. governments. There is no change expected as a result of the FTA.

Chapter Five defines national treatment, with Article 502 extending this to states and provinces in that they are supposed to provide no less favorable treatment to foreign (Canadian or American) nationals than they do to the most favoured group, whether that is residents of the state or province, or other states and provinces. Interpretive notes indicate that this Chapter reaffirms GATT agreements, and makes the obligations of states and provinces more explicit.

Chapter Six covers technical standards used as non-tariff barriers. The chapter covers all goods, other than those of agriculture, food and beverage. Provisions apply only to federal governments. Detailed examinations undertaken by IRPP should provide explicit guides to where effects are likely to have occurred; an auditable list of progress in this area would be a necessary starting point.

Chapter Seven covers agriculture. Articles cover:

- export subsidies, to be eliminated on a bilateral basis,
- an agreement to work together to eliminate export subsidies to third parties,
- provisions to provide temporary protection for Canada's horticultural producers,
- the elimination of quantitative restrictions on meat imports,
- Canadian elimination of quantitative restrictions on grain imports when U.S. federal government support in that area is equal to or less than that in Canada,
- Canadian elimination of the Canadian Western Grain Transportation rail subsidies,
- improved marketing status of Canola in U.S. markets,
- the prevention of future U.S. restrictions on imports of goods containing ten per cent, or less, sugar by dry weight (a safeguard),
- specific increased limits for the U.S. share of specified poultry and egg markets in Canada, and
- harmonization of technical standards and procedures that have in the past served as barriers.

Chapter Eight covers wine and distilled spirits; beer and malt-containing beverages are excluded specifically from the FTA, save for tariff cuts. The general approach is to apply national treatment to the sale of each party's goods. Price discrimination on wines is to be phased out by January 1, 1995, beginning with a 25 per cent reduction in the discriminatory differential in 1989. Differentials on spirits are eliminated immediately, i.e., in 1989.

National treatment applies to listings. Estate wineries in British Columbia receive automatic listing status, while Ontario and British Columbia measures requiring private wine stores to discriminate in favor of provincial vintners are left in place for those establishments operating as of October 4, 1987. Quebec maintains its right to insist that wine sold in grocery stores is bottled in Quebec, so long as alternative sales outlets for U.S. wines exist. Canada eliminates immediately requirements that bulk imports of U.S. spirits must be blended with those of Canada. U.S. bourbon and Canadian whisky will be sold in each jurisdiction only if produced respectively in the U.S. or Canada.

Chapter Nine covers energy. Provisions include:

- GATT rights and obligations are affirmed, including restrictions on quantitative barriers, and minimum import- and export-price (charge) requirements except as follow from countervailing and antidumping orders. Restraints related to third parties require consultation and assurance that neither party becomes a conduit to the other of third-party energy flows.

- Canada is exempted from U.S. legislation restricting imports of enriched uranium while Canada exempts the U.S. from the Canadian Uranium Upgrading policy. Canada is exempted from the U.S. prohibition on exports of Alaskan oil up to a maximum of 50,000 barrels per day, subject to the condition that such oil is transported to Canada from the lower 48 states.

- Export restrictions are permitted, subject to the proportionality rule.

- Regulatory powers used to inhibit trade are constrained. The National Energy Board eliminates the "least cost alternative" test, while the U.S. causes the Bonneville Power Administration to modify its Intertie Policy so that B.C. Hydro is treated equally with U.S. utilities outside the Pacific Northwest. Non-federal regulatory bodies "shall" participate in consultations.

- Exploration incentives, for oil and gas, are alloved.

- Restrictions on trade related to national security, mainly a U.S. test, are limited.

It should be noted that both opponents and proponents of the FTA within Canada pointed to this chapter as likely to cause substantial increases in exports of energy from Canada to the U.S. Any measurement of this effect will require very careful, case-specific, analysis. Potentially, its impact on total output and incomes could be large.

Trade in automotive products is covered by Chapter Ten. The Auto Pact is affirmed. Waivers on customs duties are sustained to the amount of approximately $300 million annually for those in an appended list. (The value of such vaivers may change if tariffs are altered under the MTN.) For 13 companies listed (mainly foreign trademarks), vaivers based on exports to the U.S. are eliminated immediately, and those for third parties are eliminated in 1998. For five companies, vaivers based on value-added performance are terminated in 1996.

Canadian import restrictions on used autos are phased out, beginning in 1989 and completed by January 1, 1993.

Chapter Eleven covers emergency action. This allows one Party to temporarily increase duties, for up to three years, if tariff reductions constitute a substantial cause of serious injury. This is a separate track from GATT provisions, and requires an equivalent liberalizing tariff initiative or allows for retaliation by the other Party.

The Chapter seeks to avoid "sidesvipe" effects, as e.g., from U.S., for GATT Article XIX actions, through requirements for specific naming, separate injury determination, consultation, etc. Measurement of the direct impact of this will be particularly contentious. If a Party is "sidesviped", equivalent tariff liberalization action is supposed to occur, as under GATT.

Chapter Twelve covers **exceptions for trade in goods.** This generally affirms GATT, but adds **U.S. and Canadian controls on exports of logs, and unprocessed East Coast fish.** Article 1204 covers the **exclusion of beer and malt-containing beverages** from national treatment.

Chapter Thirteen covers **Government Procurement.** For the U.S., 11 out of 13 federal departments are covered, along with 40 agencies and commissions. For Canada, 22 departments and 10 agencies are covered. (These same agencies are already covered by GATT.) A form of national treatment for goods purchases above $25,000 (U.S.) is provided, compared to the GATT limit of $171,000 (U.S.).

There is a requirement for an annual report to allov for the monitoring of activity under this Chapter.

Chapter Fourteen covers **services.** The basic approach is to apply national treatment, which is extended to provinces and states, to a list of **named services.** Exceptions include transportation, basic telecommunications, doctors, dentists, lawyers and child care. Most other commercial services are covered. (Chapter Seventeen covers financial services.)

Existing discrimination is specifically grandfathered, and the chapter explicitly makes it clear that national treatment does not force harmonization. **Specific annexes covering architecture, tourism, computer services and telecommunications networks enhanced services** are provided. The parties are encouraged to modify or eliminate existing discrimination. Taxation is excluded, provided that measures are not arbitrary or "unjustified" discrimination. The effects from this Chapter are prospective in nature, preventing new barriers and providing a framework for the development of specific annexes for other services.

Chapter Fifteen covers **temporary entry for business persons,** designed to reduce restraints on temporary business and professional labour mobility.

Investment is covered in Chapter Sixteen, and applies to all investment except for financial services (but including insurance), transportation and investment related to government procurement. Also crown corporations (including those that may be started in the future) are excluded. For these, there is some text that allovs for discrimination in the form of limiting sales of the crown assets to nationals, but indicates that once that discrimination is in place, it cannot be made more severe.

National treatment and right of establishment are the guiding principles, which are applied to states and provinces. Generally, **performance requirements are discouraged including specifically, export targets, import substitution targets, procurement preferences, and value-added targets.** Local employment, product mandating, technology transfer and research and development undertakings are alloved.

Limitations on transfer of funds cannot be proscribed on a nationality basis, but can be proscribed if derived from general application of laws relating to bankruptcy, movement of securities, criminal offences, reports of currency transfers for withholding taxes, and ensuring the satisfaction of adjudicated judgments. Other than this, no restraints are allowed.

Everything covered in all previous articles of this chapter are grandfathered. Further, threshold provisions and minimum equity and forced sales restrictions of Article 1602 are not applicable to the oil and gas, and uranium mining industries. Any forced divestiture of a cultural industry in Canada, owned by an investor of the U.S. shall be based on an offer made at fair, open market value.

Investment Canada's Act is altered to restrict investment review for direct and indirect acquisitions, based on a schedule of increasing ceilings.

The importance of this Chapter will depend on the degree to which either country introduces legislation to restrict foreign investment by other countries. What has been agreed, is that such new legislation will not be applicable to Canadian investment in the U.S., and vice versa.

Chapter Seventeen covers **Financial Services**; state and provincial actions are specifically excluded from the Agreement. Canadian financial institutions gain national treatment, but there is no reciprocity. **U.S. financial institutions will be able to underwrite obligations backed by Canada**, in degree as this is permitted in the U.S. for coverage of obligations covered by the U.S. Multi-state operations of Canadian banks in the U.S. are grandfathered, and national treatment will be accorded to Canadian banks if there are changes to the Glass-Steagall Act.

Canada agrees to exempt U.S. owners from some aspects of the "10/25" rule, but the 10 per cent limitation on any resident or non-resident shareholder will continue to apply to the larger banks. U.S. bank subsidiaries will be exempted from the current 16 per cent ceiling on the size of the foreign bank sector.

Chapter Eighteen covers **institutional provisions**, setting up the Canada-United States Trade Commission, providing for notification, the exchange of information, consultation, and establishing dispute settlement mechanisms, excluding those involving financial institutions and AD/CV cases.

A Commission is set up which, on request, will attempt to resolve the dispute, or failing this, shall refer disputes on emergency action to binding arbitration or may refer any other dispute to binding arbitration. As an alternative to arbitration, dispute panels may be used.

The direct measurement of benefits from Chapter Eighteen (and Nineteen) will be difficult. The provisions for resolution through consultation and a more speedy dispute settlement procedure will be positive. As well, these institutions represent an alternative to GATT procedures, providing some flexibility, but not lessening previous access to dispute settlement.

Antidumping and countervail dispute settlement are covered in Chapter Nineteen. This chapter is operational for five years pending the development of a substitute system of rules for AD/CV; after two further years, if no system is

in place, either Party can terminate the Agreement on six-months' notice.

Articles 1902 and 1903 make it more difficult (at least politically) to develop capricious national AD/CV legislation. Article 1903 defines the procedure for getting a declaratory opinion from a panel about a piece of legislation. Article 1904 establishes a bi-national alternative to domestic appellate procedures, for reviewing final AD/CV determinations.

If these procedures are effective, as compared to the existing GATT alternative for settling AD/CV disputes, the direct effects could follow from changes to exports, or from increased investment, given a view that AD/CV legislation and applications are depoliticized.

In Chapter Twenty's **Other Provisions**, it is stipulated that the 1980 tax convention between the parties, and Article XII of GATT, on Declaration of Trade Measures for Balance-of-Payments Purposes take precedence over the FTA.

Cultural industries are exempt from the FTA except for articles:

- o 401 - tariff elimination,
- o 1607 - fair market value when there is divestiture,
- o 2006 - retransmission of an over-the-air program, and
- o 2007 - Canadian repeal of discriminatory tax legislation related to advertising.

However, a Party may take measures of an equivalent commercial effect in response to actions that would have been inconsistent with the FTA if this general exemption were not in place.

Retransmission of an over-the-air transmission will honor the copyright laws of the original producer. Canada agrees to alter its legislation by January 1, 1990. Canada will repeal elements of the Income Tax Act which disallow the business deductions for advertising in U.S. newspapers and periodicals.

Article 2008 covers procedures for CMHC decisions about C-D grade plywood. The following article leaves the Memorandum of Understanding of December 30, 1986 on softwood lumber in place.

A provision permitting either Party to maintain or create a monopoly, or state enterprise, is included, subject to restrictions about market discrimination and predatory practices.

Chapter Twenty-One on **Final Provisions** contains housekeeping articles and a general exit provision in the form of Article 2106, which states the Agreement shall remain in force unless terminated by either Party upon six-months' notice to the other Party.

APPENDIX C

ANALYSIS OF INDUSTRY DYNAMICS

Analysis of Industry Dynamics

C.1 INTRODUCTION

By definition, a policy, such as FTA, which promotes industrial adjustment would be expected to result in changes in the structure of industrial activity and employment. One of the challenges is the measurement of such structural change. In this appendix, an outline will be provided about the major data sources which can highlight such changes as well as a brief overview of known analytical initiatives.

C.2 ANALYTICAL ISSUES

C.2.1 Employment

The issues for employment relate to job change, tenure, duration of unemployment and the scale of the gross flows between the three states: employed, unemployed and not-in-the-labour-force. Structural change would be presumably reflected in increases in these gross flows and might be reflected in shifts in job tenure or other measures.

C.2.2 Industrial Organization

Changes in industrial organization can be reflected in the birth or death of an enterprise or legal entity, or in a change in ownership. It can also be reflected in the degree of specialization or the orientation of shipments of a firm, or perhaps in the level of employment or investment as measures of factor utilization.

C.3 STRUCTURAL DATA SOURCES

C.3.1 Labour Force Survey (LFS)

The LFS could provide a basic set of statistics related to the gross flows. Until recently, the LFS publication provided a tabular presentation of the flows into unemployment. In the current issues, the presentation focuses on the reasons for leaving the last job. Job tenure is shown by industry and occupation. Duration of unemployment is shown by age, sex and region. The challenge is to determine econometrically the significance of movements in these series and to separate out the influence of factors other than FTA such as domestic demand, exchange-rate movements, tax changes, etc.

C.3.2 Record Of Employment (ROE)

The Record of Employment is issued by an employer in respect of an employee for which there has been a separation. The basic database is maintained by Employment and Immigration. Because of the potential for the issuance of several ROE records to an individual with respect to the same period of employment, rules are required to translate the ROEs to job separation units. The ROE records reflect both the start and end of employment and contain a reason for separation code. The smallest analytical unit of time is one week. Because they are coded to the individual's social insurance number (SIN), they are linkable over time. Although they are masked for confidentiality, the payroll deduction account number (PAYDAC) and the postal code of the employer are also included. The ROE master database is updated every six months.

C.3.3 T4-Supplementary File

T4 records are issued by the employer to the employee with respect to income tax deducted at source. The organization is by PAYDAC and by SIN. T4s define that employment of a person for some period of time within the taxation year and show the income and associated deductions. The basic records are collected by Revenue Canada. There is an apparent lag of about 15-18 months from the end of the taxation year until a reasonably complete T4 file is available for statistical analysis. The major difficulty with the T4 record is that it may represent employment for only some part of the year.

C.4 T2 - CORPORATE TAXATION RECORDS

Collected by Revenue Canada, these series are maintained by Statistics Canada. Through the business register identifier (BRID), it is possible to maintain a longitudinal track of a financial enterprise which is linkable through this identifier to other surveys such as the corporate ownership files. As the Central Frame Database (CFD) develops, it will be possible to develop a broader profile of the characteristics of an enterprise. The basic T2 file is available for analytical purposes with a lag of about 18 months.

C.5 MANUFACTURING AND PRIMARY INDUSTRIES (MAPID)

The annual survey of manufacturing, in previous years, has provided a database of shipments, employment, inventories and other principal statistics at the establishment level. The establishment linkage is provided with a record serial number (RSN) which is not related to changes in status of the owning enterprise. Through the BRID system, this database can be linked to the T2 data files where relevant. For larger establishments, a long-form questionnaire has been used to ask details about commodities produced. Every five years, a supplementary survey provides details about the destination (by province and abroad) of manufacturing shipments. Shipments by industry are available on a monthly survey basis as well.

C.6 LINKED DATABASES

A number of analytical projects have used longitudinally-linked employment and business databases to examine births and deaths of firms and job creation. The importance of such linkages is that it is possible to emphasize the gross changes in the flows. Most studies have shown that the gross flows far exceed the net flows, whether considering job or firm creation.

C.6.1 Longitudinal Database - Employment And Immigration

Using decision rules to reconcile the conflicts between the T4 and ROE data, this database describes the employment history of every working Canadian with a SIN ending in 5 (10 per cent sample). The employment history includes the separate ROEs with start and end date as well as the T4 information. Benefit, Claim and training program information is also included.

C.6.2 Longitudinal Employment Analysis Project (LEAP)

The LEAP database at Statistics Canada, provides a linkage of the T4 to T2 records to provide an employment database consistent with the legal entities and enterprises for which financial data is available. Linkage to the corporate (CALURA) databases allows the establishment of the country of ownership or control as well as other financial attributes. The longitudinal linkage is through the BRID identifier, by aggregating PAYDACs, providing SIC coding as well as linkage to the corporate T2 or other databases. The T4 information does not necessarily indicate a full year of employment for an individual. Some of the analytical projects, using this information, develop measures such as a full-year equivalent (FYE) or average labour units (ALU) by adjusting by appropriate SEPH (Survey of Employment, Payroll and Hours) wage rate. The basic lags of this database are such that 1988 data will be available in early 1990.

C.6.3 Developmental Databases

Statistics Canada is in the process of developing a more broadly-linked database incorporating the T4/ROE employment information, linked at the individual level, with the corporate databases and potentially establishment databases, linked at the BRID level. Numerous special-purpose databases have also been created for analytical studies.

C.7 CURRENT ANALYSIS

There have been a number of studies which estimate both job turnover and the "demography" of industrial development with respect to firm births and deaths. Linkage on a BRID or other enterprise/establishment link allows the analysis of turnover and job creation at the firm level. An example of such a study would be "Firm Adjustment and Employment Turnover in 1978-82", an internal report, prepared by the Statistical Analysis Section of the Policy Division of the Department of Regional and Industrial Expansion in 1986. Firm change was shown to be related to size. Regions showing high employment growth also recorded a high level of both business creations and failures. More recent analytical studies, performed by Statistics Canada for the successor department (Industry, Science and Technology Canada) have included a linkage to the direction of shipments file and the commodity output file to allow the calculation of specialization ratios.

Linkage on an individual basis, i.e., by SIN as in the Longitudinal file of Employment and Immigration Canada, allows the analysis of job change with respect to the reasons for leaving a previous job, wage change, etc. Linkage through the PAYDAC to the firm allows the identification of layoffs which return to the same company or industry. An example of such a study, under the COPS program of Employment and Immigration, is "Mobility of Canadian Auto Mechanics" which analyzed job change between 1981 and 1985.

C.8 FTA ANALYSIS

The studies mentioned above are primarily descriptive in nature. That is, the studies compared the performance, job creation, turnover rates of various sub-populations of people or companies defined by size, region, industry, etc. As the FTA matures, data for this complex linked files will become available for FTA observations. An initial step would be to extend these descriptive studies to see whether the experience of these sub-populations is noticeably different in the post-Free Trade environment.

However, one of the principal advantages of these databases is that they allow the potential for the creation of interesting sets of time series from their micro-data components. If these time series are analyzed statistically or econometrically with relation to other "macro" measures of economic activity, FTA analysis can be considered in terms of a change in a trend by including variables for the FTA and testing their statistical significance.