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Report to the Congress

January 1994

MEASURING U.S.-CANADA TRADE

Shifting Trade Winds May Threaten Recent Progress

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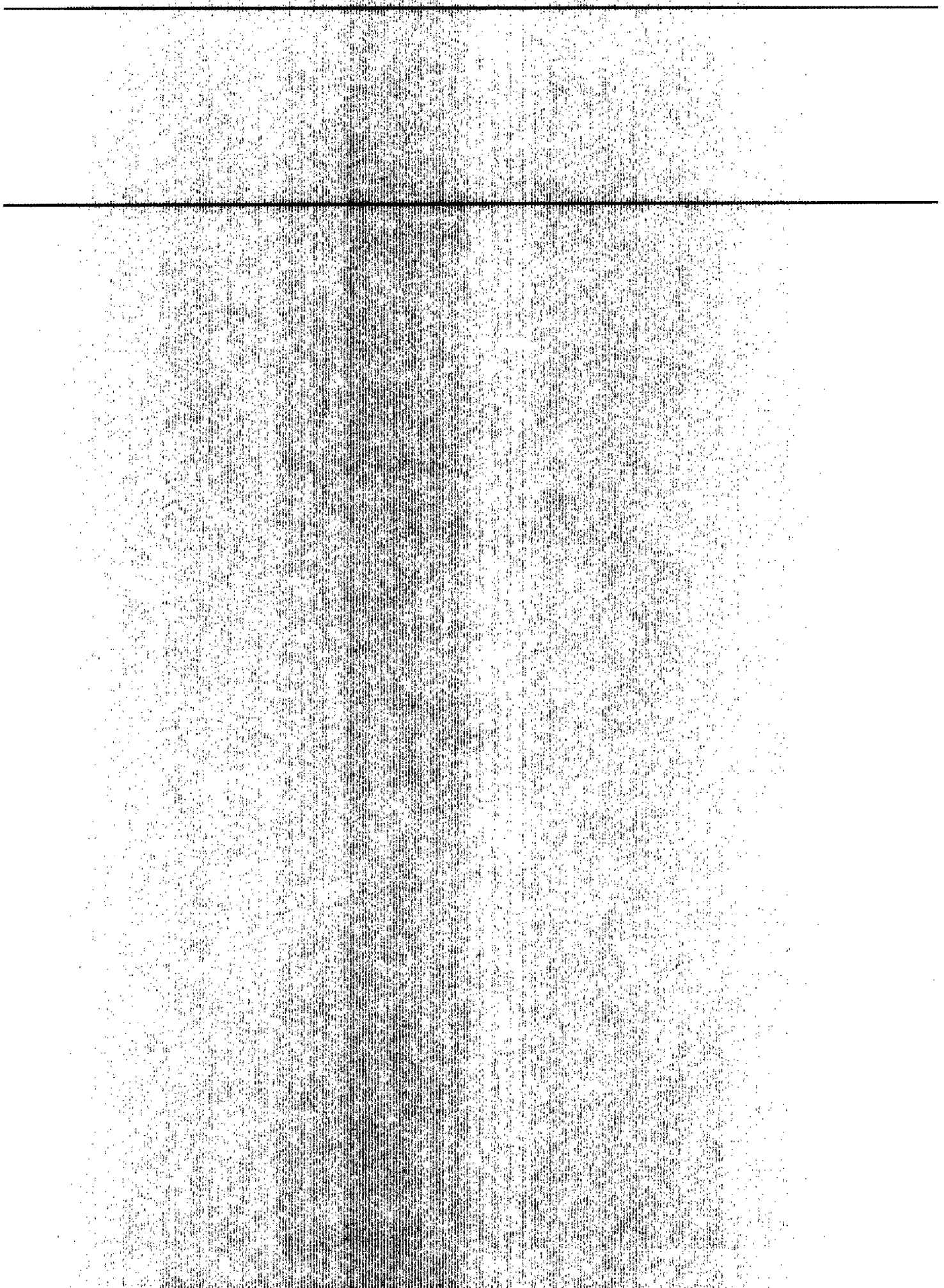

GAO

United States
General Accounting Office
Washington, D.C. 20548

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Comptroller General
of the United States

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January 19, 1994

The President of the Senate and the
Speaker of the House of Representatives

This report is the result of a parallel review of U.S.-Canada trade data by the U.S. General Accounting Office and the Office of the Auditor General of Canada. It discusses the current systems and processes for measuring trade between the United States and Canada as well as how these systems and processes may be affected by changes in the trade environment.

The report represents the first parallel review undertaken by the two audit organizations. We coordinated our work and shared information with each other. The results of the work of the Office of the Auditor General of Canada are in appendix I. This report is being released simultaneously with the presentation to the Canadian House of Commons of the Auditor General's annual report.

We are sending copies of this report to the Secretaries of the Treasury and Commerce, the Commissioner of Customs, the Directors of the U.S. Census Bureau and the Bureau of Economic Analysis, and other interested parties.

This report was prepared under the direction of William M. Hunt, Director, Federal Management Issues, who may be reached on (202) 512-8676 if there are any questions. Other major contributors are listed in appendix IV.

Charles A. Bowsher

Charles A. Bowsher
Comptroller General
of the United States

Executive Summary

Purpose

The United States and Canada are the world's top trading partners. The free trade agreement between the two countries, which took effect in 1989 and is gradually phasing out duties on bilateral trade, is expected to further enhance their trade relationship. Considering the importance of this relationship to the economies of the two nations, accurate data on its nature and extent are vital. For this reason, GAO and the Office of the Auditor General of Canada reviewed the capacity of the statistical systems of their respective countries to produce accurate and complete trade data for both the present and the future. This report focuses primarily on merchandise trade data but also recognizes the importance of data on international transactions of services, investment income, and capital.

Background

Trade data have many uses. The balance of trade, the difference in the value of a country's imports and exports, has become an increasingly important economic measure because of the emerging global economy as represented by growth in both exports and imports. Trade data are indicators of the effect of a nation's trade policies and play a significant role in the negotiation of trade agreements, such as the U.S.-Canada Free Trade Agreement and the North American Free Trade Agreement. Because the U.S. and Canadian economies are so intertwined, an accurate measurement of their bilateral trade is important for understanding each country's economy.

Although there are many aspects of U.S. international trade, data on merchandise trade are the most closely watched. Data on every declared import and export of merchandise are to be collected by the U.S. Customs Service at ports of entry as part of its trade administration efforts. The U.S. Bureau of the Census then compiles this information and publishes it on a monthly basis. Merchandise trade data are also used by the Bureau of Economic Analysis in constructing the balance of payments accounts. These accounts are the statistical summary of all of the United States' international transactions and include information on transfers of services, investment income, and capital.

Results in Brief

The United States and Canada have made great strides in improving the collection of data on merchandise trade. For years, U.S. and Canadian government officials were aware of a serious undercount of U.S. exports to Canada, mainly because of the failure of exporters to file export documents with U.S. Customs. To alleviate this problem, the United States and Canada agreed to develop a program to exchange their more accurate

administrative records on imports and use this information to determine each country's exports to the other. This data exchange program has significantly improved the quality of U.S.-Canada merchandise trade data, although some issues concerning data collection and import classification still must be resolved.

Despite the success of the data exchange program, problems with collecting and processing import data could adversely affect, to an unknown extent, the accuracy of U.S. data on merchandise trade with Canada and other countries. Some of these problems, such as the lack of control of import documents sent from Customs to Census, could be corrected by the automation of Customs' processes. Another problem is Customs' lack of assurance that its cargo examination and import document review procedures are effective in uncovering violations of Customs laws. Such violations, if undetected, could affect the accuracy of trade data. Customs, however, is making substantial efforts to improve its trade enforcement programs.

Even with their shortcomings, merchandise import data are still considered some of the most accurate trade data produced in the United States. Unlike data on other forms of trade, such as service transactions, which are collected through sample surveys that are limited in coverage, Customs attempts to collect data on all imports.

Changes in the international trade environment, however, could significantly affect the quality of merchandise import data. For example, when free trade with Canada is fully implemented in 1998, there will be little need for Customs' entry documentation beyond the collection of trade data. These changes may require developing new methods for collecting these data. Alternative methods for the United States to consider include the use of surveys and the direct reporting of merchandise trade data by businesses to Census. However, these methods have potential drawbacks, such as a loss of detailed product information and diminished statistical accuracy, that would have to be addressed.

GAO's Analysis

U.S.-Canada Trade Data Exchange Successful, but Problems Remain

The federal government has long suspected that U.S. exports have been undercounted. In 1986, a reconciliation of U.S.-Canada merchandise trade data indicated that reported U.S. exports were 20 percent lower than

Canada's recorded imports from the United States. The undercount was primarily due to the failure of exporters to report exports to Customs. To deal with the export undercount, the United States and Canada decided to exchange their more accurate administrative records on imports and use them to determine each country's exports to the other. U.S. and Canadian officials agree that the exchange, which began in 1989, has reconciled most of the differences in U.S.-Canada merchandise trade data. However, the countries are still working to resolve some problems, such as the undercounting of exports to third-party countries, that go through the United States or Canada and the failure of one country's import data to adequately capture some data elements previously available in the other's export data, such as the methods used to transport imports. (See pp. 23 to 33.)

Although import data are generally considered to be more accurate than export data, they too are flawed. Recent evaluations by the National Research Council and GAO revealed that flaws in compliance and quality control procedures could affect the accuracy of import as well as export data. One problem, the lack of control over manually filed import documents, is diminishing as Customs continues to implement an electronic filing system. A problem that is potentially more serious is that Customs' cargo examinations and import document reviews lack effectiveness in identifying violations of Customs laws. The extent to which trade data have been affected by importer noncompliance is unknown. Since a September 1992 GAO study that identified these problems, Customs has been working to improve its trade enforcement efforts. (See pp. 33 to 40.)

Changing Trade Environment Will Challenge Merchandise Trade Data System

Simply improving the current systems and procedures may not be enough to ensure the long-term quality of merchandise trade data, particularly that of import data. One reason is that Customs may end up giving less emphasis to traditional Customs documentation as the free trade agreement between the United States and Canada and other potential free trade agreements eliminate duties on imports. Customs also plans to further automate its cargo processing to deal more efficiently with the increasing trade volume. This planned automation could limit the amount of information provided by businesses to monthly summaries instead of single-transaction entries. These changes could significantly affect the quality of import data. (See ch. 4.)

Problems With Service Transaction and Investment Income Information Limit Trade Data Quality

The monthly merchandise trade balance reports issued by Census are a closely watched indicator of the country's international economic competitiveness. However, merchandise trade accounts for only a part of the United States' international economic activity. Service transactions, such as international long-distance telephone calls and interest paid on investments by foreign citizens, constitute an important and growing part of the United States' trade relationship with Canada and other countries. In fact, when service transactions and investment income are included with merchandise trade, the U.S. trade balance improves. For example, in 1992, this country had a merchandise trade deficit with Canada of $8.0 billion. However, when services and investment income are factored in, the balance with Canada becomes a $4.5 billion surplus. (See pp. 19 to 20 and 41 to 46.)

Data for the service and investment income components of this balance are collected mainly through surveys that are limited in frequency, level of detail, and coverage. Therefore, the level of quality of the data on services and investment income is lower than that for merchandise trade. Initiatives have been proposed by the current and previous Administrations to improve these data, but Congress has approved limited funding for these initiatives. (See pp. 46 to 50.)

Recommendations

GAO recommends that Census and Customs form an interagency task force to study how U.S.-Canada merchandise trade data should be collected in the future trade environment. The study should be expanded to include U.S.-Mexico trade data as the North American Free Trade Agreement is implemented. Census and Customs should consider joining with their Canadian counterparts to form a bilateral task force to address these issues cooperatively. GAO further recommends that the work of the interagency task force be done in the context of broader efforts to improve the measurement of all forms of U.S. international trade. (See p. 61.)

Agency Comments

Customs and Commerce each provided written comments on a draft of this report (See apps. II and III). Customs agreed with the issues presented as well as the conclusions and recommendations. Commerce generally agreed with the issues presented. While agreeing in principle with the recommendation, Commerce said it would like to see the Bureau of Economic Analysis included in any task force formed to address how data on trade between the United States and Canada, and potentially between

the United States and Mexico, should be collected in the future. GAO's work focused primarily on the collection of merchandise trade data, and therefore GAO directed its recommendation to Census and Customs, the agencies responsible for this task. However, GAO supports Commerce's view that the task force would be strengthened by the inclusion of the Bureau of Economic Analysis since this could help lead to broader efforts to improve the measurement of all forms of U.S. international trade. (See pp. 40, 50, and 61 to 62.)

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Abbreviations

ABI	Automated Broker Interface
ACS	Automated Commercial System
BEA	Bureau of Economic Analysis
CSS	Cargo Selectivity System
EC	European Community
ESS	Entry Summary Selectivity System
FTA	Free Trade Agreement
GATT	General Agreement on Tariffs and Trade
IMF	International Monetary Fund
INTRASTAT	Intra-[European] Community Trade Statistics
HTS	Harmonized Tariff Schedule
MOU	Memorandum of Understanding
NAFTA	North American Free Trade Agreement
NRC	National Research Council
OAG	Office of the Auditor General of Canada

Introduction

The proximity and cultural similarities of the United States and Canada have led to the development of strong economic ties between them. These ties are manifested in the enormous flow of goods, services, and capital between the two countries. Each is the other's major trading partner, and together they form the world's largest bilateral trading relationship. Because the U.S. and Canadian economies are so intertwined, an accurate measurement of the countries' bilateral trade is important for understanding each one's economy. This report focuses primarily on one aspect of the U.S.-Canada economic relationship—merchandise trade—and discusses the systems and processes the countries use to collect and produce the data measuring this form of trade. However, this report also briefly addresses other aspects of the trade relationship, including service transactions and capital flows.

This report was the result of a parallel effort between the Office of the Auditor General of Canada (OAG) and us to assess the United States' and Canada's trade data processes and systems. OAG is including its own separate report on the results of this parallel effort in a section of the Report of the Auditor General of Canada to the House of Commons for 1993, which is being released simultaneously with this report.

The Importance of Merchandise Trade Data

Merchandise trade, the exchange of goods with other nations, has long been an important component of the U.S. economy since the mercantile economy of the 18th century. Such trade introduced goods to the market that satisfied domestic consumers and allowed domestic producers access to foreign markets. Also, the duties attached to imports provided substantial revenue for government operations. Although the importance of duties as a source of government revenue has greatly decreased over the years, international merchandise trade has continually grown and become increasingly important to the country's economic development. For example, economic growth resulting from the country's access to export markets and the variety of imports from other nations contribute to a higher standard of living in the United States.

Merchandise trade data, therefore, have many important uses. The United States traditionally has relied on merchandise trade data to administer its various trade programs. Data on the origin and volume of commodities imported by the United States helps the U.S. Customs Service in assessing and collecting duties. These data also help Customs and the Department of Commerce administer quotas and other restrictions on the importation of goods.

Data on the country's merchandise imports and exports also are an important economic indicator. As the volume of U.S. trade has expanded, changes in imports and exports have had an increasingly important impact on the domestic economy. As a result, the monthly merchandise trade balance has become one of the most closely watched of the nation's economic indicators. In 1989, we reported that the release of monthly merchandise trade data had a substantial effect on financial markets.[1]

Merchandise trade is an important part of the current account component of the balance of payments, which also includes other international transactions, such as trade in services and income from foreign investments (see pp. 19 to 20).[2] Merchandise trade is also a component of the National Income and Product Accounts, which provide the overall measure of the nation's economic performance.

Government and Industry Rely on Trade Data

Merchandise trade data are increasingly used by government and businesses. Federal agencies need these data to develop the country's trade policy and to monitor the effect of this and other nations' trade policies. Local governments and businesses rely on the data to plan development and marketing strategies.

Several federal agencies, including the Commerce Department, the Federal Reserve Board, the Department of Agriculture, and the Office of the U.S. Trade Representative, rely on merchandise trade data. Commerce's International Trade Administration is charged with analyzing and disseminating merchandise trade information to U.S. industries for their use in developing trade with other countries. The Federal Reserve Board uses merchandise and other trade data in its efforts to coordinate economic policies with other nations. The Department of Agriculture monitors agricultural trade data to determine the effect of agricultural imports and exports on the supply and price of similar commodities in the United States and to determine when to activate measures to protect U.S. farmers and federal support programs from foreign competition.

The Office of the U.S. Trade Representative makes extensive use of merchandise trade data in multilateral and bilateral trade negotiations as well as for monitoring the impact of trade agreements. Merchandise trade

[1]Federal Statistics: Merchandise Trade Statistics: Some Observations (GAO/OCE-89-1BR, Apr. 21, 1989).

[2]Merchandise and services trade, income on investments, and grants and transfers together constitute the current account.

data played an important role in the negotiations between the United States and Canada that led to the 1988 U.S.-Canada Free Trade Agreement (FTA).[3] The Office continues to use the data to monitor the effect of the U.S.-Canada FTA. In addition, the U.S. team that recently negotiated the North American Free Trade Agreement (NAFTA) with Canada and Mexico relied on merchandise trade data to assess the potential effect of proposed provisions. The Office also uses the data to monitor market share limits on duty-free imports from developing countries under the Generalized System of Preferences.[4]

Other major users of merchandise trade data include state and local governments and businesses. States and localities, particularly those with ports of entry, monitor trade patterns that can affect their economic development. Many businesses and trade associations monitor data on imports and exports within their industries for indications of the performance of domestic and foreign markets. The transportation industry increasingly relies on merchandise trade data for establishing air and sea carrier routes and schedules as well as for planning terminals and other facilities.

U.S.-Canada Merchandise Trade

U.S. merchandise trade has experienced growth in recent years, and trade with Canada has been an important part of this growth. Commerce attributes some of the growth in trade between the United States and Canada to the tariff eliminations and reductions brought about by the U.S.-Canada FTA. The U.S.-Canada FTA took effect on January 1, 1989, and created the world's largest bilateral free trade area. The U.S.-Canada FTA calls for the elimination of all tariffs—in stages—by January 1, 1998. However, even before the FTA took effect, a substantial portion of the goods exchanged by the two nations were free of tariffs.

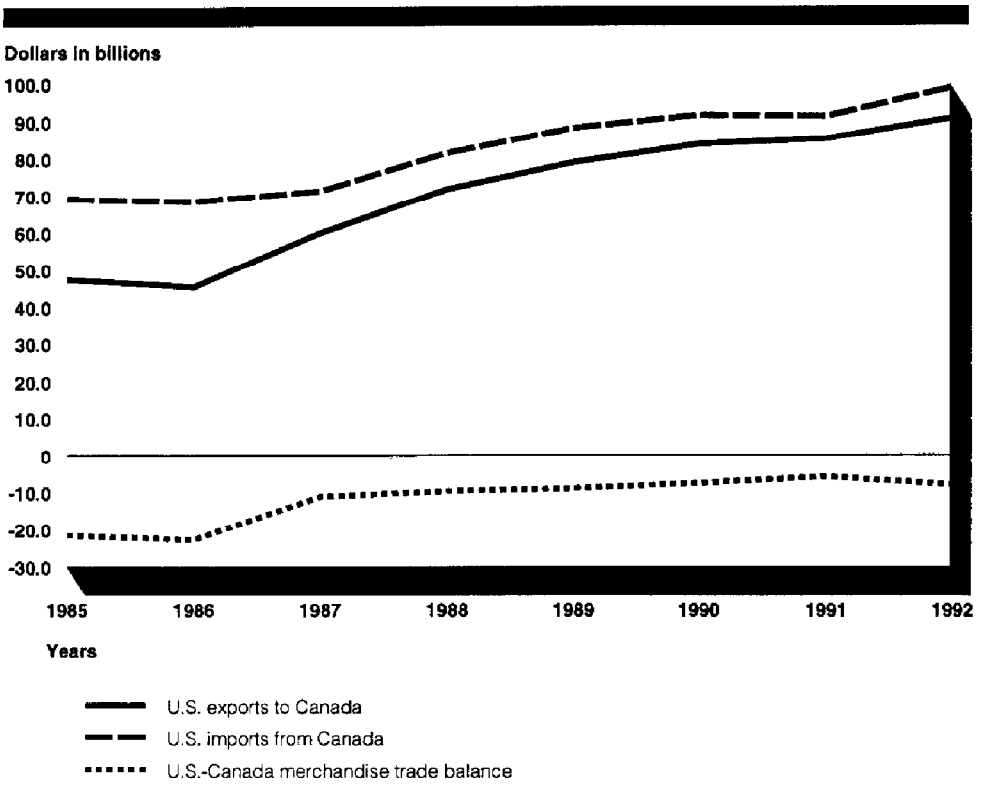
According to U.S. Census data, U.S. merchandise exports to Canada in current dollars rose from $47 billion in 1985 to $91 billion in 1992. Over the same period, U.S. merchandise imports from Canada increased from $69 billion to $99 billion. This increase represents real growth of 49 percent for exports and 12 percent for imports over the period. As it has with several of its industrialized trading partners, the United States has

[3]Free trade agreements are intended to promote trade between countries by eliminating tariffs and reducing other barriers to trade and investment.

[4]The Generalized System of Preferences is a program under which the United States grants duty-free treatment on selected products from certain developing nations and territories. The duty-free treatment applies until a nation's or territory's product gains a predetermined share of the U.S. market.

been running a merchandise trade deficit with Canada, but as figure 1.1 indicates, this deficit has been shrinking.

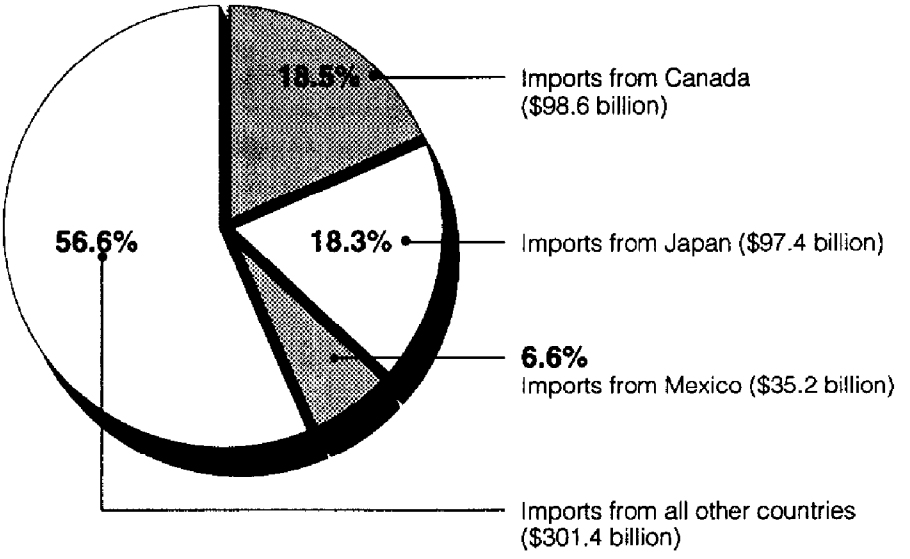
Figure 1.1: U.S.-Canada Merchandise Trade for 1985 Through 1992



Source: U.S. Census data.

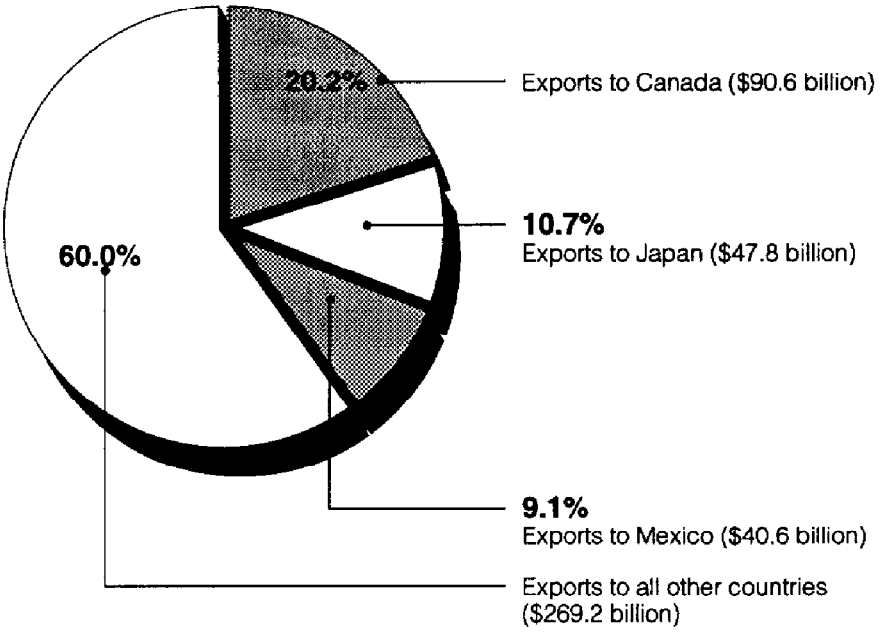
Canada and the United States have the largest bilateral merchandise trading relationship in the world. Figures 1.2 and 1.3 show that in 1992 Canada ranked first, just ahead of Japan, as a source of merchandise imports for the United States ($98.6 billion as compared to $97.4 billion) and first as a market for U.S. exports ($90.6 billion in 1992). Moreover, the United States is by far Canada's most important trading partner. In 1992, about 71 percent of Canadian imports came from the United States, and about 78 percent of Canadian exports went to the United States.

Figure 1.2: U.S. Merchandise Imports From Canada, Japan, Mexico, and All Other Countries in 1992



Source: U.S. Census data.

Figure 1.3: U.S. Merchandise Exports to Canada, Japan, Mexico, and All Other Countries for 1992



Source: U.S. Census data.

The North American free trade zone will soon get bigger as NAFTA, which includes Mexico in a free trade pact with the United States and Canada, is implemented by all three nations. As figures 1.2 and 1.3 show, Mexico already ranks third as a source of U.S. imports (6.6 percent of the 1992 total) and in purchases of U.S. exports (9.1 percent of the 1992 total). In February 1991, Canada agreed to join Mexico and the United States in discussions aimed at creating an FTA among the three nations modeled after the existing U.S.-Canada FTA. Formal negotiations for NAFTA began on June 12, 1991, and an agreement was announced in August 1992. The agreement was signed by the three nations in December 1992. The legislatures of the three countries have ratified the agreement, and implementation began on January 1, 1994. NAFTA would gradually phase out tariffs among the countries over a 15-year period.

U.S. Agencies Responsible for Merchandise Trade Data

The U.S. Customs Service in the Department of the Treasury and the Bureau of the Census in the Department of Commerce share responsibility for U.S. merchandise trade data. One of Customs' primary missions is regulating the flow of merchandise into and out of the country. In performing this mission, Customs is supposed to collect information on the nature, value, quantity, origin, or destination of virtually every shipment being imported to or exported from the United States.[5] Customs' main reason for collecting this information is to determine if proper duties and fees are paid on the shipments and to ensure that the shipments comply with the nation's trade laws and regulations. However, this information also forms the basis for the data on United States' trade with other countries.

For each shipment it approves for entry or export, Customs transmits data to Census on the country of origin or destination, the type of commodity, the quantity, the value, the transportation charges, and other data that are important for monitoring trade flows. Customs performs some edits on import data before their transmission to Census. Census then does more extensive edits and compiles these data into detailed reports on commodities imported to and exported from the United States.

Other federal agencies use Census' merchandise trade data to develop specialized reports on specific commodities or countries or as part of more general reports on the U.S. economy. For example, the Bureau of Economic Analysis (BEA) of the Commerce Department uses summary merchandise trade data in its reports on the United States' balance of payments with other nations.

Only limited information is available on the amount of federal resources that go into collecting, editing, compiling, and disseminating merchandise trade data. Customs does not have a budget for trade data collection. Rather, Customs trade data collection is a by-product of its cargo processing operations, which it conducts at 44 district offices and at nearly 300 ports of entry. In 1990, Customs estimated it used 84 staff years in collecting import data and that 14 of them were used in collecting export data. Census, on the other hand, has a Foreign Trade Division that is responsible for producing merchandise trade data. In fiscal year 1993, according to Census budget documents, the division had a budget of about $18 million, and the foreign trade statistics activity was allocated 379 staff

[5]As we discuss in chapter 2, Canada and the United States use each other's import data to estimate exports between them. Consequently, the United States does not collect documents for exports to Canada.

years across Census. However, Foreign Trade Division officials reported that only about 250 staff worked on foreign trade data programs.

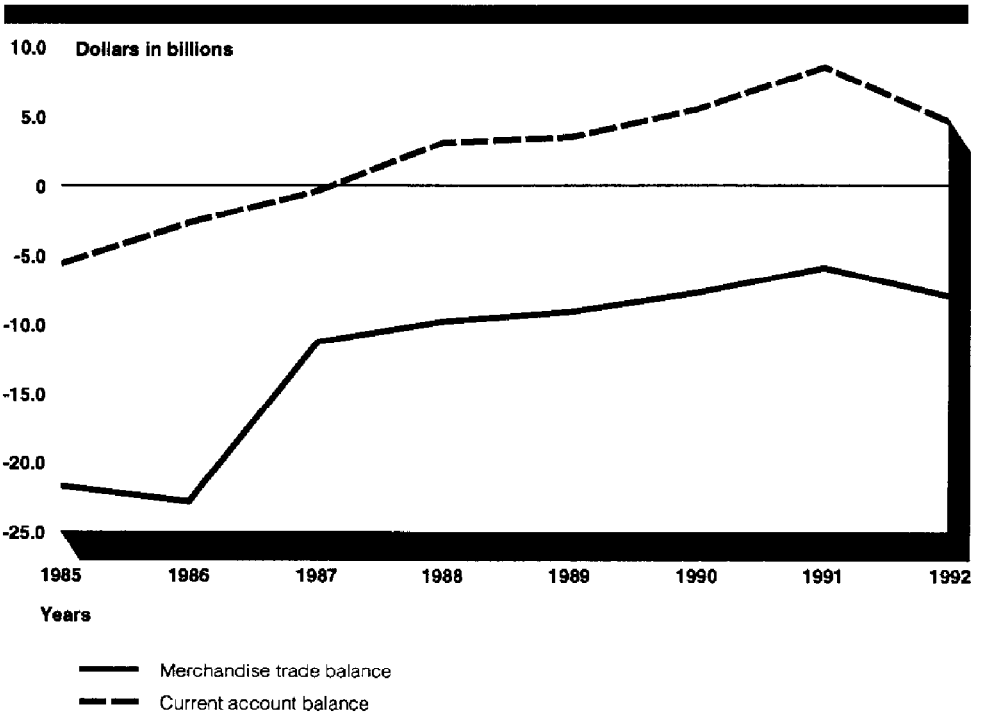
Other Aspects of the U.S.-Canada Trade Relationship

Although merchandise trade is the most well known type of economic activity among nations, there are several other types of trade that occur between the United States and other countries, including Canada. These types include transfers of such services as business consulting, insurance, and communications. Another type of trade is the transfer of income on investments made by one country's businesses or by private individuals in another country.

BEA summarizes the data on all of these transactions into several international accounts that it publishes. Data on service transactions, investment income, unilateral transfers, and merchandise trade constitute the current account. In addition to the current account, BEA monitors data on the amount and flow of financial assets, such as securities and banking transactions between residents and nonresidents of the United States and other countries. These data make up the U.S. capital account.

Although this report mainly focuses on merchandise trade data, the importance of data on these other types of international trade cannot be discounted. They can significantly affect the balance of trade with other countries. For example, as we discussed earlier, in 1992, the United States ran a merchandise trade deficit with Canada of $8.0 billion. However, when BEA factored in transfers and income on investments, the results were a current account balance surplus for the United States of $4.5 billion. Figure 1.4 shows the trends in U.S.-Canada merchandise trade and current account (which includes merchandise, services, income, and transfers) balances.

Figure 1.4: U.S.-Canada Merchandise Trade and Current Account Balances for 1985 Through 1992



Note: Merchandise trade balances are based on Census data. The merchandise trade data included in the current account balances reflect adjustments by BEA to Census data. For example, the adjustments exclude exports of merchandise under U.S. military sales contracts and imports of merchandise under direct defense spending.

Source: BEA and Census data.

Background on Parallel GAO and OAG Review

Over the past few years, we have reported and testified on various issues relating to U.S. merchandise trade and the agencies responsible for administering it.[6] A consistent theme of these reports and testimonies is the importance of merchandise trade data for measuring the country's performance in an increasingly global economy. However, in preparing these reports, we found indications of problems with the systems and procedures for collecting and compiling these data that could affect their quality. Therefore, we began to consider doing a review of these systems and procedures. During the same time, OAG was considering doing a similar review in Canada. Officials from OAG and our agency discussed the possibility of conducting a parallel review of the merchandise trade data

[6]See for example GAO/OCE-89-1BR, April 21, 1989; Commerce Issues (GAO/OCG-93-12TR, Dec. 1992) and U.S. Trade Data: Limitations of U.S. Statistics on Trade With Mexico (GAO/T-GGD-93-25, Apr. 28, 1993).

systems of their respective countries. Such a joint effort was particularly appropriate considering the fact that each country now relies on the other's administrative records for information on exports (see pp. 24 to 25). In July 1992, OAG and we decided to explore the feasibility of doing parallel reviews of merchandise trade data. On the basis of the results of this feasibility study, the agencies formally agreed in January 1993 to conduct parallel reviews. According to the agreement, OAG and we were responsible for reviewing the systems, procedures, and future plans of the agencies responsible for merchandise trade data for our respective countries. The reviews were to have similar objectives, scopes, and methodologies. Although separate reports are being issued, OAG and we have consulted throughout their preparation. This report is being issued simultaneously with OAG's presentation of its annual report to Parliament. The section of the OAG annual report dealing with merchandise trade appears as appendix I.

Objectives, Scope, and Methodology

During the feasibility phase of this joint effort, OAG and we agreed to pursue, in parallel reviews, two primary objectives. These objectives were

- to assess the extent to which the U.S and Canadian agencies have established systems and practices to provide an accurate and complete collection and reporting of trade data and
- to review domestic and international developments that affect trade data and the ways in which agencies are responding to these developments.

Our work included an examination of how data on other aspects of U.S. international trade, such as service transactions, are collected, compiled, and reported. OAG limited its work to Canada's merchandise trade data systems and procedures. OAG and we agreed to share review methodologies concerning merchandise trade data and to assist each other in obtaining information on these data from our respective governments' agencies.

We did our work at Customs headquarters in Washington, D.C.; Census headquarters in Suitland, MD; the Census processing center in Jeffersonville, IN; and several Customs field locations. These locations included Customs port facilities and district offices in Buffalo, NY, Detroit, MI, and the port at Blaine, WA, which are three of the most active border points in terms of merchandise imports from Canada. During these Customs field trips, we accompanied OAG staff to ports on the Canadian side of the border to gain a perspective on how Canada Customs'

procedures for collecting trade data compare to those of U.S. Customs. OAG staff likewise accompanied our staff on visits to U.S. Customs facilities. We also participated in some of OAG's meetings at the Canadian statistical agency, Statistics Canada, and Canada Customs headquarters, both in Ottawa, Ontario. OAG also took part in meetings with Census staff. We did our work from June 1992 to September 1993 in accordance with generally accepted government auditing standards.

To gain an understanding of the procedures and practices for collecting trade data, we reviewed Customs and Census documents, procedures manuals, and budget materials. We also interviewed Census and Customs officials responsible for various aspects of the merchandise trade data programs. We also met with officials from BEA to learn how they use merchandise trade data as well as how they compile reports on other aspects of trade, such as service transactions. We also reviewed our earlier reports on trade data and such studies done by other groups.

To assess the potential impact of changes in international trade on this country's ability to produce quality merchandise trade data, we discussed these changes with Census and Customs officials. We discussed the future of trade data with Canadian officials and members of the trade community. We also reviewed journal articles dealing with technologies, such as electronic data transfers, that could be used to improve trade data collection in the future.

We also obtained information from the Statistical Office of the European Communities about the new system it is implementing to collect trade data since the single European market was implemented on January 1, 1993. We assumed that the United States and Canada could learn some lessons from how the European Community (EC) is measuring trade flows in a free trade environment. The trade relationships among the nations participating in the single market are similar to those envisioned among the United States, Canada, and Mexico, as NAFTA is implemented.

Customs and Commerce provided written comments on a draft of this report. Copies of the comments are presented in appendixes II and III, and the comments are also summarized at the end of chapters 2, 3, and 4. Commerce also provided suggestions from BEA and Census for minor clarifications to a draft of this report. We made changes based on these suggestions where appropriate.

U.S.-Canada Data Exchange Program Has Improved Merchandise Trade Data, but Some Quality Problems Remain

For years, U.S. exports to Canada and other countries were undercounted because of problems Customs has had in collecting the documents from which export data were extracted. To address this undercount, the U.S. and Canadian governments in 1987 agreed to use each other's import data to determine the flow of exports because import data are generally considered to be more reliable than export data. Under the agreement, the countries exchange administrative records on imports. This exchange of data has greatly improved the quality of U.S.-Canada export data. However, some other problems remain with the procedures and practices for collecting and processing merchandise trade data that could adversely affect the quality of these important data.

Undercounting of U.S. Exports Is a Longstanding Problem

The federal government had long suspected that U.S. exports to Canada were undercounted but has only recently found that these suspicions were correct. As far back as 1867, according to economist Robert Lipsey, U.S. officials thought that more goods were being exported to Canada than were being recorded.[1] However, it was not until 1971, when the United States and Canada agreed to conduct an annual reconciliation of their trade data,[2] that the extent of this problem was discovered. The 1971 reconciliation showed a discrepancy of $400 million between reported U.S. exports and recorded Canadian imports. The difference rose steadily over the years, and by 1986, the discrepancy was up to $11.5 billion, accounting for more than 20 percent of total trade between the two countries.

The problem was not limited to exports to Canada. In a 1988 study, the Federal Reserve Bank of St. Louis analyzed U.S. export data and the import data of several other countries for the years 1960 through 1986. The bank found that U.S. merchandise exports had been undercounted throughout the period. It estimated that the undercount of exports to the countries included in the study paralleled the undercount of exports to Canada found in the U.S.-Canada merchandise trade data reconciliations.[3] Similarly, a 1992 study, by the National Research Council (NRC) of the National Academy of Sciences estimated that in recent years there were from $10 to $20 billion more in U.S. exports than were reported. In

[1]Robert E. Lipsey, "Reviving the Federal Statistical System: International Aspects" American Economics Association Papers and Proceedings (May 1990), p. 338.

[2]In merchandise trade data reconciliations, Census compares U.S. data to another country's data in order to identify discrepancies. These reconciliations give Census a better understanding of the quality of U.S. data.

[3]Mack Ott, "Have U.S. Exports Been Larger Than Reported?" Federal Reserve Bank of St. Louis (Sept./Oct. 1988), p. 3.

addition, a series of audits at U.S. airports by Census in 1989 indicated that the undercount of exports resulting from the failure of exporters or their agents to file export documents was $6.7 billion, or about 7.2 percent of the value of merchandise exported by air in 1988. According to Census, exports by air accounted for about 30 percent of total export value in 1988.

Census has attributed the undercount mainly to exporters failing to properly file export documents with U.S. Customs. As we will discuss later, Customs does not strictly enforce requirements that exporters submit documents accurately describing the type, value, and destination of the goods that are to be exported. Consequently, exporters have little incentive to report on their shipments accurately or at all. The potential effect of this reporting problem is illustrated by a Census estimate that $10.2 billion (87 percent) of the $11.5 billion discrepancy in exports to Canada in 1986 were caused by Customs' nonreceipt of export documents.

Customs is planning an automated system for collecting export information. Customs hopes this Automated Export System will not only improve the quality of export data but will help Customs to enforce laws governing the export of technologies related to national security. Customs, with Census' assistance, has conducted a limited test of the system at the port of Charleston, SC. Customs plans to do more extensive testing in the near future, but it is unclear when the system will be implemented. Customs and Census believe that the system can help reduce the undercounting of exports.

U.S.-Canada Import Data Exchange Aimed at Improving Export Data

By 1987, the Canadian and U.S. governments concluded that the problems resulting from the large discrepancies between U.S. export and Canadian import data needed to be resolved. Early in that year, the heads of U.S. and Canada Customs and Census and Statistics Canada met in Washington, D.C., to discuss the problem. They decided that the best solution would be to exchange import data and use it to determine each country's exports to the other. On July 29, 1987, at a meeting in Montreal, the agency heads formally agreed in a memorandum of understanding (MOU)—a formal negotiated information-sharing arrangement—to exchange data.

In the process of negotiating the MOU, U.S. and Canadian agencies identified the data regarding exports that were reported by one country but that were not part of the other country's import database.[4] In the first

[4]For example, the United States did not require import documents to specify the Canadian province of origin, which Canada considers an essential element of its export data.

2-1/2 years after the MOU, the U.S. and Canadian agencies worked together to develop the procedures necessary to permit the exchange of data. First, they incorporated the necessary export data identified before the MOU into each country's import collection systems. Second, the U.S. and Canadian agencies agreed on similar conceptual standards and definitions for compiling import and export data. Third, the countries sought to align their classifications of traded commodities. Finally, the countries developed a computer system to transmit and process exchanged import data. The countries began exchanging import data in January 1988. In January 1990, they began substituting each other's import data for their export data.

United States Reconciles but Does Not Exchange Trade Data With Other Countries

Census does not use any country's but Canada's import data to estimate U.S. exports. Census, however, attempts to reconcile U.S. trade data with the trade data of several major trading partners. Census has ongoing trade data reconciliation projects with Japan, South Korea, Australia, the EC, and Mexico and has published the results of reconciliations for 1989 and 1990 trade with Japan, 1989 and 1991 trade with South Korea, and 1989 trade with the EC. The objective of these reconciliations is to give Census a better idea about the quality of its trade data.

Although it would seem that another country's import data would mirror U.S. data on exports to that country, this is not entirely the case. Because of conceptual and definitional differences in other countries' data, simple comparisons of import and export data can be misleading. Census and the reconciliation partner nations can adjust for some of these differences, but the information available to adjust for other differences is often inadequate. For example, merchandise exported to the United States from a reconciliation partner sometimes involves manufactured goods that are transshipped through a third country. Census often does not have access to enough information to determine how these shipments were counted by the reconciliation partner.

Because of these conceptual and definitional issues, Census cannot estimate exactly the degree to which exports are undercounted to a reconciliation partner nation. However, discrepancies that could not be resolved in the reconciliation between exports reported by the United States and imports reported by the reconciliation partner represent the upper limit of the export undercount, according to Census. The reconciliations that have been completed indicated that unresolved discrepancies in the data were about 3 percent for Japan and the EC and

between 2 and 7 percent for South Korea. Census is still working on reconciliations with Mexico and Australia. Census officials noted that progress on the reconciliation with Mexico has been slow because of differences in how Mexico and the United States categorize certain imports and exports.[5] Staff from Census and Mexico's statistical agency are working to resolve these differences. However, Census does not know when the reconciliation will be completed or how useful it will be in assessing the quality of U.S.-Mexico merchandise trade data.

According to Census, the conceptual and definitional differences between U.S. data and the data of the United States' reconciliation partners presently make it impossible to use the partners' import data to estimate U.S. exports. Census was able to exchange merchandise trade data with Statistics Canada because U.S. data is more closely aligned with Canadian data than with data of other trading partners. The similarities notwithstanding, resolving the differences between the U.S. and Canadian databases took more than 2 years. Census, therefore, does not believe a similar data substitution with other nations is possible in the near future.

How U.S. Import Data Are Produced and Transmitted to Canada

Since the MOU with Canada began, the import data produced by the United States have taken on added importance. Now they not only indicate the flow of goods into this country but also help Canada determine the amount of merchandise it is exporting to its primary trading partner, the United States. To understand how the MOU works, it is first necessary to understand how U.S. import data are collected and compiled. The parallel OAG report, which appears in appendix I, describes in detail how Canada produces its import data. In general, Canada's system is very similar to that of the United States.

The process begins at the ports where goods enter the United States. Imports from Canada mainly enter the country through the northern land border ports. For merchandise to enter the country, importers (or brokers representing them) are required to present information on the nature, origin, value, and other aspects of the goods.[6] This entry information is

[5]For example, Mexico and the United States categorize transactions under the maquiladora program differently. The maquiladora program allows Mexican and foreign investors to establish manufacturing plants in selected areas of Mexico and exempts their imports from certain customs duties. Mexico considers imports to maquiladora plants, most of which come from the United States, as service transactions and therefore does not include them in its merchandise trade data. The United States, however, categorizes exports to and imports from maquiladoras as merchandise trade, and they are reflected as such in U.S. trade data.

[6]Customs does not require formal documentation for nontextile import transactions valued at less than $1,250 nor for textile shipments valued at less than $250.

used by Customs to determine the duties and fees owed as well as whether the goods are under a quota or other import restrictions. Most information is transmitted through an electronic data interchange known as the Automated Broker Interface (ABI), which is part of Customs' overall computerized merchandise processing system, the Automated Commercial System (ACS). If entry information is not transmitted electronically through ABI, it must be presented on paper at the port of entry.

The entry information submitted to Customs by importers forms the basis for the nation's data on merchandise imports. Each entry lists the country of origin, the international Harmonized Tariff Schedule (HTS) number that indicates the type of good being imported, the value of the merchandise, the quantity, its weight, and several other items describing the shipment.

In 1992, more than 90 percent of all entries were filed through ABI. The 1992 ABI filing rate for entries from Canada was virtually the same as the overall figure. ABI has statistical edits designed by Census that reject entries that do not meet statistical parameters developed by Customs and Census. For example, a shipment of textiles with an unusually high unit value would fail the edit program. Rejected entries are electronically transmitted back over ABI to be corrected by the filer. ABI entries that are accepted by Customs are transmitted to Census headquarters in Suitland, MD.

The remaining entries are filed on paper with Customs by importers or brokers, either because the filer does not have access to ABI or because some unique characteristics of the entry make it more efficient to file manually. After these entries are manually reviewed and accepted by Customs, copies are mailed to the Census processing center in Jeffersonville, IN, where they are sorted, reviewed for errors, and entered into Census' computer files.

If Customs discovers an error in an entry after it is transmitted to Census, it is supposed to send a corrected version to Census. This is done either through an on-line system that transmits corrections directly to Census or for some manually filed entries, by sending an amended statistical document. Statistical errors sometimes are found by Customs import specialists. These staff, who are normally located in Customs district offices, review selected entry documents to ensure that the proper amount of duties and fees are paid on imported merchandise and to verify that imports comply with various quotas, other restrictions, and statistical reporting requirements. An import specialist can correct errors before or

after statistical data are transmitted to Census, depending on the workload and the nature of the entry. For example, quota entries must be reviewed before merchandise is released by Customs and therefore before statistical information on the entry is sent to Census. Import specialists do not review all entry documents. Rather, a component of the ACS system, the Entry Summary Selectivity (ESS) system, selects entry summaries for review on the basis of risk criteria. ESS selects about half of all entries submitted by importers.

After Census enters the import data filed on paper into its computer, the information is merged with import data that were transferred directly to Census through ABI. Census then subjects all of the data to a further array of statistical edits. Like the edits done by Customs' ABI program, these Census edits test whether import entries fit within established parameters for value, quantity, country of origin, classification, and other data elements. Import entries that fail any of the edits are examined by Census commodity specialists, who may then contact Customs to obtain the information needed to resolve the problem. The edits are performed every week, and corrected records are reentered into the database the following week. After the data are processed, they are summarized on a monthly basis and released to the public. The first monthly release usually occurs about 45 days after the close of the subject month and contains the overall import, export, and trade balance data. Soon thereafter, Census releases more detailed reports by commodity and trading partner and other breakouts.

Data on imports from Canada that have been processed by Census are transmitted electronically to Statistics Canada three times each month over a dedicated communications linkup. Alternatively, Statistics Canada sends its data on imports from the United States to Census twice each month over the linkup. Once each country receives the import data, it submits the data to its normal editing process. If errors are suspected by either of the statistical agencies, either one contacts its counterpart to obtain clarification or corrected information. After processing the import data, the respective statistical agencies then integrate them with the data on exports to other countries and release them according to a coordinated schedule.

Exchange Has Greatly Improved Data on U.S. Exports to Canada, but a Few Problems Remain

Canadian and U.S. officials said that the MOU has been successful, although they are still working to improve some aspects of it. The officials indicated that they are more confident than they were before the MOU about the reliability of the data on their merchandise trade relationship. By definition, the MOU has virtually eliminated the discrepancy between the amount of goods that Canada was reporting as imported from the United States and the amount the United States said it had exported to Canada. According to NRC, this discrepancy had reached a high of $16 billion in unrecorded U.S. exports to Canada in 1989, which was about 20 percent of total recorded U.S. exports to Canada.

The MOU has increased the efficiency of Canada and U.S. Customs merchandise processing efforts at U.S.-Canada border ports. As a result of the MOU, Canada and the United States no longer collect export declarations for shipments bound for each other's country. A committee composed of officials from both countries reported that 5 million fewer export declarations needed to be filed by exporters in 1990 as a result of the MOU. The MOU thus significantly reduced the countries' reporting burden. U.S. Customs no longer staffs outbound lanes at Canadian border ports, although these lanes were staffed only sporadically before the MOU because of resource limitations.

Both Canadian and U.S. officials acknowledged that they still need to resolve a few issues involving or related to the MOU. These issues mainly limit the efficiency of data transfer or have some impact on other aspects of the two countries' merchandise trade databases. None of these remaining issues significantly affect the quality of U.S.-Canada merchandise trade data.

The most serious remaining issue, the undercounting of shipments traveling through either the United States or Canada and bound for another country, may actually be a by-product of the MOU. Although the requirement to file declarations on exports to the United States or Canada was eliminated by the MOU, each country still requires declarations to be filed for exports to other countries. Some of these exports enter the United States and Canada before they are shipped to another country. These exports are referred to as in-transit shipments. For example, a truck originating in Canada may enter the United States with some or all of its load bound for Mexico. In such a case, the trucker is required to file an export declaration with Canadian Customs for the part of the shipment destined for Mexico.

Studies by Statistics Canada and U.S. Census indicated that since the MOU eliminated the export declaration requirement for exports between the United States and Canada, there has been an undercounting of in-transit shipments. The agencies attributed this undercounting to a failure of exporters (the shipper is considered the exporter of record) to comply with the filing requirement. Agency officials believed that some shippers do not understand that they are still required to file declarations for in-transit shipments, while others do not bother to file. Because exit lanes at U.S.-Canada ports of entry are not staffed by each country's Customs inspectors and because shippers are expected to voluntarily drop off export declarations before leaving each country, it is almost impossible for the Customs agencies to ensure compliance with the filing requirement for in-transit exports.

Statistics Canada is concerned that the in-transit reporting problem is causing an undercount of Canadian exports to Mexico and other countries. Consequently, it proposed that U.S. Customs should attempt to capture critical export information on the documents it collects from shippers moving goods through the United States that are bound for Mexico. Alternatively, Statistics Canada asked that U.S. Customs collect the export declaration itself on behalf of Canada Customs. U.S. Customs responded that neither option was possible because both conflicted with Customs' goal to lessen regulatory burdens on the trade community. Furthermore, Customs said it lacked the necessary staff to collect the additional documentation. Census does not believe that data on U.S. exports to third-party countries through Canada are significantly affected by the in-transit reporting problem. Nevertheless, Census made similar requests to Canada Customs but was turned down for the same reasons.

In August 1992, at the annual meeting of the heads of the U.S. and Canadian agencies involved in the MOU, the in-transit reporting problem was a major topic of discussion. Agency officials noted that U.S. and Canada Customs are implementing automated systems to track the movement of shipments, including in-transit shipments. The agency officials said they hoped that these systems might eventually be used to collect data on in-transit shipments.

Another issue yet to be resolved involves Canada's ability to capture data on the transportation of U.S. exports to Canada. Before the MOU, Canada collected limited information on merchandise transportation. The United States, on the other hand, required exporters to submit such data as mode of transportation and the freight charges involved in moving the

merchandise to the port of export. The MOU specified that Canada would begin capturing this transportation data in its import documents. Canada introduced a revised import document in January 1991, but U.S. Census found serious problems with the quality of the transportation data that were being captured. Some of these problems, such as deficiencies in the reporting of shipping weight, have been resolved. However, problems remain with Canadian importers inaccurately reporting or altogether failing to report inland freight charges and the mode of transportation. Canada Customs has instituted a campaign to educate importers on the proper filing of transportation information, and U.S. Census has asked Statistics Canada to improve its data edits to identify errors in transportation information. However, Census and BEA continue to be concerned about the quality of information on inland freight and mode of transport in Canada's import data. BEA estimates that Canada's import data may overstate inland freight charges by as much as $2 billion.

The United States and Canada are still working on aligning their classifications of commodities. At the 1992 annual meeting on the MOU, the Assistant Chief Statistician of Statistics Canada announced that the countries agreed on the classifications of commodities representing about 80 to 85 percent of the value of their bilateral trade. Some of the alignment issues that remain involve the countries' agreeing on the detailed HTS classification of some commodities.[7] However, a more immediate concern of Statistics Canada and Census is the countries' agreeing on the unit used to measure the quantity of more than 2,200 of the 14,000 classes of goods traded by the United States and Canada. For about 800 of these classes, a quantity measure is used by one of the countries (e.g., kilograms) that cannot be converted into the measure used by the other (e.g., number of units). For another 1,400 classes, one country requires a quantity measure while the other does not.

As is normal in any bilateral trading relationship, Canada and the United States also have disagreements over how certain commodities should be classified. Since HTS was implemented in 1989, creating a unified international commodity classification system, the United States and Canada have disagreed over which tariff codes should apply to some commodities. At the 1992 annual meeting on the MOU, a Statistics Canada official reported that Canada and the United States have had 54 classification disagreements, of which 31 have been resolved. The two countries have agreed to address the remaining 23 cases in order of their

[7]Under HTS, commodities are first classified into broad groups, e.g., passenger automobiles. The commodities are then given more detailed classifications, e.g., station wagons with engines smaller than 3.0 liters.

importance to U.S.-Canada trade. Five cases that the countries could not resolve unilaterally had to be referred to the Customs Cooperative Council in Brussels for resolution.

One issue that the countries are still working to resolve involves identifying the province of origin of U.S. imports from Canada. Canadian provinces have a large amount of autonomy in setting economic policy, and therefore, data on their trade with other countries is important. Before the MOU, U.S. Customs did not collect this information on its import documents. Since the MOU was implemented, U.S. Customs has been deriving the province of origin from the address of the Canadian vendor, who often is not the producer of the good. Consequently, provincial data users have questioned the reliability of the province-of-origin portion of the import data supplied by U.S. Census.

U.S. Customs had hoped to solve the province-of-origin problem by requiring importers to supply province-of-origin information on their import entries starting in the second quarter of 1993. However, importers and their brokers protested this requirement. They argued that in many cases they import goods from Canadian intermediaries who do not provide information on where in Canada the goods originated. As a result of the protests, U.S. Customs did not implement the province-of-origin reporting requirement. However, U.S. Customs has agreed to try to improve its current system for deriving the province of origin.

Statistics Canada and U.S. Census also are taking steps to coordinate the procedures they use to edit import data. As we noted earlier, each agency edits import data before sending it on to its counterpart. Each counterpart agency then reedits the import data received according to its own procedures. This reediting of the import data conflicts with the objective of the MOU to streamline the processing of import data by the countries' statistical and Customs agencies. Also, by the time reediting is done, it is sometimes difficult to correct identified errors because the necessary information is not available. This forces the statistical agencies to impute the unavailable information. Recognizing the need to correct this problem, a committee of Canadian and U.S. officials involved in the MOU created a working group to address the problem. The group's mandate is to align the editing procedures used by the statistical agencies so that the need to impute information can be substantially reduced or eliminated.

Some Procedures in Place for Maintaining Accuracy, but Overall Quality of Import Data Unclear

As we noted earlier, U.S. Customs and U.S. Census employ edits to identify and correct errors in the data filed by importers. However, the edits can only catch import entry data that does not fall within the various edit parameters. Although these edits are extremely useful for maintaining data quality, they alone are not sufficient for ensuring data accuracy. Procedures are also needed to guard against importers filing false information as well as to ensure that information is not lost or altered inadvertently as it goes through the many collection and processing steps. Recent evaluations of compliance and quality control procedures by NRC and us reveal that there are problems with these procedures that could affect the accuracy of import data, including data on imports from Canada.[8] U.S. Census and U.S. Customs have attempted to improve their procedures, but more work is needed in this area.

Trade Data Quality Controls Have Flaws

In 1992, NRC released a report that was critical of the U.S. international trade and financial data system. The report, Behind the Numbers: U.S. Trade in the World Economy, concluded that these data have major shortcomings that need to be addressed for the country to have a timely, accurate, relevant, and cost-effective international data system. Our work at both U.S. Customs and U.S. Census confirms many of NRC's findings regarding merchandise trade data.

The NRC report devoted considerable attention to merchandise trade data. Although in the report NRC acknowledged several recent improvements in the merchandise trade data system, such as reduced processing delays as well as the U.S.-Canada import data exchange MOU, it concluded that the system still had significant problems. The most serious of these problems was the undercounting of exports that we discussed earlier in this chapter. Another problem NRC cited was the lack of a formal data management framework to guide the collection, processing, storage, and dissemination of merchandise trade data. This lack, the report concluded, makes it difficult for agencies to monitor and evaluate their own performances and to identify areas needing improvement.

In the report, NRC specifically noted that the computer edits performed on merchandise trade data were the only major quality control mechanism in the data collection system. It was most critical of the system's lack of control over paper import entry forms. According to NRC, there were no

[8]See Behind the Numbers: U.S. Trade in the World Economy, Committee on National Statistics, Commission on Behavioral and Social Sciences and Education, National Research Council (Washington, D.C.: 1992) and Customs Service: Trade Enforcement Activities Impaired by Management Problems (GAO/GGD-92-123, Sept. 24, 1992).

statistical controls in Census' Jeffersonville, IN, processing center's mail room, where the paper entry forms are received from Customs. Consequently, it was not possible for Census to ascertain whether statistical documents were inadvertently discarded or lost before they could be entered into the computer. In the report, NRC noted that in the early 1980s, Census decided not to institute statistical controls for budgetary reasons. Census was not aware of any documents being lost, but Census officials said that some documents that should have been reviewed for errors may have been accidentally sent directly to be entered into the computer. However, the report noted that even if erroneous information was entered, errors would be identified in the computer edits.

We visited Census' Jeffersonville processing center in May 1993 to review the control of paper import entry forms. Census officials at the center admitted that there was still a lack of control over documents from the time they were mailed by Customs until they were delivered to Jeffersonville. Census officials said that Census and Customs are working to institute a system to verify that entry documents sent by Customs are actually received at Jeffersonville. We found, however, that rigorous procedures were in place to control the flow of documents through processing once they were received at the Jeffersonville center.

Less than 5 percent of import entries are filed on paper and thus subject to manual processing at Jeffersonville. The remainder are filed through the ABI system and, as we noted earlier, are transmitted electronically from Customs to Census headquarters for editing. Although paper entries constitute a small portion of the total entries filed, they account for a much larger percentage of the total value of imports, particularly imports from Canada. Census data show that in December 1992, entries representing about 18 percent of the total value of imports that month were filed on paper. Moreover, data on almost 40 percent of the total value of Canadian imports that month were entered manually.

Automotive imports mainly account for the high value of manually filed entries from Canada. A 1965 trade agreement between the United States and Canada removed tariffs on vehicles and original equipment auto parts (i.e., not replacement parts) produced by American or Canadian companies in either the United States or Canada.[9] The agreement also set up a system whereby importers dealing in these duty-free products could file a single summary entry each month, rather than one for each

[9]This agreement was implemented in the United States by the Automotive Products Trade Act of 1965 (P.L. 89-283).

transaction, as is the usual practice. Because ABI is not equipped to handle these high-value monthly summary entries, importers file them manually.

We found that U.S. Customs and U.S. Census pay special attention to these monthly entries. Customs import specialists at district offices on the U.S.-Canada border are required to verify each item on a monthly entry against the shipping invoices to make sure the values match. The monthly entries are sent to the Census' Jeffersonville center separate from the other paper entries.

At Jeffersonville, staff are expected to review manually each automobile monthly summary for errors before the summaries are entered into the computer. The entering of all automobile monthly summary information also is verified. Once entered, the monthly summary information is subjected to the same computer editing process used on all import data. As an extra control, a staff person is responsible for ensuring that all importers who normally submit automobile monthly summaries have done so before the deadline for entering data for the monthly release of trade data. Most monthly summaries covering automobile part imports are not given the same special attention at the Jeffersonville center because the entries they contain are not as highly valued as the entries appearing on automobile monthly summaries. Because of the high value of some automobile monthly summaries—some cover more than $300 million worth of automobiles—a serious clerical error or a lost summary could significantly affect monthly U.S.-Canada merchandise trade data. However, the special attention given to these summaries by Customs and Census lowers the risk of a serious error.

Despite these precautions, Customs and Census officials agreed that the accuracy of the data obtained from the summaries could be controlled more efficiently and less labor intensively if the data were submitted electronically. Customs is hoping to upgrade ABI in the near future to accept monthly summary entries from businesses importing automobiles and automobile parts under the 1965 trade agreement with Canada.

Improvements Needed in Trade Data Quality Assurance

In its report, NRC made several recommendations for improving the quality of merchandise trade data. Some of these recommendations pertained exclusively to U.S. export data but are not applicable to data on U.S. exports to Canada because of the data exchange MOU. Two recommendations, however, were aimed at improving the overall management of the merchandise trade data system. Both Census and

Customs have made limited progress in implementing these recommendations.

The first recommendation was that Census and Customs should identify and develop performance measures of the quality of merchandise trade data to guide those responsible for data collection, analysis, and dissemination. In addition to providing an overall estimate of the quality of published merchandise trade data, these measures are also to indicate the quality of key processes such as data collection, coding, editing, and error correction procedures. The other recommendation was for Census to establish a system for independently reviewing a sample of import and export transactions. The reviews would be done by staff who were not involved in the original processing of the transactions, and their results would be used to determine the sources and causes of errors and to develop procedures to improve data quality. Census and Customs officials agreed that their quality control processes needed improvement. However, the agencies have not completely implemented the two NRC recommendations.

Census has programs underway that address to some extent the NRC recommendation regarding performance monitoring. For example, Census has developed a program to measure the quality of its editing and imputation processes. However, Census said that it would be difficult and expensive to fully implement the performance measurement system suggested by NRC.

Although not directly in response to the NRC recommendation, Census, in conjunction with Statistics Canada, has begun looking for ways to improve the quality of the import data involved in the MOU. Census and Statistics Canada officials have visited three U.S.-Canada border ports of entry: the one between Blaine, Washington and Pacific Highway, British Columbia; the one between Buffalo, New York, and Fort Erie, Ontario; and the one between Detroit, Michigan, and Windsor, Ontario. These visits were intended for the agency officials to observe firsthand how merchandise trade data are collected and to suggest needed improvements. Census and Statistics Canada officials have also visited ports of entry that are not on the U.S.-Canada border. These ports include the seaport and airport in Montreal, Quebec; the airport in Toronto, Ontario; JFK Airport in New York; and the seaport in Newark, New Jersey. Through these visits to ports of entry that are not on the U.S.-Canada border, the officials hoped to gain a perspective on how shipments that go through the United States or

Canada on route to another country were being handled by U.S. and Canada Customs.

Although more visits to ports are planned in 1994, the number of trips will be limited because of budget constraints that are faced by both agencies. Census and Statistics Canada officials said that the initial visits have mainly served to acquaint them with the data collection process. They hoped that these and future visits will result in program improvements.

Census has not implemented the NRC recommendation regarding independent reviews. Census said they lacked the staff and other resources to do independent reviews. The agency noted that the independent reviews recommended by NRC would only apply to import data filed by importers on paper. Because less than 5 percent of import entries are currently filed on paper, Census believes that independent reviews would not be cost-effective.

Lack of Assurance That Import Information Is Filed in Compliance With the Law

The controls that we have discussed thus far, both those that are in place and those that are proposed, on merchandise trade data collection and processing are most effective at detecting and correcting inadvertent errors made by filers or data input clerks. The controls are less effective in discovering misrepresentations of commodities by importers in the documents they file with Customs. The controls are, of course, not effective in identifying underground trade, in which persons smuggle merchandise into the country without filing the required documents with Customs or making the merchandise available to Customs for inspection. Merchandise smuggled or imported improperly into the country is either not reflected or is reflected improperly and possibly inaccurately in merchandise trade data.

Customs relies on detailed examinations of cargo and the accompanying documentation to detect noncompliance with the nation's trade laws for the purpose of avoiding duty or import restrictions. In a recent report, we pointed out flaws in these processes and concluded that Customs lacks assurance that trade laws are being effectively enforced.[10] Although Customs has taken several steps to improve its trade enforcement efforts, the effectiveness of these steps at this time remains unknown. Because Customs lacks information on the results of its cargo inspections and import document reviews, it is unknown how trade data have been affected by importer noncompliance.

[10]GAO/GGD-92-123, September 24, 1992.

Customs inspects cargo to ensure that it does not violate trade laws or restrictions and is, therefore, admissible into the country. An inspection essentially verifies that the merchandise in the containers is what is described on the entry documents. Custom uses a component of ACS, the Cargo Selectivity System (CSS), as its primary method for choosing cargo for examination. In conjunction with related ACS programs, CSS is used to process entry documents, assess the risk posed by the stated cargo, identify cargo for inspection, and store management information about the results of these examinations. CSS also selects a random sample of cargo for inspection as a deterrent to noncompliance by importers as well as a tool for assessing its own operation. In all, Customs inspects about 8 percent of all shipments.

In our September 1992 report, we questioned the effectiveness of Customs cargo examination efforts. By comparing data from Customs' random examinations to results from examinations done on cargo identified by CSS or Customs inspectors as high risk, we estimated that Customs did not detect about 220,000 of the 265,680 entries that violated the trade laws. Thus, about 84 percent of the total trade law violations in imported cargo were not detected in 1991, allowing this merchandise to pass into domestic commerce. Our analysis showed that about 4 percent of all entries violated the law. We estimate that about 3.3 percent (84 percent of 4 percent) of all entries that violated trade laws went undetected.

No information is available on the nature of undetected violations. However, Customs records show that more than 60 percent of the violations actually discovered from fiscal years 1989 through 1991 were marking violations.[11] Customs inspectors also discovered classification, quota, and miscellaneous violations. Customs records do not indicate the significance of discovered violations. Customs and Census officials acknowledged that if violations go undetected, the accuracy of import data could be affected.

Customs also attempts to ensure importer compliance through import specialist reviews of entry documentation. The purpose of these classification and value reviews is to ensure that the proper amount of duties and fees is paid on merchandise and to verify that imports comply with other restrictions. All of these activities are done by import specialists who make their classification and value determinations by reviewing a variety of documents that importers are required to submit. Among these documents is a Customs form, known as an entry summary,

[11]Marking violations occur when goods are labeled in a false or misleading manner.

which describes the classification and value of the merchandise for duty assessment purposes and includes the shipment invoice. In 1988, Customs introduced ESS. As we said earlier, ESS is designed to automatically select documents for an import specialist to review on the basis of risk criteria. Risks include underpayment of duties, noncompliance with trade quotas, and other merchandise restrictions. ESS also selects a random sample of about 0.06 percent of entry summaries. A total of about 50 percent of shipments are selected for entry document review.

In our 1992 report, we concluded that the processes for ensuring that merchandise entering the United States is properly classified and valued are not effective. We found that ESS did not readily provide information to import specialists on why entry documents were selected for review and that system design limitations made it difficult for them to use ESS, thus discouraging diligent enforcement efforts. In addition, ESS selects a large number of entry documents for review, about 4 million in 1990, or nearly 8,000 per import specialist. Sixty-seven percent of import specialists responding to a questionnaire we used for the 1992 report thought that their units did not have enough staff to do their work. In two visits to Customs districts in mid-1991, we were told by import specialists that increasing workload and other responsibilities left them with little time to carefully review import documents. This sentiment was echoed by import specialists at one of the Canadian border districts we visited in early 1993.

In our 1992 report, we also found that Customs could not assess the effectiveness of the ESS criteria in targeting high-risk entry documents because ESS does not allow Customs to compare the entry document reviews with the specific criteria prompting their review. Thus, Customs has no estimate of the percentage of violations discovered by import specialist reviews and so it cannot assess the impact of classification and value violations on the accuracy of import data.

Customs has taken steps to address the problems with its trade enforcement efforts. It is in the process of improving the effectiveness of CSS in targeting high-risk shipments. It has also redesigned ESS to include a feature that captures the results of entry reviews, which can then be used to assess the effectiveness of the targeting criteria. The upgraded ESS is currently only available in some Customs districts, but Customs plans to expand its use to all districts. Most importantly, Customs established a selectivity redesign task force to fundamentally rethink its trade enforcement efforts and to develop a reliable capability to assess compliance with the trade laws on an industry-by-industry basis. Until

these changes are fully implemented and proven effective, Customs' ability to guard against the introduction of false information into import data will remain open to question.

Conclusions

The federal government has done much in recent years to improve the quality of merchandise trade data. In the case of U.S.-Canada trade data, the improvements have been particularly impressive. The import data exchange MOU with Canada and the import data reconciliations Census performs with its counterparts from our other major trading partners have increased the accuracy of U.S. export data. Computer edits of import data have also been helpful in identifying errors in the data. However, more needs to be done to improve the procedures for maintaining the quality of the data as it passes through the many stages of collection and processing. Moreover, until Customs institutes better systems for ensuring that imports enter the country in compliance with the law, the overall accuracy of merchandise trade data will remain open to question. Nevertheless, the fact that traders are required by law to report each import and export transaction to Customs means that U.S. merchandise trade data are more reliable than most data on other forms of trade, such as service transactions. We discuss these other types of trade data in chapter 3.

Agency Comments

Customs in its written comments said that our report provides a good overview of the data collection problems affecting not just the U.S.-Canada import data exchange MOU but merchandise trade data collection in general. Customs further noted that while our report recognized flaws in the collection of merchandise trade data, it also indicated the general success of the MOU and the fact that Customs continues to work toward the improvement of its data collection efforts.

In its written comments, Commerce emphasized that the U.S. data exchange MOU already has yielded considerable benefits in terms of more accurate merchandise export data, paperwork reduction, and the redirection of resources to improving overall trade data. However, Commerce indicated that there remains room for improvement in trade data. For example, it noted that Census research shows that the undercounting of merchandise exports has been greatly reduced but not eliminated.

Problems With Service and Investment Income Data Further Limit Quality of U.S.-Canada Trade Data

Many people in government, industry, and the media have focused their discussions of the country's international economic competitiveness almost exclusively on merchandise trade. However, merchandise trade accounts for only a part of U.S. international economic activity. Service transactions, such as the purchase of international airline tickets and international long-distance telephone calls and interest that is paid on investments by foreign citizens, constitute an important and growing part of the United States' economic relationship with Canada and other countries. For example, services and income on investments accounted for about 23 percent of the United States' total exports to Canada in 1992. Despite the importance of services and investment income in U.S. foreign trade, data on them is of lower quality than data on merchandise trade because of BEA's reliance on surveys that are limited in frequency, detail, and coverage. Initiatives have been proposed by the current and previous administrations to improve these surveys, but Congress has approved limited funding for these initiatives.

Merchandise Trade Is Only Part of International Economic Relationships

In addition to merchandise, countries also exchange services, such as travel and passenger services, transportation services for foreign goods, and patent information or other property that generates license fees or royalty payments. The receipt and payment of income on international investments are also part of economic relationships between nations. Other types of international transactions include unilateral transfers, in which resources are transferred from one country to another without the recipient providing or promising to provide anything in return. Merchandise trade, services, investment income, and transfers together constitute what is known as the current account.

The current account alone, however, does not represent the full extent of international economic transactions. Transactions in financial assets between residents and nonresidents of a country, such as direct or portfolio investments, are included in a separate category known as the capital account. The current and capital accounts together constitute a country's balance of payments, which is the statistical summary of all of the country's international transactions.

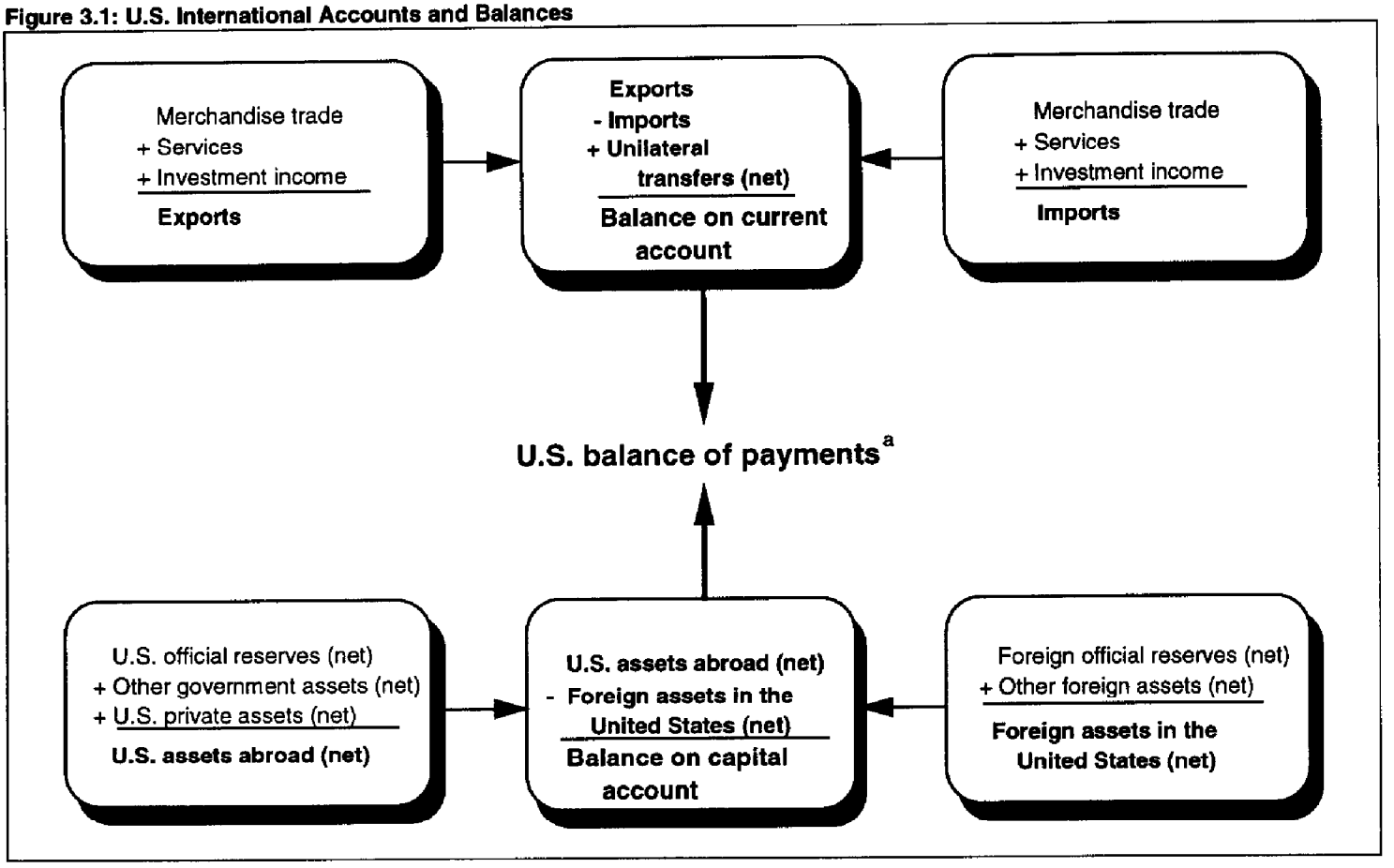
BEA compiles its balance of payments accounts in accordance with the principles of double entry business accounting, which require that every debit to an account be offset by a credit to another account. Conceptually, therefore, the net sum of the debit and credit entries in the balance of payments accounts is to be zero. However, the data used to construct

these accounts come from many databases that vary in terms of completeness, accuracy, and the period covered. Consequently, there are inevitable discrepancies between credits and debits in the accounts in any given period. BEA, therefore, adds an entry in the balance of payments accounts, known as the statistical discrepancy, to balance the credits and debits.

BEA publishes several partial balances of various aspects of U.S. international transactions. The most widely known is the balance of merchandise trade, which measures the difference between merchandise imports and exports. Another important statistical summary is the balance on the current account, which measures the net receipts or payments of merchandise plus services, income on direct and portfolio investments, and unilateral transfers. The current account balance is widely used internationally for assessing overall trade flows and balances.

Figure 3.1 depicts graphically the international accounts that make up the various trade balances. Table 3.1 shows U.S. transactions, including trade balances, worldwide and with Canada for 1992.

Figure 3.1: U.S. International Accounts and Balances



[a]The U.S. balance of payments by definition equals zero (i.e., the balance on the current account minus the balance on the capital account), including any statistical discrepancy.

Source: BEA data.

Table 3.1: U.S. Transactions Worldwide and With Canada for 1992

Dollars in millions

Transactions	Worldwide	Canada
Current account		
Merchandise exports	$440,138	$91,146
Merchandise imports	-536,276	-100,871
Balance on merchandise trade	-96,138	-9,725
Service exports	179,710	17,719
Service imports	-123,299	-8,532
Balance on services	56,411	9,188
Income on U.S. assets abroad	110,612	9,128
Income payments on foreign assets in the United States	-104,391	-3,762
Balance on income	6,222	5,366
Balance on merchandise, services, and income	-33,505	4,829
Unilateral transfers, net	-32,895	-322
Balance on current account	-66,400	4,507
Capital account		
U.S. official reserves abroad	3,901	[a]
Other U.S. government reserves abroad	-1,609	63
Total U.S. assets abroad, net (capital outflow)	-50,961	-8,677
Foreign official reserves in the United States	40,684	511
Other foreign assets in the United States	88,895	690
Total foreign assets in the United States, net (capital inflow)	129,579	1,201
Balance on capital account	78,618	-7,476
Balance of payments, statistical discrepancy	-12,218	2,970

Note: Merchandise trade data reflect adjustments by BEA to Census data. For example, the adjustments exclude exports of merchandise under U.S. military sales contracts and imports of merchandise under direct defense spending.

[a]Data were not available.

Source: BEA data.

As table 3.1 indicates, the merchandise trade balance was a negative $96 billion in 1992, while the balance on services was a positive $56 billion. The table illustrates how the merchandise trade balance provides an incomplete picture of the U.S. trade balance. One reason many in the press and government rely on the merchandise trade balance as the sole

indicator of U.S. international competitiveness is that the balance is released monthly, while information on the entire current account is available only on a quarterly basis. The Department of Commerce, however, has announced that it hopes to begin publishing service transaction data on a monthly basis. BEA and Census are currently studying the feasibility of preparing monthly estimates of service transactions.

U.S. trade in services has been growing rapidly over the last decade. Total exports of services in current dollars increased from $72.9 billion to $179.7 billion from 1985 to 1992, while imports of services increased from $72.8 billion to $123.3 billion over the same period. These increases represent real growth rates of 92 percent for exports and 32 percent for imports over the period. Growth in the services categories was substantially greater than the growth of merchandise trade over that same period.

Service trade with Canada in current dollars also increased rapidly during those years from $7.1 billion to $17.7 billion for exports to Canada and from $5.1 billion to $8.5 billion for imports from Canada. Table 3.2 lists U.S. service transactions worldwide as well as with Canada for 1992.

Table 3.2: U.S. Current Account Service and Investment Income Transactions With Canada and Worldwide for 1992

Dollars in millions

Transactions	Exports			Imports		
Services	U.S. exports worldwide	U.S. exports to Canada	Percentage of U.S. exports worldwide to Canada	U.S. imports worldwide	U.S. imports from Canada	Percentage of U.S. imports worldwide from Canada
Travel	$53,861	$7,975	14.8%	$39,872	$3,507	8.8%
Passenger fares	17,353	1,306	7.5	10,943	275	2.5
Other transportation	22,773	1,008	4.4	23,454	699	3.0
Royalties and license fees	20,238	1,304	6.4	4,986	110	2.2
Other private services	53,601	5,963	11.1	27,988	3,595	12.0
U.S. government miscellaneous services	869	56	6.4	2,290	195	8.5
Military transfers/direct defense expenditures	11,015	106	1.0	13,766	149	1.1
Total services	179,710	17,718	9.9	123,299	8,530	6.9
Investment income						
Direct investment payments/receipts	49,888	2,933	[a]	1,630	-60	[a]
Other private payments/receipts	53,687	6,178	[a]	61,582	2,733	[a]
U.S. government payments/receipts	7,038	17	[a]	41,179	1,089	[a]
Total investment income	110,613	9,128	[a]	104,391	3,762	[a]
Total	**$290,323**	**$26,846**	[a]	**$227,690**	**$12,292**	[a]

[a]Not applicable because one country's investments in another country can have a net negative return.

Source: BEA data.

Significant Difficulties in the Collection of U.S. Service and Investment Income Data

The coverage and accuracy of U.S. service transaction data is limited, primarily by BEA's need to use statistical surveys to collect the data. In turn, this limitation affects the overall reliability of the current account side of the balance of payments.

Although data are collected for each import and export transaction, service trade data are obtained on only a portion of total transactions through surveys. This difference in collection methods can be explained by the fact that the data collection systems for merchandise and service

trade developed in substantially different ways. As we noted in chapter 1, the United States and other nations have long been concerned about having accurate data on all merchandise imports in order to assess duties and enforce import restrictions. The data collected at the port of entry by Customs also forms the basis for merchandise import data. Customs' presence at the port of entry also allows the collection of statistical documents for each export transaction, even though duties are not assessed on exports.

By comparison, the collection of service data had in the past been justified mainly on the basis of its value for statistical purposes. Since the early 1980s, rapid advancement in the service industries has helped increase the attention paid to service industry data, both in the domestic and international economies. For example, in 1980, for the first time, the contribution of domestic services to the U.S. gross domestic product exceeded that of domestic manufactured goods. Services have also become more important in U.S. international trade. By 1992, service exports had reached 41 percent of merchandise exports, and service imports made up 23 percent of merchandise imports. As a result of this growth, services are now also a large part of U.S. trade policy considerations. During the Uruguay round of negotiations of the General Agreement on Tariffs and Trade (GATT), service transactions were an integral part of the negotiations.

Although the importance of the service trade in the U.S. economy has been increasing, the data available on international service transactions lack the completeness and accuracy of those on merchandise trade. This situation is primarily due to the fact that it is more difficult to collect accurate data on the service trade. Unlike merchandise trade, there are no comprehensive administrative records from which to derive data on service transactions. Also, many service transactions cannot be measured by monitoring the U.S. border. Some service transactions, such as tourist services, are provided to foreign tourists in the country they are visiting. These service transactions contrast with merchandise trade transactions, which are shipped from one country across the border to another country. As a result, collecting data on service transactions is based on a set of statistical surveys that although extensive do not completely cover the universe of international service transactions.

Several improvements in the collection of service data have occurred in the last decade. Many of these improvements have resulted from legislation, particularly the Trade and Tariff Act of 1984. The institution of

new benchmark and annual surveys under the act resulted in the coverage of many services that previously were not reflected in service data. The new surveys also expanded coverage of other service transactions. In addition, several existing surveys that had been conducted on a voluntary basis were made mandatory by the act.

Nevertheless, a number of difficulties remain in the collection of service data. One is that complete surveys are difficult to carry out. In the case of data collection efforts for merchandise trade, all import transactions of more than $1,250 and all export transactions of more than $2,500 are included. BEA, however, directs its surveys toward the companies that have the largest transactions. However, it is not always possible to determine which firms are trading in a service and what share of the service trade that these firms represent. For some services, such as those provided by airlines, this situation is not a problem because there are relatively few U.S. operators involved in international flights. For other services, however, surveying the full range of firms is problematic. For instance, although the business, professional, and technical service industries are growing in the United States, it is difficult to determine the firms involved in trading these services internationally. However, BEA has recently conducted two benchmark surveys that the agency believes have helped to improve coverage of these types of services.

Another problem is that the companies involved in the service transactions do not always keep track of the information in a way that conforms to the statistical definitions used by BEA. For example, U.S. transportation firms delivering goods in Canada are exporting a service that includes the portion of the trip that occurs on the Canadian side of the border. However, most transportation firms do not calculate and report their rates and earning in a way that distinguishes the costs on the U.S. and Canadian sides of the border. When companies' records on their service transactions are incompatible with BEA definitions, BEA is forced to make arbitrary estimates or report data with major caveats.

An additional difficulty is the wide range of international service transactions that occur. Certain services may overlap categories, and technological change may lead to further difficulties. For example, the telecommunication services category, while still dominated by telephone services, now may include data transmission and a number of support services. In addition, goods and services that are sold together in a package, such as large computer systems, present problems because of a difficulty in separating the value of the services from the goods.

Perhaps the most difficult current account transactions to measure are those involving income on investments and financial services. In a recent report on discrepancies in countries' current accounts, the International Monetary Fund (IMF) identified problems regarding portfolio investment income as the largest of these discrepancies.[1] IMF identified discrepancies by comparing sets of countries' current account debits (e.g., interest paid to foreign parties on the securities they hold) to other countries' corresponding credits (e.g., interest received by residents on their foreign investments). IMF found that debits exceeded credits by a substantial amount. This discrepancy occurred because statistical authorities generally are better able to collect data on debtors (i.e., interest payers) than on creditors (i.e., interest receivers).

Congress and the previous and current administrations have taken action to improve services and other balance of payments data. In his 1991 budget, President Bush requested funding for an initiative to improve U.S. economic data. The initiative included projects to improve measures of trade in services and international capital flows. President Bush's subsequent budgets and President Clinton's 1994 budget included funding for these projects. According to BEA, for fiscal years 1991 through 1993, the Administration requested about $8 million for international data improvement projects, and Congress funded less than half of this request.

Cooperation Has Improved U.S.-Canada Service Trade Data

Because of their extensive common border and close cultural and economic ties, the United States and Canada have the largest bilateral services trade relationship in the world. The abundance and diversity of these service transactions pose several challenges to the statistical agencies of both of the countries trying to measure them. Fortunately, BEA and Statistics Canada have developed a close working relationship similar to the one that Canadian and U.S. agencies have regarding merchandise trade. Through this relationship, BEA and Statistics Canada share information that helps to improve the accuracy of each other's data.

An important aspect of the relationship between Statistics Canada and BEA is the annual reconciliation of current account data. According to BEA, the annual reconciliation process has improved estimating techniques, thus ensuring greater accuracy of the published estimates of transactions between the United States and Canada. To do the reconciliations, the agencies exchange data on merchandise imports; services, such as travel,

[1]Report on the World Current Account Discrepancy, International Monetary Fund (Washington, D.C: 1987).

passenger fares, inland freight, and government expenditures; unilateral transfers, such as pensions; and certain U.S. and Canadian banking data that are used to estimate investment income. More than 80 percent of the data used by Statistics Canada and BEA in compiling U.S.-Canada current account reconciliation estimates is obtained through the exchange of data.

Adjustments based on the reconciliations are reflected in the U.S. and Canadian published estimates as far as possible. However, according to BEA, the complete exchange of data or the substitution of reconciled estimates for published estimates is not feasible because of differences in the definitions and methodologies used by BEA and Statistics Canada. BEA also notes that substituting reconciled estimates for published estimates would in some cases affect the estimates of U.S. and Canadian transactions with third-party countries.

The success of the cooperation between BEA and Statistics Canada in reconciling current account data encourages the possibility of expanding this cooperative arrangement. One area in which an expansion could prove beneficial is the transporting of merchandise. As we indicated earlier, BEA is currently not able to adequately distinguish the costs incurred in Canada by U.S. truckers when they are transporting goods from the United States to a destination in Canada. These costs are considered a U.S. service export. BEA and Statistics Canada could work together to devise a procedure for capturing these transportation services transactions on both sides of the U.S.-Canada border. This might entail the agencies' collecting data beyond those already reported by transportation firms. In chapter 4, we recommend that BEA and Statistics Canada work together to improve the measurement of services, such as the transportation of imports, as part of broader efforts to improve the measurement of U.S. international trade.

Agency Comments

Commerce emphasized that BEA and Statistics Canada have considerably improved the coverage of service transactions in recent years but that the need for further improvement remains. It indicated that the resolution of many of the remaining problems will require expanded data collection, which in turn will require the commitment of resources. We acknowledge the progress made in the coverage of services and recognize that further progress may be limited by budgetary constraints.

Changing U.S.-Canada Trade Environment Will Provide Challenges and Opportunities for Data Programs

Simply improving Customs' and Census' current systems and procedures may not be enough to ensure the quality of merchandise trade data in the long term, particularly on imports. These data are now collected through Customs processes that are expected to change significantly as the United States' participation in the global economy increases the flow of trade through its borders. Customs plans to further automate its cargo processing to more efficiently deal with the increased trade volume. Customs may also end up de-emphasizing traditional customs documentation when duties are reduced or eliminated as the United States and other countries open their markets to foreign products.

The U.S.-Canada FTA, which went into effect at the beginning of 1989 and which will be fully implemented in 1998, will test how Customs responds to a free trade environment. Changes to Customs' processes that would result from the FTA combined with the further automation of these processes could significantly affect the quality of import data and may require new methods for collecting them. As Customs adapts its trade operations to this changing environment, it should continue to work with Census to ensure that adequate trade data are still collected. These efforts should be integrated into broader efforts to improve the government's ability to measure all international transactions, including merchandise trade, services, investments, and capital flows.

The United States and Canada Are Now Part of a Global Economy

The United States, Canada, and most other industrialized nations are increasingly orienting their economies toward the production of goods and the provision of services intended for international markets. These global markets have led to a tremendous growth in economic transactions among nations and has made countries dependent on each other for fulfilling the needs of businesses and consumers.

The global market has also changed the nature of the exchange of goods and services among nations. To take better advantage of the opportunities offered by the global market, many companies have affiliates operating in foreign countries. The parent company and its foreign affiliates constitute what is known as a multinational company. BEA defines a foreign affiliate as a foreign business enterprise in which a U.S. parent company owns or controls 10 percent or more of the voting securities or the equivalent. Multinational companies have had a tremendous impact on trade. According to BEA, trade associated with U.S. multinational companies and

their affiliates accounted for 63 percent of total U.S. merchandise exports and 43 percent of merchandise imports in 1990.[1]

Coupled with the increase in merchandise trade is the need for businesses to receive foreign goods more quickly than ever. New inventory management systems, such as "Just in Time," focus on speed of delivery to reduce inventory costs and to improve customer service. Also, an increase in competition requires that businesses produce and ship their products as quickly as possible. These trends challenge Customs to clear and release cargo more quickly.

These trends are also complicating Customs' trade enforcement responsibilities. Products are now often assembled in stages, and these stages can take place in more than one country. When a number of countries are involved in production, it is sometimes difficult for Customs to determine which is the country of origin. Such a determination is important because FTAs and most-favored-nation designations only eliminate or reduce tariffs on products originating in countries that are part of these trade arrangements.

The FTA between the United States and Canada was, in part, intended to lessen Customs' administrative requirements at the U.S.-Canada border. However, the agreement has added a new requirement because of the importance of the country of origin. Importers who want to enter their merchandise in either country duty-free or at reduced duty under the FTA must be prepared to show that country's Customs a certificate prepared by the exporter indicating that the product meets the FTA's country-of-origin requirements. U.S. and Canada Customs officials indicated that ensuring that country-of-origin declarations are accurate has complicated their jobs on the U.S.-Canada border.

Changing Trade Patterns May Affect Data Quality

In addition to changing the face of international trade, the move to a global economy may also change the way merchandise trade data, particularly import data, are collected. Ongoing developments, such as the growth of free trade, the spread of multinational corporations, and the increased need for faster processing of imports and exports could make it more difficult for Customs and Census to ensure that merchandise trade data

[1]According to BEA, U.S. merchandise exports associated with U.S. multinational corporations are the sum of goods shipped to affiliates by all U.S. persons and goods shipped to unaffiliated foreigners by the U.S. parent of a multinational corporation. U.S. merchandise imports associated with U.S. multinational corporations is the sum of goods shipped by affiliates to all U.S. persons and goods shipped by unaffiliated foreigners to U.S. parents.

are being collected completely and accurately. Because the U.S. and Canadian economies are already so closely tied, some of these trends are already or soon will be affecting trade data.

Free Trade Could Affect Quality of U.S.-Canada Trade Data

The United States and Canada have embarked on creating the largest international free trade zone in the world. The U.S.-Canada FTA calls for the elimination of all tariffs by 1998. Likewise, NAFTA, when implemented by the United States, Canada, and Mexico, would extend this free trade zone by gradually phasing out tariffs on trade among the three nations.

Census and Statistics Canada officials and others in the statistical community believe that the elimination of duties by the FTA could adversely affect the quality of merchandise trade data. As we discussed in chapter 2, import data are extracted from the documents that importers are required to file with Customs to enter merchandise into the country. Customs collects these documents mainly to ensure that the proper duties are paid on the goods and that the goods do not violate trade restrictions or laws. Customs also submits more than 90 percent of all entries, those filed electronically, to computer edits that determine, among other things, whether the statistical information fits within established parameters. Customs import specialists also review a sample of documents to determine if they are accurate and comply with the trade laws.

Census officials and others in the statistical community fear that when the U.S.-Canada FTA is fully implemented and most duties are eliminated, the level of accuracy of statistical information filed by importers will decline. These officials believe that Customs would not be inclined to scrutinize entry documents only for the purpose of detecting statistical errors or to reject entries for what it might consider to be minor statistical inaccuracies. Although Customs' management rejects this hypothesis, some Customs personnel we spoke with stationed at Canadian border offices indicated they may be devoting less attention to shipments that are clearly eligible for duty-free entry under the FTA. Instead, they foresee spending much of their time ensuring that shipments are of Canadian origin and thus duty-free. A separate document, the Certificate of Origin (which is prepared by the exporter), is reviewed to make this determination. This document does not contain the detailed statistical information listed on the entry form.

We spoke with representatives of a large customs brokerage firm that deals extensively with Canadian imports, and they said that the quality of

statistical information would decline under free trade. They said that their importer clients would be less interested in providing accurate statistical information when their filings to Customs were purely for administrative purposes and no longer accompanied duty payments.

Although the U.S.-Canada FTA does not call for changing or eliminating Customs controls at the U.S.-Canada border, this may eventually occur. When duties are, for the most part, eliminated in 1998, Customs' duty collection responsibilities at the Canadian border will be negligible. Customs' presence will still be necessary to guard against the introduction of contraband and to ensure that goods are of Canadian origin. These enforcement activities, however, do not normally require that importers submit the extensive entry information now needed by Customs to ensure that proper duties are being paid.

Faster Customs Processing Could Affect Trade Data

The need for faster processing of merchandise through ports of entry could also have a significant impact on import data. Customs has been trying to expedite the flow of trade by automating the processing of cargo and declarations. These efforts will become more important if the elimination of duties has the intended effect of increasing the flow of goods to and from Canada. However, Census also is concerned that some aspects of Customs' automation plans may result in businesses providing less detailed information on import and export transactions. For example, Customs would like to shift from a system in which importers file entry documents for each import transaction to one in which they periodically report their entry activities. These periodic reports, which would probably be filed monthly, could cover a variety of goods and may not provide the detailed information that could be obtained from single-transaction entries. Census is concerned that it may not be possible to adequately account for information such as the country of origin of each item from a monthly entry.

As we discussed in chapter 2, Customs already allows North American automobile and automobile parts manufacturers to file monthly entries for products made in Canada or the United States that can be shipped duty-free under the 1965 U.S.-Canada trade agreement. Unlike the monthly entries planned for the future, which will be filed electronically, the monthly entries for automobiles are submitted on paper by the importer. The importer uses the standard Customs entry form, which was designed for a single transaction. All of the automobiles and automobile parts listed on monthly entries that are accepted by U.S. Customs are supposed to

originate in Canada, so tracking this statistical item is not a problem. However, Census believes that unless the reporting format is changed, it would be impossible to track the country of origin and other data items for monthly entries containing items from several countries.

Census and Customs Need to Explore New Ways of Collecting Trade Data

Census and Customs should continue to work together and begin to consider new ways of collecting import data in the trade environment of the future. Free trade with Canada and possibly with Mexico, as well as faster and more efficient Customs processing, could make the current collection methods obsolete by the turn of the century. Therefore, new collection methods need to be researched and tested so that a new system could be available if a significant deterioration occurs in the quality of merchandise trade data.

Alternative Collection Methods Have Pros and Cons

Alternatives exist for collecting merchandise trade data, and each has advantages and disadvantages. Two alternatives include surveys, which are already used to collect data for many economic data series, and direct statistical reporting through electronic data interchanges. Census and Customs have considered some of these alternatives but have not devoted much attention to researching or testing the feasibility of their use.

Surveys of Importers and Exporters

Using surveys to collect data for estimating merchandise imports and exports is possible, but the data that would be gathered would be limited compared with those collected using current methods. Surveys are now used to collect data for most of the country's economic indicators, including several of the components of the U.S. balance of payments. BEA uses surveys as the basis for its estimates of several types of transactions with foreign parties, both here and abroad. These transactions include income and capital flows relating to direct investments, selected service transactions, and other transfers. The surveys collect data from businesses that engage in transactions with foreign residents on their own behalf or on the behalf of others. We discussed the components of the balance of payments in more detail in chapter 3.

Census officials believe that surveys could be used to collect merchandise trade data. However, they warn that surveys would not yield the level of detailed information that is now available through Customs' administrative records. They note that because of cost and other constraints, it would be infeasible to construct a survey that sufficiently sampled each of the over 14,000 import and over 8,000 export commodities entering and leaving the

United States. Practically speaking, surveys could only be relied on to produce estimates of the imports and exports of broad categories of merchandise. Such estimates would probably not satisfy many of the users of trade data such as business and government decisionmakers.

Although it does not have definite plans to use surveys to obtain import or export data, Census has developed a foundation for a survey of exporters by developing a database of all businesses it can identify that export merchandise. This database was constructed by matching the employer identification number that appears on export declarations with a list of all employers that Census uses for its economic census. The database is now used to construct special tabulations of export data, such as by state of exportation, as well as to identify exporters that consistently file incorrect export information. Census officials noted that the database could possibly be used to sample and survey exporters in lieu of collecting the information from export declarations. However, Census officials also pointed out that because the database was constructed from tax records, i.e., the employer identification number, the use of the database for survey purposes could be constrained by privacy laws. In addition, Census officials noted that it would be difficult to keep the exporter database current enough for it to be used to survey exporters for trade data purposes.

Census has not constructed a similar database of importers. If Census wanted to create an importer database, it would have to find a methodology for doing so. It could not employ the methodology it used for the exporter database because importers do not indicate an employer identification number on the entry documents they submit to Customs. Census might be able to extract importer information from Customs' ACS since the system records the names and addresses of businesses that file entries.

Businesses Reporting Trade Data Directly to Census

Another way trade data could be collected is directly from businesses. Under this approach, businesses would file this information directly with Census, instead of being required to report imports and exports to Customs at the border. This is the method the EC uses for collecting some data on trade between members of the single market.

The most efficient way for Census to collect trade data directly from businesses would be through an electronic data interchange system, similar to the one Customs currently uses to obtain import entry data from brokers. Census already collects export data directly from some exporters.

However, exporters do not report this data electronically on-line, but rather send it to Census on a magnetic medium, such as data disks. Officials report that about 20 percent of transactions are reported through this system. The EC employs an electronic data interchange to collect some trade data directly from businesses (see p. 58). Other European businesses report this information manually.

The United States would face several challenges in developing and implementing a direct reporting system for merchandise transactions with Canada and Mexico. First, to establish such a system, changes would be needed in the Customs laws, which currently require businesses to file documents with Customs for all imports and exports. Obtaining such a legislative change could be problematic, considering that legislation making several amendments to laws governing Customs procedures, including one allowing the electronic filing of entries, was introduced in the previous two congressional sessions but was never enacted.[2]

Second, it would be difficult to ensure the accuracy and completeness of import data reported directly to Census. Smaller businesses or businesses that are not heavily involved in foreign trade might not find it cost-effective to join an electronic data interchange for filing trade data. Unless these businesses were legally required to join a system, they might choose to report their data on paper, which may not be as accurate or complete as those reported electronically. The NRC reported in 1992 that more than 100 companies report export data using an electronic format. Electronic reporting improves the accuracy of trade data because it forces importers and exporters to file complete information. Under the ABI system, if an importer or broker submits incomplete information, the import declaration is rejected.

Further, if a direct reporting system were instituted, Congress would need to make a decision on whether businesses would need to be legally required to provide import data to Census. Even if they were, it would be difficult for Census to enforce this requirement. Under the current system, import documents containing statistical information must be presented to Customs at the U.S.-Canada border. Customs can use fines and deny Customs privileges (e.g., the immediate release of cargo) to ensure that these documents are filed and comply with laws and regulations. Census, on the other hand, being removed from the actual movement of goods, would have difficulty identifying businesses that were shipping goods and

[2]See the Customs Informed Compliance and Automation Act of 1990, H.R. 4689, introduced in May 1990 and the Customs Modernization and Informed Compliance Act, H.R. 3935, introduced in November 1991.

not complying with filing requirements. Also, since it is not a law enforcement agency, Census may not be in a position to bring into compliance those businesses it identified as not meeting filing requirements. If reporting requirements are not adequately enforced, imports could be undercounted.

Integrating a New U.S.-Canada Trade Data System With Existing System Is Problematic

For the foreseeable future, duties and the Customs controls for collecting them will continue to play an important role in U.S. trade with countries outside of North America. Thus, a direct import data reporting system designed for use in a free trade environment may only be needed for trade with Canada and later with Mexico as NAFTA is implemented. This system would create a situation similar to the one that now exists in the EC in which direct reporting is used to measure trade between members, while traditional Customs administrative records are still the source of information on trade with countries outside the EC.

A difficult challenge for Census and Customs would be determining how a new Canadian trade data system would be integrated with the existing trade data collection system. Businesses that deal with Canada and other countries would have to contend with a dual-reporting system. Such a system could lead to confusion and could adversely affect the quality of reporting.

New European Community Trade Data System Developed for Free Trade

Recent developments in Europe may hold some lessons for the U.S. as it moves closer to full free trade with Canada. The EC faced the dilemma of collecting trade data outside of customs control processes when it established the single market on January 1, 1993. The single market eliminated duties on trade between member nations as well as customs controls at members' borders. The EC decided that even though its members were joining a single market, it was still important to collect data on trade between them in order to measure the performance of each member-nation's individual economy. However, instead of continuing to collect customs documents solely for the purpose of monitoring trade between members, the EC instituted a new system for acquiring this data. The new system, known as INTRASTAT, which is short for intra-Community trade statistics, is based on the direct reporting of data by traders and does not involve any monitoring of shipments by customs agencies at internal EC borders. The INTRASTAT design calls for the EC's statistical agency and the statistical agencies of the member states to obtain trade data directly

from businesses in conjunction with the value-added tax declarations they are required to file.

It is too early to tell if INTRASTAT will produce accurate and complete trade data. However, critics of INTRASTAT point out that some of the old system's detail and accuracy will be lost. For example, although the INTRASTAT collection form includes items on country of origin and port of destination, the filing importer has the option of not completing them. One critic argues that as a result of this optional reporting, the data collected on origin and destination of goods will be of limited value. Data from INTRASTAT were available in September 1993, and INTRASTAT officials should have some indication soon of the INTRASTAT's effectiveness. However, because INTRASTAT has not operated in parallel with the old system during INTRASTAT's initial implementation, it will be difficult for the EC to assess INTRASTAT's ability to produce accurate data.

The EC's experience with collecting data in a free market environment will be instructive for the United States as it moves closer to full free trade with Canada. However, it should be noted that there are significant differences between the EC's single market and the U.S.-Canada free trade zone. Although the U.S.-Canada FTA and the EC agreements leading to the single market share the goal of improving trade, the single market goes beyond the FTA in establishing a common trade regime among its members. For example, each member of the single market has agreed to levy the same tariffs on imports from countries outside of the single market. Therefore, EC countries have no need beyond statistical purposes to require documentation on country of origin on shipments from nonmember countries moving across internal borders. The U.S.-Canada FTA, on the other hand, only applies to products originating in the United States or Canada and does not eliminate the need for border controls to ensure this origination. Finally, of the two countries, only Canada has a value added tax, known as the Goods and Services Tax, from whose administrative records trade data might be extracted. The United States does not have a similar tax that is applied to imports or exports.

Census and Customs Need Strategy for Future Trade Data Collection

Census and Customs will need to formulate a strategy for collecting merchandise trade data when the U.S.-Canadian FTA is fully implemented. The need for a free trade data collection strategy will become even greater as NAFTA extends the free trade zone to Mexico. The agencies should look to the experience of the EC, which planned for data collection under a free

market but which still may encounter problems in maintaining data quality.

As of this report, neither Census nor Customs had devoted much attention to the future of merchandise trade data collection under free trade. Customs, for instance, issued a 5-year plan in 1993 that was intended to guide the execution of all of its numerous missions, including those relating to trade. The plan does not address trade data collection, despite the fact that it proposes changes to Customs' cargo processing operations, such as further automation of entry reporting, that could affect Customs' trade data collection responsibilities. Customs officials told us that changes to its trade operations contained in the plan will not affect trade data. This opinion runs counter to that of Census officials and to evidence that we have collected. As we noted earlier, Census officials fear that Customs' automation will adversely affect the quality of trade data and that free trade will cause Customs to de-emphasize its commercial operations on the U.S.-Canada border, which could degrade the quality of trade data.

Census, for its part, has given some consideration to how trade data will be collected in the future. However, it has not formulated any specific plans for addressing the issue. Census' Foreign Trade Division headquarters staff, which is responsible for managing Census' merchandise trade data program, has a staff of only about 140. This staff is mainly concerned with producing the monthly merchandise trade reports as well as numerous other merchandise trade data summaries. Carrying out this primary responsibility leaves little time for planning future projects. Foreign Trade Division officials told us that most of their planning efforts have focused on expanding the automation of merchandise trade data collection and processing.

Conclusions

The continued move to a global economy will challenge the agencies that are responsible for merchandise trade data to adapt and improve their data collection procedures. Aspects of the global economy, such as free trade and the need for a faster movement of goods between countries, will make it difficult to continue to collect accurate merchandise trade data at the nation's border. The move to a global economy may require developing new methods for collecting these data. Alternative methods for the United States to consider include the use of surveys and the direct reporting of merchandise trade data by businesses to Census. However, these methods

have potential drawbacks, such as a loss of detailed product information and diminished statistical accuracy, that would have to be addressed.

Although we recognize the resource constraints and competing mission priorities facing both Customs and Census, we believe that the agencies should begin developing a coordinated strategy for future trade data collection. An interagency working group similar to the one formed to study problems with the U.S.-Canada import data MOU is one possible way of addressing the issue of future trade data collection. Like the data exchange working group, representatives from Canada Customs and Statistics Canada, who are facing the same issues as their U.S. counterparts, might also be included in a trade data futures group.

However, Census and the other agencies responsible for trade data should not limit their attention to merchandise trade data when considering the future. As we discussed in chapter 3, improvements are also needed in the methods for collecting data on other aspects of U.S. international trade, such as services and investments, if the country is to have valid measures of international economic transactions in the future.

Recommendation

The Secretary of Commerce should instruct the Director of Census and the Secretary of the Treasury should instruct the Commissioner of Customs to form an interagency task force to study how U.S.-Canada merchandise trade data should be collected in the future trade environment. This study should be expanded to include U.S.-Mexico trade data as NAFTA is implemented. The task force could be modeled after the one that is currently in place to study ways of improving the U.S.-Canada import data exchange MOU. The secretaries should consider joining with Statistics Canada and Canada Customs officials to form a bilateral task force to address this issue cooperatively.

The work of the interagency task force should be done in the context of broader efforts to improve the measurement of all forms of U.S. international trade. Part of these broader efforts could be expanding the BEA-Statistics Canada cooperative arrangement on current account data, that we discussed in chapter 3, to explore ways to improve the measurement of services, such as the transportation of imports.

Agency Comments

Customs agreed and Commerce generally agreed with our conclusions and recommendation. Customs noted that it must focus on the future to ensure

that the present level of accuracy of statistical information not decline in the face of a changing trade environment. Commerce, while agreeing in principle with the recommendation, said it would like to see BEA included in any task force formed to address how data on trade between the United States and Canada, and potentially between the United States and Mexico, should be collected in the future. Our work focused primarily on the collection of merchandise trade data, and therefore we directed our recommendation to Census and Customs, the agencies responsible for this task. However, we support Commerce's view that the task force would be strengthened by BEA's inclusion, because this could help lead to broader efforts to improve the measurement of all forms of U.S. international trade.

Merchandise Trade Statistics: Chapter From the Report of the Auditor General of Canada to the House of Commons for 1993

Chapter 23

Merchandise Trade Statistics

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Merchandise Trade Statistics

Assistant Auditor General: Elwyn Dickson
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Main Points

23.1 Merchandise trade is a key component of Canada's current account. This information is used by governments in making economic policy decisions and international trade agreements. Merchandise trade data are also used at the detailed level by governments and business to make decisions on markets and products.

23.2 Statistics Canada relies largely on administrative data collected by the Department of National Revenue (Customs) in compiling merchandise import trade data. Under a Memorandum of Understanding with the United States Bureau of the Census, data on merchandise imports are exchanged between Canada and the United States. This information is used to determine exports to each other.

23.3 Satisfactory controls are in place for the collection of import documentation and the electronic transmittal of data from Customs to Statistics Canada, and from Canada to the United States. The usefulness of sending copies of import documents to Statistics Canada needs to be reviewed.

23.4 Customs manual verification of commercial entries often is not performed and summary results are not reported to Statistics Canada. Deficiencies also exist in Statistics Canada verification and imputation procedures. The impact of these deficiencies on the overall quality of merchandise trade data has not been determined.

23.5 Improvements in communications and co–ordination between Customs and Statistics Canada are needed to resolve current and emerging data quality issues.

23.6 Difficulties exist in measuring illegal, non–commercial postal and casual imports, and in defining their relationship to merchandise trade data.

23.7 Current Customs procedures do not ensure complete collection of export declarations, and there is ongoing under–reporting of merchandise exports to countries other than the United States.

23.8 Recent Customs initiatives to streamline operations, and changing technology and patterns of trade, will require Customs and Statistics Canada to review their working relationship in the collection, verification and analysis of merchandise trade data to ensure an uninterrupted flow of high-quality data.

23.9 Internationally, Canada is considered to have high-quality merchandise trade statistics but the maintenance of the system for collection and verification will require continuing vigilance and co–operation.

23.10 The findings of the United States General Accounting Office review of United States merchandise trade data are consistent with those of our audit of Canadian trade statistics.

Appendix I
Merchandise Trade Statistics: Chapter From the Report of the Auditor General of Canada to the House of Commons for 1993

Introduction

23.11 Canada's trade with the world consists of imports and exports of merchandise and services. Net changes in the level of imports and exports of merchandise and services are collectively recorded in Canada's current account. This account also includes financial flows such as dividends and interest paid to and received from foreign sources.

23.12 Accurate and timely statistics on trade are an important source of information about the pattern and pace of economic activity. The current account is a key indicator of how well the economy is performing in relation to those of its international trading partners. Such information is essential to private sector decision makers, as well as to government. In addition to supporting fiscal and monetary policy decisions, governments use trade data to support the negotiation of international trade agreements, such as the General Agreement on Tariffs and Trade, the Free Trade Agreement between Canada and the United States and the pending North American Free Trade Agreement.

23.13 Merchandise trade data, the largest component of the current account, are derived from the administrative records of goods imported and exported by Canada. Records are mainly collected by National Revenue (Customs) at all points where goods enter or leave the country legally. This information is transmitted to Statistics Canada for analysis and reporting of merchandise trade statistics.

23.14 Neither Canada nor the United States collects data on merchandise exports to the other. Instead, since one country's exports are another country's imports, they merely translate each other's import data into statistics on exports. In January 1990, Canada and the United States implemented a Memorandum of Understanding to govern the collection and exchange of merchandise trade data.

23.15 Our report focusses on the data used to report on Canadian merchandise imports, which in 1992 amounted to $148.0 billion, whereas Canadian merchandise exports to the world were reported as $157.5 billion. Historically, Canada has maintained a surplus in its merchandise trade with the world. In recent years this surplus has fallen as deficits in services and financial transactions have increased.

23.16 In 1992, Canada's surplus of $9.5 billion in merchandise trade could not compensate for a deficit of $38.0 billion in non-merchandise transactions, and a net deficit of approximately $29 billion was left in Canada's overall trade with the world. Net balances on trade in goods and services are an important factor in Canada's ability to service international liabilities over the long term.

Accurate and timely statistics on trade are an important source of information about the pattern and pace of economic activity.

23.17 To address each country's interest in the quality of import and export data, the United States General Accounting Office and the Office of the Auditor General agreed to examine the systems, procedures and practices in place for the collection and reporting of merchandise import data in their respective countries.

Audit Scope

23.18 In Canada, Statistics Canada is responsible for the reporting of merchandise trade statistics. Responsibility for the collection and verification of data is shared by Customs and Statistics Canada. Customs is required to collect import documentation for all goods entering Canada, except for data transmitted directly to Statistics Canada by Canada's National Energy Board, and data on imports of fully assembled vehicles provided by the major North American automobile companies. Our audit examined:

- the reliability of Customs systems, procedures and practices in the collection of all merchandise import documentation, along with some export data, at border and merchandise transshipment points within Canada;

- the accuracy achieved by Customs procedures and practices in the processing and verification of trade data, and the transmission of electronic and paper documentation to Statistics Canada;

- the reliability and accuracy achieved by Statistics Canada systems, procedures and practices for the verification, analysis and reporting of merchandise trade data; and

- the appropriateness of actions taken by Statistics Canada and Customs to address changes in technology and other initiatives that could affect the collection and reporting of merchandise trade data.

23.19 The methodology of our audit was developed in conjunction with a parallel review of United States trade data conducted by the General Accounting Office. Methods included a literature review on the compilation and interpretation of trade statistics, interviews with employees of Customs and Statistics Canada, and site visits to four Customs regional offices and a number of border crossings between Canada and the United States. Work included the detailed charting of the trade data system to identify and assess controls on computer access, data completeness, and accuracy in the recording of transactions and verification procedures. Our examination of controls included the review of a representative sample of transactions used in the verification and imputation of import data.

Observations and Recommendations

Trade Data: Administrative Arrangements

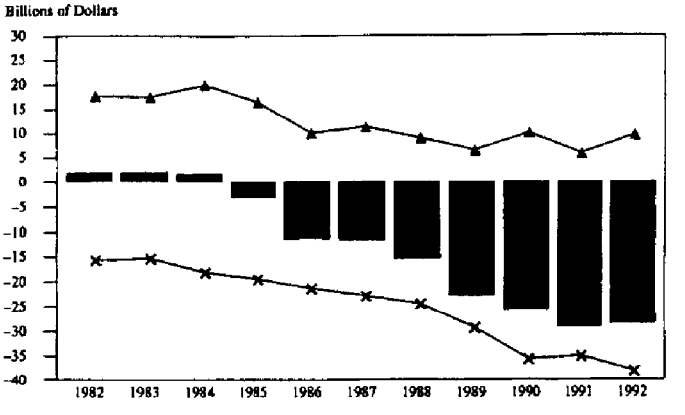
23.20 Customs is responsible to ensure that all duties and taxes are assessed and collected on commercial goods entering Canada. It is also responsible for controlling the movement of people and goods to achieve compliance with legislation. Statistics Canada is responsible for defining the concepts of trade statistics and for the conversion of administrative data into trade statistics.

23.21 The *Statistics Act* requires the Minister of National Revenue to provide

Exhibit 23.1

Balance of Payments (Current Account)

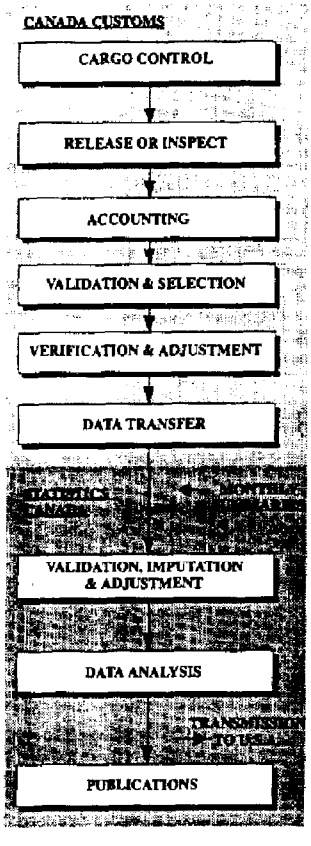
Since 1985, Canada's surplus in merchandise trade has been more than offset by deficits in non-merchandise trade.



Source: Statistics Canada Historical Statistics 1926-1992

the Chief Statistician with the administrative data on Canadian imports and exports collected by Customs. The arrangement by which data are transmitted was agreed upon in a 1984 memorandum of understanding between the two departments.

23.22 In January 1988, Customs implemented the Customs Commercial System, an automated system to process all commercial goods entering Canada. At the same time, Canada adopted the international convention on the Harmonized Commodity Description and Coding System based on a six-digit code to classify goods. However, Canada and the United States expanded the code to 10 digits. The first six digits are the Harmonized System Code for the commodity. The next two digits are to identify a particular tariff item and the last two digits are for statistical detail on the commodity. A revised memorandum of understanding between Customs and Statistics Canada was signed in 1993 to



Commercial goods enter Canada. Customs inspectors enter cargo control data in the Customs Commercial System (CCS) to track release of goods.

The Custom inspector accesses the CCS for information to decide whether to release the goods or to perform a physical inspection.

Detailed information on the goods imported is submitted manually or electronically by the importer/broker.

Transaction data are validated by the CCS. Items are selected for manual verification by commodity specialists at Customs regional offices.

Commodity specialists compare selected transactions to supporting commercial documents. If an adjustment is necessary, a detailed adjustment statement is generated to advise the importer/broker.

Transaction data and adjustments are sent to Statistics Canada weekly on machine-readable tapes.

The "Big 3" automobile companies and the National Energy Board submit monthly summaries of complete motor vehicles and energy data respectively.

The Statistics Canada trade data system performs validation edits and imputations. High-value items are selected for review. Records are adjusted when necessary.

Data are reviewed on a macro level to identify problem areas.

Statistics Canada transmits data relating to merchandise imports from the United States to the U.S. Bureau of the Census twice monthly.

Merchandise trade data are published monthly, quarterly and annually for use by public and private sectors and international organizations.

Exhibit 23.2

Merchandise Trade Data Process – Imports

In 1992, Customs processed over 40 million commercial documents, including cargo control documents, commercial invoices and import accounting coding forms.

incorporate these changes and the data exchange agreement between the two countries.

Customs Collection of Documentation

Satisfactory controls are in place for the collection of import documents

23.23 In 1992, Customs processed over 40 million commercial documents, including cargo control documents, commercial invoices and import accounting coding forms. Most transactions are processed via the Customs Automated Data Exchange (CADEX). In our view, satisfactory controls are in place to ensure that import documents are collected for shipments released and electronic records of transactions are transmitted to Statistics Canada.

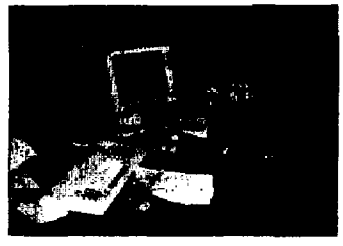
Usefulness of sending copies of import documents to Statistics Canada needs to be reviewed

23.24 Customs keeps a copy of the commercial invoice and other documentation for all commercial entries processed and sends Statistics Canada copies for transactions of over $1200. Customs keeps the documentation for six years and Statistics Canada for two. Brokers and importers keep their own records. Current procedures for the storage and transport of commercial import documents involve manual collecting, sorting, dispatching, filing, storing and retrieving of documents. Statistics Canada estimates that approximately seven percent of the 750,000 documents sent to the agency each month cannot be retrieved. In testing the system to retrieve import documents for data verification, we noted that, while the electronic records of transactions were complete, a high proportion of the paper documents at Statistics Canada could not be found within the test period.

***Statistics Canada response:** The Agency's present quality assurance and verification procedures for imports depend upon direct access to the paper documents and the estimated non-retrieval rate of seven percent under the regular search program is acceptable. This is likely to become a moot issue, however, as Customs moves toward a paperless environment. Statistics Canada is prepared to work with Customs in developing on-line access to information as well as new quality assurance procedures.*

Transportation carriers report to Customs at border entry port.

Customs inspectors review commercial documents to decide whether to release, reject or inspect the goods.



Customs Verification Procedures

Often, required manual verification work is not performed

23.25 One Customs procedure involves manual review and adjustment of commercial entries to ensure the correct application of duty and taxes on imported goods. Such procedures also improve the reliability of data transmitted to Statistics Canada.

23.26 Merchandise import transaction data, input into the Customs Commercial System by Customs staff at ports or by brokers or importers via CADEX, are electronically validated. Only

commercial entries without validation errors are accepted. A selection of validated commercial entries is subsequently reviewed by Customs commodity specialists. In 1992, approximately 1.8 million transactions, or eight percent of all transactions, were selected for review by approximately 263 commodity specialists. Commodity specialists verify details of selected transactions such as commodity classification, value, quantity and country of origin.

23.27 We noted that Customs commodity specialists made data adjustments in approximately six percent of the transactions selected for review. The remaining transactions not adjusted by a commodity specialist are supposed to be subject to a quarterly spot check, but often these checks are not performed, and error rates are not reported.

23.28 Our audit also noted that often transactions selected for manual review by commodity specialists are not reviewed; perhaps because of inadequate human resources to handle the volume of transactions selected. In other cases, the commodity specialist may decide on the basis of experience that a review is not necessary.

23.29 Customs uses electronic verification tests (called edits) designed by Statistics Canada to review all transactions with a value of more than $25,000. Transactions of more than $25,000 that do not fall within a predetermined unit value range are selected for detailed review since they are considered to be inaccurate; these account for approximately one quarter of all data entries selected for verification. Unit value ranges refer to the range of normal or expected values established by Statistics Canada for each type of merchandise. If these ranges are to serve their purpose, which is to identify imports where unit values fall outside these ranges and then to subject these transactions to further review, they must be both appropriate and current. Our audit noted that, in fact, unit values often are not updated on a timely basis, and many of the value ranges are too wide to allow the enforcement of meaningful standards. Unit values, which allow the computer to target these transactions for manual review, are necessary to validate data for commodity classification groups, for example, electronic goods and pharmaceutical products, that are subject to wide variation over time. About 4000, or 23 percent, of the 16,000 classification codes involving commodities without standardized units of measure do not have the unit value ranges needed to do electronic verification. Statistics Canada is attempting to reduce this percentage over a period of time.

Summary information on results of Customs review is not provided to Statistics Canada

23.30 Statistics Canada estimates that if Customs performs the verification procedures required by the memorandum of understanding between Customs and Statistics Canada, 75 percent of the value of each commodity class entering Canada will be verified. In fact, there is insufficient information on the frequency of verifications carried out by Customs to know whether this level of verification is appropriate and is actually achieved.

23.31 Customs, in selecting samples for verification, also applies selection criteria based on target groups and perceived risk. In addition, it makes random selections of transactions based on the commodity specialist workload. However, the random selection procedure, which accounts for approximately 25 percent of all transactions selected for verification, is not intended to provide a statistically valid sample or to be used to assess overall data quality.

23.32 Customs does not provide Statistics Canada with summary information on verification results relating to transactions selected for verification. Lacking an analysis of results, it is

Customs does not provide Statistics Canada with summary information on what changes are made to transactions selected for verification.

impossible to evaluate the effectiveness of Customs verification procedures and the usefulness of Statistics Canada's computer verification tests. In our view, Customs and Statistics Canada need to determine whether these edits are a cost–effective method of ensuring the accuracy of trade data.

23.33 Customs and Statistics Canada should develop appropriate performance indicators and review the effectiveness and workload implications of the procedures used to verify merchandise trade data.

Customs response: Agreed. We will, in consultation with Statistics Canada, work toward developing appropriate indicators within the context of current activities related to government restructuring and the implementation of the Customs new business re–engineering initiatives. Both of these can be expected to have a substantial impact on the collection and verification procedures for trade data.

Statistics Canada response: The Agency fully supports the recommendation that the two departments should develop appropriate performance indicators, and management information tools, to determine the cost–effectiveness of data verification procedures. However, joint consideration must be given to whether the investment required to undertake the task at this time is warranted, when Customs' re–engineering initiatives, such as audit verification and electronic release, will change the way in which Customs and Statistics Canada will control the quality of the data in the future.

Customs Compliance Verification and Audit

The cumulative effect of errors detected by Customs compliance verification and audit work has not been determined

23.34 In 1992, Customs set up compliance verification units in its regional offices to perform post–importation reviews of commodity declarations. These focussed on commodity classification, valuation and country–of–origin data. While this work resulted in additional revenue, a lack of summary information on adjustments made to the import data means that the impact of the reviews on merchandise trade statistics is unknown.

23.35 During the same period, Customs implemented a pilot program to audit importers' activities rather than focus on specific transactions. Pilot audits of two large companies were conducted in 1992–93, the purpose being to evaluate audits as a cost–effective way of verifying compliance with Customs accounting requirements. Both pilot audits revealed classification errors in the reporting of merchandise trade data. In our view, these errors would not have been detected by commodity specialists performing desk verifications.

23.36 Customs and Statistics Canada jointly should analyze the statistical implications of Customs compliance verification activities and audits in relation to merchandise trade data.

Customs response: Agreed. We will, in consultation with Statistics Canada, develop the means to do so within the context of departmental efforts in business re–engineering.

Statistics Canada response: The Agency concurs. A joint effort to analyze the statistical implications of Customs' initiatives to streamline operations is especially critical if Statistics Canada is to ensure an uninterrupted flow of high-quality merchandise trade data.

Customs Physical Examination of Commercial Shipments

Physical inspection confirms only the narrative description of goods provided on import documents

23.37 One aspect of Customs commercial enforcement is the physical examination of goods. Mandatory

examinations involve the physical inspection of all shipments of a particular commodity. Selective referrals depend on the inspector's judgment as to whether a shipment should be examined or not. For random referrals, the Customs Commercial System identifies for examination a specified percentage of all imported shipments.

23.38 A physical examination is performed to check information on the cargo control document and commercial invoice — including a description of the goods, country of origin and quantity — against the actual shipment. Unfortunately, these documents do not indicate commodity classification codes. Therefore, a physical examination can only confirm the general narrative description of goods provided on the import documents, but cannot be used to verify the commodity classification. Customs indicates that the most effective way of physically verifying the commodity classification would be through post-audits at the importers' premises.

23.39 Customs and Statistics Canada, in their reliance on electronic and paper documentation, assume that the nature of trade merchandise entering Canada is reasonably reflected in the information on file. We believe that the verification of commodity classification, whether by physical inspection of goods at the time of release or through on-site inspections at importers' premises, is important to improving trade data.

Statistics Canada Data Verification and Imputation

23.40 To improve data quality, Statistics Canada conducts a variety of electronic verification tests, manually reviews selected transaction documentation, imputes data values where information is not available and, where warranted, makes various adjustments to the data. In attempting to enhance data quality, Statistics Canada risks the introduction of inaccurate adjustments and imputations; in terms of value for money, it may be that the cost of adjustments is not justified by improvements in data quality.

23.41 Statistics Canada has an ongoing concern with the quality of trade data. Its publications usually define the limitations of their data, though quantitative indicators can be given only in relation to appropriate assessment measures. Statistics Canada maintains that there are no simple and efficient ways to determine accurate measures of quality: "Attempts made in the past to obtain error rates for the coding of commodities have yielded inconclusive results primarily because the task of commodity coding can be quite subjective since the Harmonized System of Commodity Description and Coding (HS) has over 16,000 codes. Furthermore, the quality of trade data has more dimensions (due to the large number of variables involved) than the accuracy of commodity coding and this quality cannot be captured in a single quantitative measure." *The Quality of Canadian Imports Data*, Statistics Canada Catalogue, no. 65-001, September 1991

23.42 While the above problems are inherent in the system of collecting and analyzing trade data, our audit identified a number of less integral deficiencies that also affect data quality. These deficiencies were identified through testing the accuracy of computer verification and imputation procedures, updating a 1991 data quality analysis, and reviewing results with senior staff at Statistics Canada.

23.43 Statistics Canada conducts three types of tests: one test detects inadmissible values (for example, non-existent unit of measure); the second test cross-references two pieces of data (for example, country of origin and classification code, as in "oil from Switzerland"); the third test checks that the value of a commodity lies within an

acceptable range. Where specific transactions do not pass the computer's checks, adjustments are imputed automatically by the computer for transactions of less than $50,000. Rejected transactions of more than $50,000 are manually reviewed by a commodity officer.

Statistics Canada verification and imputation procedures do not always improve data quality

23.44 Our test of Statistics Canada's verification and imputation system included a representative sample of 520 transactions selected from current trade data. While our test sample is too small to allow us to estimate total error, the results raise questions about the ability of the system to optimize data quality.

23.45 Of the 520 transactions in the sample, documents for only 233 transactions were retrieved from the Statistics Canada records room; this retrieval rate was less than Statistics Canada estimates of documents not received or misfiled. Many transactions rejected by the edits are not analyzed and may be incorrectly imputed because copies of documents cannot be found in Statistics Canada.

Many transactions with invalid codes or missing information are not analyzed or are incorrectly imputed

23.46 In comparing the computer records against the physical records of transactions in documents we did obtain and examine, we noted that where the transaction's commodity classification code cannot be matched to a table of valid codes or imputed, the computer allocates an "unassigned" code to the transaction. The total value of unassigned transactions, which mainly includes low-value items under $1200, is approximately $1.5 billion annually; but these transactions are not analyzed.

23.47 In comparing the commodity classification code with the country of origin, the computer incorrectly imputed the data in 32 out of 35 cases: the effect is to overstate the number of imports from the United States, our largest trading partner, and to understate the number of imports from Canada's smaller trading partners.

23.48 We noted that some of the unit values in our sample had been recently updated. We also found that the commodity officers were well informed of current developments in their areas of expertise although, because of the increasing volume of international trade, they were not able to review and adjust all selected transactions. Our review also indicated that errors in unit of measure (for example, imperial instead of metric) for specific commodity groups could be more easily detected by Customs at the data input stage.

23.49 Information on the mode of transportation for imports from countries other than the United States is derived from the cargo control document for the transaction. Our audit found that in 31 of the 46 transactions we examined the mode of transport was incorrectly derived. In fact, since imports from countries other than the United States tend to involve more than one mode of transport, it has been difficult to assign a single appropriate mode. However, as of 1 April 1993, it became mandatory for the importer to provide information on the principal mode of transport, so those data will no longer be derived. This will improve the quality of information required for the data exchange with the United States.

23.50 The size of the sample of transactions selected for review is too small to allow us to estimate the effect of these deficiencies on Statistics Canada's verification and imputation procedures. However, the results obtained do raise questions about the effect of current

imputation procedures on improving data quality.

23.51 Statistics Canada verification and imputation procedures should be reviewed to determine their effectiveness in improving data quality. The review should include an assessment of opportunities to apply better, possibly automated, quality control techniques to update the unit values used to verify trade data.

Statistics Canada response: The Agency recognizes that its verification and imputation procedures require review and revision. Even more important, the changes taking place in the international trading environment and the implementation of the "New Business Relationship" initiatives at Customs will require revisions to the concepts and methodologies underlying the present trade statistics program.

In reference to the specific data quality issues related to unit value ranges, Statistics Canada and the U.S. Bureau of the Census are in the process of reviewing and harmonizing their editing strategies to alleviate inconsistencies and improve the effectiveness of these edit parameters. This harmonization process is being carried out under the direction of the Heads of Agencies who meet annually to review the status of the Canada–U.S. Memorandum of Understanding on the Exchange of Import Data. In addition, the recent recommendations of the Customs Co–operation Council in Brussels to internationally standardize units of quantity may facilitate the alignment process.

Data Transmission to the United States

Satisfactory controls exist for the transfer of data to the United States

23.52 Once verification and adjustments are complete, Statistics Canada transmits data on merchandise imports from the United States to the United States Bureau of the Census. This is done twice a month through a communications link–up to the Canadian Embassy in Washington. The Bureau reviews the data and, if questions are raised or changes are required, contacts Statistics Canada directly. Statistics Canada reconciles its monthly merchandise trade statistics with those of the United States Bureau of the Census.

Operating Relationships: Customs and Statistics Canada

23.53 Differences in the strategic objectives of Customs and Statistics Canada affect the collection and verification of merchandise trade data. While Customs is responsible for the initial collection of merchandise trade data, its primary objectives are to collect revenue and to control the movement of goods and people as required to achieve compliance with legislation. Statistics Canada is responsible for the analysis of data and reporting of statistics. Electronic verification procedures designed by Statistics Canada can increase the workload of Customs. For example, out–of–date unit values used in electronic verifications increase the number of selected transactions that require manual review by Customs commodity specialists. This practice can leave commodity specialists unable to perform the required verifications or reduce the time available for them to do other required work, such as examining high–risk commercial entries.

Maintaining good data quality depends on good communication between Customs and Statistics Canada.

Extending direct communications at the operational level would promote timely resolution of problems

23.54 Maintaining good data quality depends on good communication between Customs and Statistics Canada. In fact, current operating procedures do not encourage direct communication between Statistics Canada and Customs regional offices on specific data quality issues.

23.55 Statistics Canada usually communicates directly with Customs headquarters rather than with regional offices, where at least some data inquiries could be answered directly. This increases the time required by both organizations to respond to data quality improvement initiatives. The lack of prompt action taken in response to "problem reports" and "case studies" is evidence of the communication problems between Customs and Statistics Canada.

23.56 "Problem reports", which are filed by Customs when regional commodity specialists note that a particular Statistics Canada validity check is out-of-date, are forwarded to Statistics Canada for review and update. "Problem reports" are relayed through Customs headquarters, which reviews and then transmits them to Statistics Canada: this transmission does not always occur in a timely manner. Most Customs commodity specialists, seeing little action result from their reports, do not bother to prepare reports when unit value problems are detected.

23.57 Statistics Canada case studies, which deal with specific data quality issues such as commodity classifications, value ranges or country of origin, also experience delays when they are forwarded to Customs headquarters for review and appropriate action. The inability of Statistics Canada to communicate directly with Customs regional offices to resolve regional data problems hinders the timeliness of data quality improvements. Both Customs and Statistics Canada have advised us that procedures are being developed to allow more flexibility and direct communication at the operational level.

Some duplication of effort between Customs and Statistics Canada

23.58 Current verification procedures sometimes result in a duplication of verification work by Customs and Statistics Canada. For example, transactions of more than $50,000 that fail the unit value verification edits are selected for review at Customs; if they are not adjusted at Customs, the transactions will undergo a similar review at Statistics Canada. As mentioned earlier, Statistics Canada is not informed of the summary results of Customs verification adjustments made as a result of Statistics Canada's edits. Hence, Statistics Canada is not able to analyze the effectiveness of its verification edits and the usefulness of the review procedures used to ensure data quality.

23.59 Customs and Statistics Canada should continue to improve communications with a view to achieving prompt action and enhancing data quality.

Customs response: *We agree with the importance placed by the OAG on this activity. There has already been a marked improvement in communication between the two departments in the recent past. Customs and Statistics Canada have established a close working relationship and efforts have been ongoing to ensure that a high level of communication and co-ordination between the departments continues. Measures taken include the signing of a memorandum of understanding by the departments and the establishment of formal communication mechanisms such as the Data Quality/Classification Committee and the quarterly Working Committee for the memorandum of understanding on the exchange of import data. Statistics Canada is being consulted in the development of new departmental initiatives that may have an impact on statistical data collection, and is making direct contact with local Customs offices more frequently in order to promote the timely resolution of problems. Efforts in this regard will continue to be made under the terms of the memorandum of understanding between the departments.*

Statistics Canada response: *The Agency fully endorses this recommendation and*

believes it is especially critical at this time. The Agency is working with Customs to establish a closer working relationship and to effect the timely resolution of current and emerging data quality issues.

Measurement and Definitional Issues in Import Data

23.60 An accurate knowledge of what goods are included or omitted from the data collection process is an important element in the interpretation of international trade statistics. Transactions are often complex, and information on quantities, value or composition of shipments can be difficult to obtain. Knowledge of data limitations improves the usefulness of trade statistics.

23.61 In some cases, international conventions define trade categories and thus affect the classification of goods. For example, goods imported by travellers (such as used automobiles) are counted as services, whereas value added by services in the manufacture of goods and intellectual properties may be included in the price: for instance, royalties on any patented goods if the royalty payment is a condition of the sale.

23.62 Illegal imports, which are not included in the trade statistics, are difficult to measure. Any time there is an incentive to avoid taxes or duties, there is the possibility of under-reporting. With Canada's major trading partner, the United States, the incentive for misclassification of trade data is now diminishing as duties are lowered or eliminated under the Free Trade Agreement; however, it is not known if this decline will translate into increased accuracy in the value of trade reported in import documents.

23.63 In other cases, there may be an incentive for international firms to reduce taxes through "transfer pricing". This practice places an unrealistic value on exported or imported products transferred between two divisions of the same corporation, so that profits of the corporation are minimized in countries with high tax rates and maximized in countries with low tax rates. Another way to reduce the dutiable value of goods is to bill separately for services such as licensing, marketing, financial advice or data processing. Pricing issues are complex, and their full impact on trade statistics is unknown. These nuances in trade patterns and practices represent an ongoing challenge to producers and users of merchandise trade statistics.

Pricing issues are complex, and their full impact on trade statistics is unknown.

Postal Imports

Non-commercial postal imports are based on estimates

23.64 Information on non-commercial postal imports is based on estimates. The estimated value of these transactions has increased from $541 million in 1988 to $1.5 billion in 1992. In July 1992, Customs implemented a Postal Import Control System to collect duties and taxes on postal imports with a value for duty over $20.

23.65 However, due to limitations in the Postal Import Control System, Customs is unable to provide specific information on postal items imported into Canada, though it estimated that postal imports accounted for approximately 2.5 million items in 1992-93. With the full implementation of the system, Statistics Canada expects to have better estimates of non-commercial postal imports to be included in the "Customs basis" merchandise trade data.

Casual Imports

Casual imports are not considered a component of merchandise trade data

23.66 In March 1991, Customs implemented the Travellers Entry Processing System, which by March 1993 was operating in 90 of Canada's 350 ports of entry. During 1992, Customs processed

over 123 million travellers entering Canada and approximately 4.2 million casual import documents. However, because the system is not operational at all ports and is not designed to provide summary data, the total value of casual imports by travellers into Canada continues to be based on estimates.

23.67 To complement this system, Customs officers at ports collect data on the number of cars, residents and non-residents entering Canada. Statistics Canada has used this information, as well as quarterly samples collected in collaboration with Customs, to estimate the total value of casual imports at around $3 billion in 1992, though that value is not included in Statistics Canada merchandise trade data. Casual imports by travellers are defined by international convention as a component of the "service account" in Canada's balance of payments.

Merchandise Trade Data on Exports

Under-reporting of exports to countries other than the United States is an ongoing problem

23.68 Under the memorandum of understanding with the United States Bureau of the Census, Statistics Canada relies on U.S. import data to determine Canada's exports to the United States: these account for about 70 percent of Canada's merchandise exports worldwide.

23.69 For exports to countries other than the United States, Customs is responsible for the collection, sorting and forwarding of export documentation to Statistics Canada. In addition, Statistics Canada receives about 50 percent of the export declarations from Customs-approved exporters, in the form of monthly summary reports. Statistics Canada is responsible for compiling export data and for developing, implementing and monitoring data verification procedures.

23.70 In fact, the collection of export forms is erratic. There is no penalty to exporters for not submitting the export forms and there are inadequate controls on the collection of export declarations at Customs border points. For example, marine carriers present bills of lading or equivalent printouts to Customs within five days after leaving a Canadian port. Customs then checks the bill of lading to determine if the export form is required, and if it has been submitted. If the form is missing, a tracing letter is sent to the exporter. After a month, if no export form has been received, there is no further administrative recourse and the file is closed. In one region, Customs estimates that approximately seven percent of the data on marine export trade, representing approximately $100 million annually, goes unreported to Statistics Canada.

23.71 As a result of the data exchange between Canada and the United States, Customs no longer requires Canadian exporters to complete an export declaration for goods entering the United States. However, goods entering the United States from Canada that are destined for other countries do require an export form to be completed; exporters often assume otherwise, since such forms are not required for goods destined for the United States, and do not comply.

23.72 Also, if Canadian goods are purchased by a company in the United States for eventual sale to a third country, such as Mexico, the Canadian exports are recorded as a sale to the United States and not to the final country of destination. Such practices in the international recording of data affect the interpretation of trade statistics by overstating exports to the United States and under-reporting exports to, for example, Mexico.

23.73 Customs and Statistics Canada recognize the problem of under-reporting of exports to countries other than the United States and have undertaken a number of studies to estimate the impact on trade data, specifically: seeking to

assess trade by different modes of transportation; attempting to reconcile Canadian merchandise export trade data with the data of other countries; and establishing a joint Statistics Canada and Customs data committee to monitor the quality of data on Canadian exports. Customs has also taken steps to encourage exporters to participate in monthly summary reporting to Statistics Canada. The importance of good quality data on Canada's world trade patterns warrants increased efforts to improve current methods of collecting data on Canadian exports to other countries via the United States.

23.74 Customs and Statistics Canada should work with United States agencies to review current practices in the recording of trade data involving exports from Canada to other countries through the United States.

Customs response: *Both Customs and Statistics Canada have been working with the United States agencies for some time to improve our trade data with respect to in-transit trade statistics. These efforts will continue as a result of the memorandum of understanding between the United States and Canada, which provides and sets out the terms and conditions for the exchange of import data.*

Statistics Canada response: *The under-coverage of Canadian exports to countries outside the United States, for shipments directly to those countries and in transit through the United States, is a critical issue in Statistics Canada's measurement of export trade. The Agency is working with both Customs and the U.S. agencies to quantify this under-coverage and to increase the accurate filing of export data. Nevertheless, in the absence of Customs border controls and compliance sanctions, there is no definitive solution to the problem. The registration of new exporters, however, under the Single Business Registration Number initiative, will help to develop a statistical solution to the under-coverage problem.*

Future Initiatives: Impact on Trade Statistics

23.75 In 1992, National Revenue announced a number of initiatives intended to streamline Customs operations. Two Customs initiatives in particular will have a major impact on the collection, verification and reporting of merchandise trade statistics. The primary objective of these initiatives, which are described below, is to increase the efficiency of Customs operations and to allow a speedy "no hassle" transfer of goods across Canada's borders.

Electronic Release and Data Interchange

Customs plans to release commercial shipments by transferring information electronically

23.76 The purpose of this initiative is to increase the use of electronic data interchange in effecting import clearances, and to move toward a paperless system of reporting on, and accounting for, imports. Under the new system, release information is electronically transmitted to Customs by the importer or broker. There it is reviewed, and the transporter is informed through electronic data interchange when the goods are cleared for import into Canada.

23.77 This initiative is directed to the 70 percent of the importing community already transmitting accounting information via CADEX. The program eliminates the need for importers to physically deliver paper documents to Customs, although hard copy documentation would be retained by the importers and could be forwarded to Customs on demand. Other government departments, including Statistics Canada, would receive information through access to the Customs Commercial System.

23.78 In March 1993, Customs began the process of identifying user requirements for electronic release, and announced in June 1993 that the automotive industry will be the first to use the new system to process the import of auto parts and supplies. The program will also be extended to other industries. As yet, there is no agreement between Customs and Statistics Canada on the best ways to maintain data quality.

Auditing Importers

Emphasis in verification is shifting to auditing of importers

23.79 In the streamlining of its operations, Customs indicated that in future it would turn toward a greater use of importer audits. To that end, Customs is now developing procedures that will eliminate "hard copy" invoice requirements for shipment clearance; instead, import business will be verified through audits of importers after the goods have entered Canada. This initiative will have a significant impact on Statistics Canada's merchandise data verification requirements since the data format will differ from that of the current import system.

23.80 The implementation of periodic verifications or audits could have a significant impact on the quality of merchandise trade data being reported: for example, commodity classification errors may not be detected in a timely manner. Depending on Customs capability and the number of audits to be carried out, a large number of importers may not be audited. In our view, continuing consultation between Customs and Statistics Canada is needed to assess how this initiative will affect the collection and reporting of merchandise trade data.

Statistics Canada: Alternative Data Sources

As systems for data collection change, new and broader sources of data are needed

23.81 In view of potential changes in the way import trade data are collected, Statistics Canada has been working since April 1991 to identify alternative data sources. Officials in Customs and Statistics Canada have met periodically to discuss matters of mutual interest in this area.

23.82 The primary focus of the project is to identify the best methods for surveying importers, exporters and carriers so as to obtain high-quality import data. To begin with, such a survey requires an up–to–date inventory of Canadian importers and exporters.

23.83 While it has been concluded that much of the required trade data is available from Canadian importers, there are many concerns about the effects of using survey techniques in the collection of trade data, specifically: the response burden on Canadian business; whether data gathered by means of surveys would meet the requirements of Statistics Canada's data exchange agreement with the United States; and, finally, the role of the 350 Canadian customs brokers, as opposed to that of some 150,000 importers, in the retention of documentation required for data verification. Under the Free Trade Agreement, duties and tariffs between Canada and the United States will be gradually eliminated, but the complexities of compliance with international trade rules, particularly with regard to country of origin, will increase. A new role for customs brokers in serving these needs and in assisting the data collection process has not yet been established.

23.84 **Statistics Canada and Customs, in consultation with other users of trade**

data, should take steps to ensure that, as new data collection and verification techniques are implemented, the quality of Canadian merchandise trade statistics is maintained.

Customs response: Both National Revenue and Statistics Canada are committed to the maintenance of quality statistics and will take appropriate steps to ensure that the quality of merchandise trade statistics is maintained when any new data collection or verification techniques are implemented.

Statistics Canada response: The Agency is pleased with the acknowledgment given to the high quality of its merchandise trade statistics and to the importance of accurate and timely trade statistics, to decision makers in both government and the private sector. As Customs proceeds with the implementation of its initiatives to streamline operations, the requirement for a joint consultative process becomes especially critical if Statistics Canada is to ensure an uninterrupted flow of high-quality merchandise trade data.

Conclusion

Continuing vigilance is required to maintain high-quality merchandise trade data

23.85 Statistics Canada generates merchandise trade statistics from collecting data on millions of individual transactions. Simply adding the results of all import transactions should, in theory, produce a precise statement of exactly what entered the country. In practice, however, there are bound to be inaccuracies.

23.86 Several factors contribute to the reporting of inaccurate merchandise trade data: human error, incomplete documentation, under- or over-reporting of imports to avoid taxes, deliberate or accidental misclassification to avoid duties, or wrong indication of country of origin to gain preferential duty treatment. In addition, there are legitimate differences of opinion on the interpretation of the commodity classification, country of origin and mode of transportation. Also, there are illegal imports. The challenge is to understand the limitations of the data, measure their impact and, whenever possible, take steps to overcome them.

23.87 Internationally, Canada is considered to have high-quality merchandise trade data and, indeed, the current system of collecting data is working well. However, to maintain that system in light of changing patterns of trade and technology will require continuing vigilance and responsiveness. Measurement issues and questionable categories of trade, when added together, substantially affect the interpretation of Canada's reported 1992 merchandise trade surplus of $10 billion: for example, an estimated $3 billion in casual imports by travellers, currently classified as services, is not included in the amount of merchandise imported into Canada; furthermore, trade data do not include estimates of illegal imports. At a more detailed level, $1.5 billion worth of goods that fall in the unassigned commodity code could, if assigned codes, substantially affect trade data for specific commodity groups, as could the estimated $1.5 billion in non-commercial postal imports. While small in relation to Canada's total trade with the world, these amounts could affect the picture for particular sectors of the Canadian economy.

Canada is considered to have high-quality merchandise trade data, but maintenance of the system for collection and verification will require continuing vigilance and co-operation between Customs and Statistics Canada.

23.88 Improving the accuracy of statistical measurements, or even maintaining it, will continue to be challenged by changes in technology, transnational transactions and budgetary restraint. Nevertheless, the demand for high-quality, detailed trade statistics will continue. Administrative records may still be the primary source of information, but methods of collection and verification will change. In managing this change,

Customs and Statistics Canada must work together to ensure that there is an uninterrupted flow of data, and to implement improvements that meet the needs of governments and other users of trade data for accurate and timely statistics.

Comments From the U.S. Customs Service

DEPARTMENT OF THE TREASURY
U.S. CUSTOMS SERVICE
WASHINGTON, D.C.

MAN-5-06-CO:T:E:S FRC
C211010

NOV 2 1993

Mr. William M. Hunt
Director, Federal Management Issues
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Hunt:

This is in response to your Letter of October 21, 1993, to the Secretary of the Treasury, in which you seek comments on your draft report on United States-Canada trade data collection.

Your report provides a good overview of data collection problems which affect not just the U.S.-Canada data exchange, but data collection in general. The report, while recognizing flaws, indicates the general success of the program and the fact that we continue to work toward the improvement of our data collection efforts.

We agree with your conclusions and recommendations. We must focus on the future to ensure that the present level of accuracy of statistical information not decline in the face of a changing trade environment.

We look forward to receipt of the final report. If you have any questions about our views on any aspects of the report, please do not hesitate to contact us.

Sincerely,

for Karen J. Hiatt
Acting Assistant Commissioner
Office of Commercial Operations

Comments From the Department of Commerce

THE SECRETARY OF COMMERCE
Washington, D.C. 20230

November 8, 1993

Mr. William M. Hunt
Director, Federal Management Issues
General Accounting Office
Washington, D.C. 20548

Dear Mr. Hunt:

Thank you for the opportunity to review your draft report entitled, "Measuring U.S.-Canada Trade."

We have reviewed the enclosed comments of the Bureau of Economic Analysis and the Bureau of the Census and believe they are responsive to the matters discussed in the report.

Sincerely,

Ronald H. Brown

Enclosures

COMMENTS: The U.S.-Canada data exchange agreement already has yielded considerable benefits in terms of more accurate merchandise export statistics, paperwork reduction, and the redirection of resources to improving overall trade statistics.

However, there remains room for improvement in trade statistics. Census Bureau research, for example, indicates that undercounting of merchandise exports has been greatly reduced but not eliminated, amounting to three to seven percent of exports depending upon the trading partner. The Bureau of Economic Analysis (BEA) and Statistics Canada have considerably improved the coverage of service transactions in recent years, but again the need for further improvement remains.

As your report notes, resolution of many of the remaining problems will require expanded data collection, which in turn will require the commitment of resources. We continue to place a high priority on improvements in our trade data.

RECOMMENDATION: GAO recommends that Census and Customs form an interagency task force to study how U.S.-Canada merchandise trade data should be collected in the future trade environment. The study should be expanded to include U.S.-Mexico trade data in the event that the North American Free Trade Agreement is ratified and implemented. Census and Customs should consider joining with their Canadian counterparts to form a bilateral task force to address these issues cooperatively. GAO further recommends that the work of the interagency task force be done in the context of broader efforts to improve the measurement of all forms of U.S. international trade.

RESPONSE: We agree in principle with the report's specific recommendation for the establishment of an interagency task force to address how data on trade between the U.S. and Canada, and potentially between the U.S. and Mexico, should be collected in the future. We share the concerns expressed in the report about the challenges of a changing trade environment to data collection and quality. In addition to Customs and the Census Bureau, we would like to see BEA included in any interagency task force formed to address these concerns. In addition, we agree that the efforts of any such task force should be coordinated with broader efforts to improve statistics on international transactions.

Both the Census Bureau and BEA have reviewed the report's examination of measurement issues in their areas of respective interest -- merchandise trade (Census) and services and investment income (BEA). Many of their comments are editorial in nature, or provide technical corrections and in some cases updated estimates that you may wish to incorporate. These are shown in the enclosed markup of the draft report.

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