

C. Reconciliation studies, cross-country comparability and bilateral data exchanges

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9.41. *Goals of bilateral reconciliation studies.* Often, it is assumed that exports of country *A* to country *B* should be equal to imports of country *B* from country *A*. This, however, is rarely the case. Reconciliation studies aim towards explaining these discrepancies between the bilateral imports and exports statistics of trading partners, i.e., by identifying conceptual and methodological differences in their respective types of data collection. However, even if both countries compile their data using the same methodological principles and international guidelines, their bilateral merchandise trade data will usually not match owing to multiple factors (see para. 9.46 below). The purpose of a reconciliation study may be limited to the identification of major differences in the statistics of two countries and the results will help each partner to better understand the bilateral trade flows. However, the reconciliation process may reveal systematic measurement errors and gaps, which should be corrected. Therefore, the goal of reconciliations studies might include assessing the causes of differences and making adjustments to various data components. Another, even more ambitious objective could be the harmonization of the conceptual framework of the two sets of statistics, which could lead to the revision of certain procedures and definitions and, in some cases, could suggest the use of alternative data sources, all of which is expected to improve the overall quality of foreign trade data. At the policy level, a reconciliation exercise will yield a common perception of the facts and can thus facilitate the development of bilateral economic negotiations and international cooperation.

9.42. *Limitations of the reconciled data.* Reconciliation studies might entail the creation of a reconciled data set. However, the reconciled data do not reflect any changes in the officially published trade figures of either partner country. Reconciliation adjustments normally include a series of estimates, which are not sufficiently precise to permit modifications to officially published data. For example, many countries' import data are valued on a CIF-type basis, that is, including insurance and freight charges, which must be removed during reconciliation, since the partner country's exports are usually valued on an FOB-type basis; however, estimates of insurance and freight charges are usually derived indirectly and do not necessarily reflect their true amount.

9.43. *Basic procedures for bilateral reconciliation studies.* In general, reconciliation may include the following activities: (a) setting the objectives for the project and reaching agreement on the basic procedures; (b) establishing a common conceptual framework for reconciliation purposes; (c) converting officially published data to the common framework; (d) examining the differences in data and methodology; (e) making necessary data adjustments to achieve mutually agreed sets of trade figures; and (f) formulation of conclusions of the reconciliation study. An individual study could be limited to the activities described in (a), (b) and (c) above. It is advised that a reconciliation study cover trade for at least a full year, and that a reconciliation table (which identifies all the additions and subtractions that need to be performed in order for the trade data of one partner to correspond to the trade data reported by the other) be prepared as one of the outputs.

9.44. *Cooperation between trading partners.* The success of reconciliation is dependent on the full cooperation of trading partners from the very beginning and on clear identification of procedures to be followed at all stages of the process, from the initial exchange of the required information to the mutual agreement on the final results. The agencies conducting the reconciliation study should examine not only the various organizational aspects of the proposed study but also its legal implications (for example, in certain cases, an exchange of data at the level of transactions may involve the issue of confidentiality). At the beginning of a reconciliation exercise, both parties have to agree on which data should be used as the benchmark for a specific category of goods. For example, in the past, import data were normally used as a benchmark for the comparison of most commodities. Import data were, in general, considered to be of better quality than export data because imports are reported in sufficient detail to allow customs to apply duties, taxes or other regulatory controls. However, for certain commodities and in some countries, export data were viewed as being more accurate for the same reasons.

9.45. *A common conceptual framework and conversion of data to that framework.* Establishing the common conceptual framework involves an exchange and comparison of methodologies and compiling practices, and adoption of the same definitions and classifications for use in the reconciliation study. Issues to be considered are, among others: what are the major conceptual differences; whether information is available on a country of origin/last known destination or on some other basis; whether there are significant differences in compilation procedures (such as suppression of confidential or low-value trade) which will affect bilateral comparability; and whether there are certain transactions (such as processing trade) for which streamlined reporting provisions exist that could affect comparability. The common framework serves as a practical working tool with which to facilitate comparison of data between the two countries: it does not replace official methodologies of the countries involved. The partners must also decide on such issues as the working currency for the study, and whether currency conversion should be carried out on a monthly or an annual basis (if exchange rates are fluctuating significantly, annual conversion could create additional discrepancies).

9.46. *Reasons for differences in data.* Even where both partners fully comply with United Nations guidelines for trade statistics, there can be differences between partner data. In fact, some of the discrepancies are a direct result of following those guidelines. In order to identify reasons of a conceptual nature for discrepancies, the following areas should be reviewed: (a) coverage; (b) trade system applied; (c) time of recording; (d) interpretation and application of the commodity classification; (e) valuation; (f) partner country attribution (i.e., in the case of indirect trade or triangular trade);^[18] (g) confidentiality; and (h) other sources of discrepancy. The trading partner attribution is considered, in terms of value, the most frequent and most important reason for asymmetries, such as in the case of trade between the United States and China (see below for details). Other common reasons for discrepancies in total trade and detailed trade level relate to the valuation of goods (imports valued on a CIF-type basis and exports valued on a FOB-type basis; treatment of taxes and duties, markups applied after export, currency conversion, etc.), the timing of recording, coverage (trade system, different treatments of trade in special categories of goods, thresholds, underreporting of transactions above threshold), classification and confidentiality. Some of these differences are based on conceptual factors; however, many are not. For a detailed discussion of these data items, please see annex IX.C.

9.47. *Reconciliation studies: a few examples.* The conduct of a bilateral reconciliation study requires an agreement of the two partner countries which usually, would specify the responsible agency and the other involved national agencies, the purpose, the scope, the years covered, the methodology used and any other arrangements that are required for the conduct of the study, such as the sharing of data and information. Reconciliation studies are conducted by many countries^[19] and a few examples are provided below:^[20]

- *The experience of Canada-Mexico-United States.* The reconciliation studies between Canada and Mexico, and between Mexico and the United States, allowed the sources of significant differences in the 1996 and 1997 official trade statistics to be identified. The studies have been useful to the three countries involved in evaluating their trade statistics and identifying areas for further improvement.^[21]
- *United States and China.* Both countries established a statistical working group to examine bilateral merchandise trade owing to the unusually large and growing statistical discrepancies in their respective officially published data. The working group examined the years 2000, 2004 and 2006, focusing on trade flows from China to the United States owing to the larger discrepancies in that direction. The distinction was made between trade moving directly from China to the United States, and trade moving indirectly through intermediary countries. The working group identified factors that explained the majority of the bilateral statistical discrepancies.^[22]

- *Sweden and Denmark: asymmetry exchange project.* The goal of this project was to reduce the asymmetries in the trade data of both countries. The available documentation provides useful information on how to conduct such a project (e.g., it includes the draft agreement between Statistics Sweden and Statistics Denmark) and illustrates the problems that arise from concerns over confidentiality, which is in itself a major contributor to asymmetries on the disaggregated commodity level. The work on asymmetries at Statistics Sweden entailed examination of data at the enterprise level.^[23]
- *European Union.* Asymmetries in the intra-European Union trade flows. Eurostat, together with the member States of the European Union, has been undertaking major efforts in examining asymmetries in the intra-EU trade flows. Reconciliation exercises are carried out with the aim of identifying the causes of asymmetry and to reconcile the mirror figures wherever possible.^[24]
- *Brazil.* In Brazil, the statistical harmonization (reconciliation) of trade data has two objectives: (a) to improve the quality of statistical data for national purposes and (b) to submit to the trade negotiators figures that are accepted by both countries. For further details, see annex IX.D.

9.48. *Cross-country comparability.* The issue of cross-country comparability, i.e., whether the data on exports of one country is comparable with the data on exports of other countries represents an important quality dimension and the main objective of international recommendations. Cross-country comparability is the basic working assumption when comparing data from two or more countries and depends on the extent to which the international concepts and definitions for international merchandise trade statistics are applied by countries, and on the impact of the various deviations on the data. The United Nations Statistics Division has conducted multiple studies in which countries were asked about their compliance with the international recommendations.^[25] IMTS 2010 (para. 9.23 (a)), recommends that countries provide in their metadata information on their practices and on any deviations from the international standards.

9.49. *Bilateral data exchange: example of the United States and Canada.* As an outcome of bilateral reconciliation studies between the United States and Canada, both countries agreed to derive their exports statistics from the partner country's statistics on imports. The agreement was implemented January 1990, and each country consequently eliminated the requirement of filing export documents for goods destined to the other. Under the agreement to exchange data, the reporting burden on exporters is greatly reduced and data quality is improved. From the perspective of the United States, this eliminated undocumented shipments to Canada, increased the accuracy of the data, and increased inclusion of data in the correct statistical month. However, since the data exchange was implemented when both partners primarily used paper export declarations, the benefits may now be relatively less significant, as the capability of collecting export declarations electronically has improved.

9.50. *Additional challenges.* Although in general they do not outweigh the benefits, there are additional challenges stemming from the data exchange between the United States and Canada. One such challenge is the increased response burden on importers, as they have to report additional data elements to meet the exporting partner's needs. When it is not possible to collect these additional data elements, one partner country or both may have a gap in data. For example, Canada does not collect containerization information on imports from the United States; hence, containerized value and shipping weights are excluded from United States data on exports to Canada. Further, the case of trade transiting one partner en route from the other to a third country has not been handled well through data exchange. This leads to possible errors in coverage and in attribution of country of destination. These and other problems have been identified and efforts are made to measure them and minimize their impact on statistics. A joint report prepared by the United States Census Bureau and Statistics Canada which discusses the effects of the data exchange has been made available by both agencies.

[18] The term "indirect trade" refers to the situation when exports of country A are sent to country B, from which the goods are re-exported to country C. The term "triangular trade" is usually used to refer to the case of trade within the European Union where goods are sold by a company in member State A to a company in member State B, which in turn sells them to a company in member State C, although the goods are physically moved only once, from A to C. In such cases, there is the risk that B will be recorded as partner country, or that B itself will report a trade transaction.

[19] The United Nations Statistics Division plans to establish a reference website for materials on the topic of reconciliation.

[20] Almost half of the countries that responded to a 2006 survey carried out by the United Nations Statistics Division indicated that they had conducted or were planning to conduct bilateral or multilateral reconciliation studies with their trading partners (see http://unstats.un.org/unsd/tradereport/introduction_MM.asp).

[21] See International Merchandise Trade Statistics: Compilers Manual (United Nations publication, Sales No. E.02.XVII.17), part I, annex D.4.

[22] See Department of Commerce and Office of the United States Trade Representative, United States of America, and Ministry of Commerce, People's Republic of China, "Report on the statistical discrepancy of merchandise trade between the United States and China", October 2009. For examples of additional research that has been conducted, see Zhi Wang, Mark Gehlhar and Shunli Yao, "Reconciling trade statistics from China, Hong Kong and their major trading partners: a mathematical programming approach", GTAP Technical Paper No. 27 (Weif Lafayette, Indiana, Center for Global Trade Analysis, Purdue University, September 2007).

[23] See Establish an Asymmetry Exchange Project between Sweden and Denmark, Background Facts: Economic Statistics 2008: 10 (Stockholm, Statistics Sweden, 2008).

[24] See Eurostat, Quality Report on International Trade Statistics, 2010 ed., Eurostat Methodologies and Working Papers (Luxembourg, European Union, 2010), pp.26-27. Available from <http://ec.europa.eu/eurostat/documents/3888793/5848021/KS-RA-10-026-EN.PDF/1d0590b5-03e5-48d1-a686-d906f393810c?version=1.0>.

[25] The results are available from the UNSD website, at http://unstats.un.org/unsd/tradereport/introduction_MM.asp.