Balance of Payments Adjustment - International Trade Data

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1. Methods

Statistics on goods trade are compiled monthly by the International Trade Division. The balance of payments adjustments to trade in goods are compiled on a monthly basis by the Balance of Payments Division. The two divisions work in close co-operation to integrate the balance of payments adjustments with the customs data. The International Trade Division publishes the data on trade in goods on a monthly basis and the Balance of Payments Division publishes the same data, but quarterly, as part of the balance of payments.

The following summarizes the compilation of Canadian exports and imports, from a customs basis through to their compilation on a balance of payments basis.

1.1 Exports

Canadian exports to the United States on a customs basis are compiled from U.S. Customs imports from Canada [1]

1) to which are added Canadian re-exports (goods of foreign origin shipped through Canada);

2) from which are subtracted

a) U.S. goods returned through Canada and designated as Canadian origin by the United States; and

b) U.S. imports originating from Canada but shipped from third countries; and

3) to which are added freight and related charges from point of lading to Canadian point of exit.

This procedure is used for all Canadian exports to the United States except exports of natural gas and electricity. These two commodities are recorded directly from Canadian sources in both Canadian and U.S. customs data, as the Canadian sources are viewed as more accurate than U.S. import data for these series. Exports to other countries are compiled from Canadian customs documents by Statistics Canada's International Trade Division.

The resulting customs exports to the United States and to other countries are then adjusted through four categories of balance of payments adjustments: coverage adjustments, timing adjustments, valuation adjustments for inland freight, and other valuation and residency adjustments.

1.1.1 Coverage adjustments

Three major coverage adjustments are made to customs exports: an adjustment on crude petroleum exports to the United States, an adjustment on natural gas exports to the United States, and a general provision to account for undercoverage of exports to countries other than the United States not covered in customs data.

The crude petroleum adjustment is made to replace customs data with volume and price data (obtained from the Manufacturing, Construction and Energy Division of Statistics Canada and the National Energy Board, respectively). This adjustment is effectively both a coverage and a valuation adjustment, although it is portrayed as simply a coverage adjustment until 1995, when a split was re-instituted.

[1] Country of origin and f.o.b. point of lading.

Although the adjustment to natural gas is a freight adjustment to bring the value of gas to the border (since gas is valued as being delivered at the border), it is classified as a coverage adjustment for historical reasons.

The undercoverage adjustment, which begins with the reference year 1986, was introduced to account for exports to countries other than the United States that were not recorded in customs data. The amount increased noticeably with the introduction of the data exchange agreement with U.S. authorities in 1990; the increase stemmed from Canadian exporters not always being aware that they had to continue to report exports which transited through the United States but which were ultimately destined to countries other than the United States. On the U.S. side, it is legal and faster to file goods as imports for consumption in the United States and avoid the obligations of in-transit procedures, which penalize failure to ship the goods outside the United States within a given period.

1.1.2 Timing adjustments

Two main types of timing adjustments are made: one to current customs exports of grains and the other for late documents.

The adjustments for wheat and durum products entail replacing customs data with volume data on clearances obtained from the Canadian Grain Commission (CGC) coupled with prices from the Agriculture Division of Statistics Canada from 1988 to 1992, as well as with a global transaction price from 1993 onward, which is used for customs data by the International Trade Division. The CGC's data are believed to reflect more accurately the movement and ultimate destination of Canadian grains and have been progressively introduced into the customs data by the International Trade Division. From 1999, the CGC volumes were applied monthly rather than annually.

From 1999, the CGC volumes and the International Trade Division unit prices have been applied monthly at the customs level for two other grains: canola and barley.

For other grains (oats, rye, flaxseed, and corn), balance of payments adjustments substitute monthly CGC volumes for customs volumes and use the latest available unit price from the International Trade Division. None of the grain adjustments are applied to the United States because its import data are generally taken as sufficient.

A temporary adjustment based on recurrent patterns is made for late arrivals of customs documents, which are subsequently integrated into the customs database and removed from the balance of payments adjustments. Omissions from customs records documented from other sources are temporarily recorded from time to time through a balance of payments adjustment as well, until appropriate entries are made in the customs data.

1.1.3 Valuation adjustments for inland freight

The inland freight on goods is such a large valuation adjustment that it is shown separately in publications. To ensure consistency with Canada's input–output statistical treatment, goods require valuation at the plant. This is done first by removing inland freight to the border as recorded in the customs data (see section 1.1.4.1), and second, by applying specific balance of payments adjustments as explained in the current section. This process is followed because, based on past research and ongoing commodity balancing within the input–output framework, it was found that freight measured in the customs data was incomplete. Once further deductions of freight (and discounts) are made to bring the value of exports to the plant, the estimation of a somewhat different amount of inland freight back to the border is again carried out by the Balance of Payment Division.
For exports to the United States, the following inland freight adjustments are applied *en bloc*, that is, they are not necessarily distinguished by commodity:

• Freight by truck, as reported in U.S. customs data, is added (U.S. brokers estimate the mileage-based share of the journey occurring in Canada).

• Rail freight, as reported in U.S. customs data, is adjusted to factor in certain receipts on forest products shipped on a cost, insurance and freight (c.i.f.) basis to the United States and, historically, seen as missing from direct surveys of carriers.

• For charges on petroleum moved by pipeline, the U.S. customs data are recalculated using National Energy Board transport-to-border rates and volumes provided by the Statistics Canada Manufacturing, Construction and Energy Division. A small amount identified by the Input–Output Division for liquid petroleum gas transport is also added. No inland freight is added to natural gas exports as this commodity has been already valued at the border through a coverage adjustment (see section 1.1.1). Note that this is an exception to at-plant valuation, as significant sales are made inclusive of transport charges.[2]

• A small miscellaneous freight amount from U.S. customs data, unclassified as to mode of transport other than air or water, is added.

• A small percentage reduction is made for duplication of rail charges on exports transiting the United States and already estimated in inland freight to overseas destinations.

For exports outside the United States, historical rates for freight are applied to overseas exports and serve as the inland freight estimate for non-U.S. exports. A separate freight component is not distinguished in the customs data for these exports.

1.1.4 Other valuation and residency adjustments

The other valuation and residency adjustments are made up of the following:

• a valuation adjustment to remove the freight and handling charges and to account for the discounts on a number of commodities not fully removed in the customs data;

• a valuation adjustment on pre-packaged software; and

• two residency adjustments made to gold, mainly to add gold bullion transacted with non-resident accounts in Canada and to add gold sold by Canadian monetary authorities to non-residents other than foreign monetary authorities.

1.1.4.1 Removal of customs-based and additional freight

The initial stage of the valuation adjustment consists in deducting freight already included in customs data. This provides data which are essential to the input–output framework for the at-plant valuation.

For Canadian exports to the United States, inland freight is removed on every commodity by means of a special 'freight-out' run provided by the International Trade Division, which obtains the data—including mode of transportation—from the U.S. Census Bureau on the range of U.S. imports from Canada.[3]

[2] Another exception is wheat exports, marketed centrally with transport costs to the border already covered in customs valuation.

[3] As discussed in section 2.3.2 Statistics Canada Catalogue No. 67-506-XPE, air and water freight are not treated as inland freight, and are not included in the value of goods as they are incurred beyond the customs point of exit; rather they are classified in transportation services from the point of departure by the carriers from their ports of exit.

For exports to overseas countries, a small general factor is applied, without distinction by commodity, to subtract freight in order to reach plant valuation.

A few more deductions are made to certain resource commodities, where not all freight and discounts are considered to have been removed. Large freight deductions are made on the following commodities for exports to countries other than the United States: coal, newsprint, wood pulp and aluminium. Smaller adjustments are made on sulphur, asbestos, iron ore and potash, and a general freight adjustment is made for the remaining commodities.

Freight adjustments are also made for exports to the United States of newsprint and wood pulp. The large adjustments for freight as well as the discounts are calculated from the gap between customs values and the customs volume revalued at unit prices from production censuses by the Manufacturing, Construction and Energy Division. For post-census periods, information on unit values is projected from more current price index series of Statistics Canada. The smaller adjustments for freight are carried out by applying known percentages on monthly exports.

Discount adjustments, part of the above valuation gap, are made for the following commodities: newsprint, wood pulp, sulphur and, to a lesser extent, aluminium and asbestos.

1.1.4.2 Valuation adjustments to pre-packaged software

From 1996, a small adjustment compiled by the U.S. Bureau of Economic Analysis is applied to increase the value of prepackaged software exports. The data source, U.S. import data, continue to value some of these transactions at the value of the medium (for example, diskette or CD) rather than at the value of the content.[4]

1.1.4.3 Residency adjustments on gold

The first residency adjustment to gold is limited to transactions between residents and non-residents on commodity gold located within Canada, since the cross-border movement of gold is already recorded in customs data. The adjustment consists of adding to the customs data gold sold to non-residents but which is left in Canada with non-resident accounts. Data for these adjustments are obtained from surveys of Canadian banks and refiners.

A second residency adjustment covers gold sold by Canadian monetary authorities to foreign residents other than foreign monetary authorities. Gold transacted between Canadian monetary authorities and foreign monetary authorities should not be recorded as trade in goods—since it is treated as monetary gold and is part of financial assets [5] —and any customs documents which involve the Canadian monetary authorities are removed before customs data are compiled (or, if not removed in time, cancelled by an offsetting balance of payments adjustment). Where monetary gold is sold to foreign residents other than foreign monetary authorities, it is viewed as normal exports of commodity gold. From time to time the monetary status of certain individual transactions may be difficult to determine readily in source data. When a monetary exclusion is inadvertently made in the customs data, a balance of payments adjustment is applied to include the transaction if it is non-monetary in nature. When such gold is sold by Canadian monetary authorities from holdings abroad to a non-monetary foreign resident, there is no customs record generated and the change of ownership is also reflected through a balance of payments adjustment.

[4] For a further discussion see Chapter 6, “Commercial Services.” Statistics Canada Catalogue No. 67-506-XPE

[5] Financial assets also include gold held abroad by Canadian residents other than the Canadian monetary authorities. Transactions in gold held abroad by Canadian residents other than the monetary autorities are recorded as a financial asset in the financial account and not as commodity gold in the current account. This treatment is inconsistent with the treatment of gold assets held in Canada by non-residents and which is not treated as their financial assets (that is, their gold is not shown as Canada’s financial liability).

Up to 1968, goods also include the Canadian production of gold that was available for export. The value corresponds to that of current domestic gold production, minus gold consumed by Canadian industry or the arts, and minus that held by producers for refining, or in the mines. Although this metal was not actually exported, it was sold to the Exchange Fund after having been refined in Canada. Its value was recorded as a credit entry in the current account and as a debit in the official exchange holdings account. This was consistent with the convention used at that time to shift the gold from the real sector (gold as a good) to an international asset (monetary gold).

Given the special role of gold up until 1968, when its commercial price was no longer fixed, it was decided to break the series at that point, and no attempt was made to apply the current treatment to the data prior to 1968.

1.2 Imports of goods

Canadian imports on a customs basis are also adjusted with four broad balance of payments adjustments: coverage adjustments, a timing adjustment, a valuation adjustment for inland freight, and other valuation and residency adjustments.

1.2.1 Coverage adjustments

Four adjustments for coverage are applied to customs imports. The first pertains to crude petroleum, where quantity data, seen to be more accurate, are used from the Manufacturing, Construction and Energy Division to replace the customs volume data. Prices used to arrive at values are based on unit values provided by the International Trade Division, with the except of the current month where information supplied by Natural Resources Canada is used. The second adjustment relates to imports via mail which are not fully recorded in customs data; this adjustment was developed from internal investigation and administrative sources linked to existing customs coverage and external variables such as exchange rate change. The third adjustment pertains to the import of undeclared tobacco products, which has been roughly estimated from internal studies on production and trade.

Beginning in 1996, a fourth adjustment based on customs records was compiled by the International Trade Division to subtract custom software already covered in service imports.

1.2.2 Timing adjustment

A temporary adjustment is made for late arrival of documents for automotive parts. Based on past patterns, the amount is reduced each month as customs records are received.

1.2.3 Valuation adjustment for inland freight

Because customs imports are valued only at the place of last direct shipment to Canada, an estimate of freight to the export frontier must be added. This inland freight adjustment is made by mode of transport and commodity (trucks, rail, coal) for imports from the United States; a smaller general adjustment is applied to imports from countries other than the United States.

The methodology for calculating inland freight on imports with the United States has evolved over time, in particular since of the end of the 1980s as different institutional arrangements for data sourcing and imputation procedures have themselves changed. Under the Canada-United States exchange of imports data in 1990, basic information began to be compiled using Canadian import documentation, a complete reversal of practice up to that date. Ideally, much of the freight from import documentation would be drawn upon in the same way as became possible for export freight after the data exchange. However, compilation from Canadian import documents did not begin until 1991, and from then, the Canadian customs measure has represented freight for the whole journey rather than to the border only. Thus the source for inland freight was substantially overstated until 1998, when the International Trade Division changed imputation methodology; this almost halved the freight-to-goods ratio, bringing it much closer to the ratios that prevailed before 1990.

Because of the issues in Canadian import documentation outlined above, the Balance of Payments Division continued with a modal approach between 1990 and 1998. The largest component, truck freight, was initially estimated in consultation with the Transportation Division using a range of volume, price and transborder share information. With the imputation procedures recently adopted by the International Trade Division, a more direct and current measure was taken for truck freight. Freight by rail continues to be compiled from balance of payments survey sources of Canadian and U.S. rail carriers, avoiding a substantial drop shown in the current customs-based information. A third component of inland freight with the United States consists of a rate-based estimate in addition to current volume information on coal.

The adjustment for inland freight on imports from countries other than the United States is derived from specific freight rates applied to the values of all goods imported excepting some specific products, such as crude petroleum, aircraft, autos and trucks. As with exports, separate freight accounts are not distinguished in the customs data, except for those transactions with the United States.

1.2.4 Other valuation adjustment and residency adjustments

One valuation adjustment and two residency adjustments are applied to customs imports.

The valuation adjustment consists in a small rate-based adjustment to represent inland freight included in imports from countries other than the United States. This amount, once deducted from imports valued at the exporter's customs frontier, brings overseas imports to the same plant basis as imports from the United States. At this point inland freight (see section 1.2.3) is added to reach border valuation on a balance of payments basis.

The first residency adjustment pertains to gold bought in Canada by non-residents, but which does not cross the border. Data from a survey of banks and refiners are used in producing this adjustment.

The other residency adjustment is made in order to show imports on a last country of shipment. These adjustments are made at the level of countries and cancel out on a global basis. A residency adjustment would also be called for if the Canadian monetary authorities were to purchase gold in certain circumstances from non-residents other than foreign monetary authorities. If a purchase is from a non-resident within Canada, or if the purchase is made abroad for delivery abroad, no import document is generated to reflect the transaction.

1.3 Summary

Overall, the adjustments on exports are more numerous and sizeable than on imports (see Table 1) and the largest adjustment for both exports and imports arises from ensuring appropriate inclusion of inland freight to the border. It should be noted that the adjustments are not always strictly balance of payments adjustments as they are often used to rectify what would ideally have been originally recorded as customs data. Timing adjustments are such examples and they are subsequently replaced with more complete customs records.

Table 1
Summary of balance of payments adjustments

	Exports	**Imports**
Coverage	Petroleum Natural Gas Exports overseas addition	Crude petroleum Mail addition Undeclared tobacco addition Custom software deduction
Timing	Grains Late documents, general	Late documents, automotive parts
Inland freight valuation	Inland freight addition	Inland freight addition
Other valuation and residency	Freight and discount deductions (valutaion) Petroleum (valuation) Prepackaged software U.S. addition (valuation) Non-monetary gold addition (residency)	Freight deduction (valuation) Non-monetary gold addition (residency) Country of shipment (residency)