

BILATERAL RECONCILIATION OF STATISTICS, 1993 AND 1994

INTRODUCTION

The Australian Bureau of Statistics (ABS) has recently undertaken a bilateral reconciliation study with Statistics New Zealand (SNZ) covering merchandise trade flows between Australia and New Zealand. New Zealand is Australia's third largest trading partner, accounting for 7.9% of Australia's exports and 4.7% of Australia's imports in the 1996–97 financial year.

If identical concepts and definitions were applied by each country to both imports and exports, and if there was no time difference between the recording of the export by one country and the import by the other, Australia's exports to New Zealand should be identical to New Zealand's imports from Australia and vice versa. The purpose of this study was to quantify and adjust for conceptual and methodological differences so that the remaining differences could be investigated in order to identify any major coverage or quality deficiencies in the statistics produced by each agency.

Outcomes of the reconciliation study are shown in Tables A and B. These tables show the value of Australia's exports or imports, the value of adjustments made, and the value of New Zealand's imports or exports. Also shown is the residual discrepancy - this is the discrepancy that remains between the two sets of figures after all conceptual and practical adjustments have been made. All figures are in Australian dollars, converted using an average annual exchange rate of \$A1 = \$NZ1.2503 in 1993, and \$A1 = \$NZ1.2314 in 1994.

COMPARISON OF PUBLISHED TOTALS

In 1993, Australia recorded imports of \$3,035 million from New Zealand while New Zealand recorded exports to Australia of \$3,116 million (in AUD). The discrepancy of \$81 million represents 2.7% of Australia's imports from New Zealand. In the same year, Australia recorded exports of \$3,691 million to New Zealand while New Zealand recorded imports from Australia of \$2,814 million. The discrepancy of \$877 million represents 23.8% of Australia's exports to New Zealand.

In 1994, Australia recorded imports from New Zealand of \$3,382 million while New Zealand recorded exports of \$3,564 million to Australia. The discrepancy of \$182 million represents 5.4% of Australia's imports from New Zealand. In the same year, Australia recorded exports of \$4,390 million to New Zealand while New Zealand recorded imports from Australia of \$3,244 million. The discrepancy of \$1,146 million represents 26.1% of Australia's exports to New Zealand.

CONCEPTUAL AND METHODOLOGICAL DIFFERENCES

The international recommendations contained in the United Nations (UN) publication, *International Trade Statistics, Concepts and Definitions*, Statistical Papers, Series M, No. 52, Rev. 1 are generally followed by both countries in the compilation of their international trade statistics. There are still, however, definitional and conceptual differences in the data, and the adjustments made to account for these differences in this reconciliation are outlined in this section. For more detailed information on the possible causes of differences between the exports of one country and the imports of another, see the article *Bilateral Merchandise Trade Statistics Reconciliation: Australia and the United States of America, 1991 to 1994* which was published in the September Quarter 1996 issue of this publication.

WESTBOUND TRADE

The adjustments shown in Table A represent the changes needed to transform Australia's published imports to the same basis as New Zealand's published exports. They do not reflect revisions to either country's official statistics.

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CONCEPTUAL AND
METHODOLOGICAL DIFFERENCES
continued

Coverage

The most significant coverage difference affecting westbound trade relates to differing treatment of low value records.

In Australia, import entries lodged on informal clearance documents for values not exceeding \$250 per transaction line are excluded. In addition, imported parcel post items valued under \$1,000 are excluded. In New Zealand, merchandise trade statistics generally exclude export shipments valued under \$799 (\$NZ1,000); individual transactions under \$NZ1,000 where the total value of a shipment exceeds \$NZ1,000 are, however, included.

To adjust for this differing treatment, an estimate of Australia's direct imports less than \$799 (\$NZ1,000) in value was applied as a negative adjustment, to exclude its low value trade. The estimate of New Zealand's individual transactions under \$NZ1,000 was then added back as a positive adjustment, to account for its inclusion in New Zealand's figures. The resulting net adjustments made for low value trade in the reconciliation tables were -\$11 million in 1993 and -\$17 million in 1994.

Valuation

In Australian statistics imports are valued on a 'Customs value' basis. Customs value is the FOB transactions value adjusted for any transaction where the Australian Customs Service considers the FOB transactions value to be not a true market value. New Zealand values its exports on an FOB basis.

No adjustment for valuation was made in the reconciliation study. The difference between Australia's import value on an FOB basis and on a Customs value basis in both years was found to be insignificant.

Country classification

In accordance with international recommendations, New Zealand classifies its exports by country of final destination and Australia classifies its imports by country of origin. Classification of exports by country of final destination can be a difficult task as the exporter is sometimes not in a position to know whether the goods are to be further manufactured or otherwise consumed in the country to which they are consigned, or whether they will be traded with yet another country. When the country of final destination is not known at the time of exportation, the exporter declares the country of last shipment (country of consignment) in place of the country of final destination.

In concept at least, export and import statistics will only be symmetrical between trading partners when exports are shipped directly from the country of origin to the country of final destination. Discrepancies occur when third countries are involved, as with re-exports of merchandise and goods traded through intermediate countries.

In the case of westbound trade, the following adjustments were applied to adjust for differences in country attribution principles.

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CONCEPTUAL AND METHODOLOGICAL DIFFERENCES *continued*

New Zealand's re-exports. Goods which are imported by New Zealand and are subsequently re-exported to Australia should be recorded in New Zealand's exports to Australia but not in Australia's imports from New Zealand. Consequently, for data reconciliation purposes, the value of New Zealand's re-exports to Australia needs to be subtracted from New Zealand's export statistics. New Zealand re-exports of Australian and third country merchandise totalled \$180 million in 1993 and \$264 million in 1994. If in fact some of these transactions have been recorded in Australian import statistics as originating in New Zealand, this adjustment may be overstated.

Australia's indirect imports. When Australia imports goods of New Zealand origin from a country other than New Zealand, they will be included in Australian imports from New Zealand, but will generally not be included in New Zealand's exports to Australia. This assumes that the New Zealand exporter is unaware of the subsequent re-trading. However in some instances the New Zealand exporter will be aware of the ultimate destination of the goods and these transactions will be included in New Zealand's exports to Australia. It is impossible to distinguish between these two circumstances.

In the reconciliation, adjustments of -\$9 million in 1993 and -\$8 million in 1994 have been included. This is the value of merchandise of New Zealand origin imported by Australia from third countries. Since some of Australia's indirect imports will undoubtedly be recorded as exports to Australia by New Zealand, this adjustment may somewhat overstate the effect of trade via third countries.

Timing

The timing adjustment accounts for merchandise trade which is likely to have been recorded in different years in the statistics of the exporting and importing countries. It is made up of an adjustment based on the amount of time it takes a shipment to reach Australia (shipping adjustment) and an adjustment for the time taken by the Australian Customs Service to process the import entry (processing adjustment). Adjustments are made for each end of the reference period.

The shipping adjustment was calculated on the assumption that it took, on average, 5 days to ship goods by sea from New Zealand to Australia. Australia's January 1994 statistics included \$14 million of imports which arrived by sea between 1 January and 5 January, while Australia's January 1995 statistics included \$30 million of imports which arrived between 1 January and 5 January. It is assumed that these imports would have been included in New Zealand's 1993 and 1994 exports respectively. Using these figures, the overall shipping adjustment for 1994 was calculated as \$16 million. Similar calculations resulted in a shipping adjustment of -\$9 million for 1993.

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CONCEPTUAL AND METHODOLOGICAL DIFFERENCES *continued*

The second component of the timing adjustment, the processing adjustment, is made to account for goods arriving in Australia outside the year in which they were recorded in Australia's import statistics. This adjustment applies to both sea and air freight and is necessary because Australia's imports are recorded statistically in the calendar month in which the import entries are finalised by Customs, rather than the month of arrival. \$17 million of Australia's imports from New Zealand recorded in January 1994 actually arrived in December 1993 or earlier and were out of scope of the reconciliation. \$12 million of Australia's imports from New Zealand recorded in January 1995 actually arrived in Australia in 1994 and should have been included in the reconciliation. Therefore, the overall processing adjustment for 1994 was -\$5 million. Similarly, the overall processing adjustment for 1993 was -\$9 million.

In aggregate, the total westbound timing adjustments for 1993 and 1994 were -\$18 million and \$11 million respectively.

Other differences

After conceptual adjustments have been made, discrepancies often still exist between each country's data. Comparison of data at the commodity level identified some goods that were included in Australia's import statistics but were omitted from New Zealand's export statistics. Adjustments of -\$12 million in 1993 and -\$8 million in 1994 have been made to account for these.

EASTBOUND TRADE

The adjustments shown in Table B represent the changes needed to transform Australian published exports to the same basis as New Zealand's published imports. They do not reflect revisions to either country's official statistics.

Coverage

The most significant coverage difference known to affect eastbound trade statistics relates to differing treatment of low value records.

In Australia, individual transaction lines within an export consignment where the value of the goods is less than \$A500 are excluded. In addition, exported parcel post items valued under \$2,000 are excluded. In New Zealand, Customs data generally excludes import shipments valued under \$799 (\$NZ1,000); individual transactions under \$NZ1,000 where the total value of a shipment exceeds \$NZ1,000 are, however, included.

To adjust for this differing treatment, an estimate of Australia's direct exports less than \$799 (\$NZ1,000) in value was applied as a negative adjustment, to exclude its low value trade. The estimate of New Zealand's individual transactions under \$NZ1,000 was then added back as a positive adjustment, to account for its inclusion in New Zealand's figures. The resulting net adjustment made for low value trade in the reconciliation tables was \$20 million in 1993 and \$21 million in 1994.

Investigations have indicated that the discrepancy due to any other coverage differences would be minimal.

Valuation

Australia values its exports on an FOB transactions value basis, while New Zealand values its imports on a 'customs value' basis. However, investigations have shown the differences between the two valuation methods to be insignificant.

BILATERAL RECONCILIATION OF STATISTICS, 1993 AND 1994

CONCEPTUAL AND METHODOLOGICAL DIFFERENCES *continued*

Country classification

Australia classifies its exports by country of final destination and New Zealand classifies its imports by country of origin. As noted above, the exporter is not always aware of the country of final destination and in this case the country of last shipment (country of consignment) is reported.

Export and import statistics can be expected to be symmetrical between trading partners only when exports are shipped directly from the country of origin to the country of final destination. Discrepancies occur when third countries are involved, as with re-exports of merchandise and goods traded through intermediate countries.

In the case of eastbound trade, the following adjustments were applied to adjust for differences in country attribution principles.

Australian re-exports. When goods are imported by Australia and are subsequently re-exported to New Zealand, these goods should be recorded in Australia's exports to New Zealand but not in New Zealand's imports from Australia. Consequently, for data reconciliation purposes, the value of Australia's re-exports to New Zealand needs to be subtracted from Australia's export statistics. Australian re-exports of New Zealand and third country merchandise totalled \$694 million in 1993 and \$852 million in 1994. If in fact some of these transactions have been recorded in New Zealand's import statistics as originating in Australia, this adjustment may be overstated. It is also possible that some re-export transactions have not been recorded as such in Australia's export statistics. In this case the adjustment shown may understate the actual value of adjustment needed.

New Zealand's indirect imports. When New Zealand imports goods of Australian origin from a country other than Australia, they will be included in New Zealand's imports from Australia, but will generally not be included in Australia's exports to New Zealand. This assumes that the Australian exporter is unaware of the subsequent movement. However in some instances the Australian exporter will be aware of the ultimate destination of the goods and these transactions will be included in Australia's exports to New Zealand. It is impossible to distinguish between these two circumstances.

In the reconciliation, adjustments of \$21 million for 1993 and \$31 million for 1994 have been included. These are the estimated values of merchandise of Australian origin imported by New Zealand from third countries. The value of Australia's exports to New Zealand via third countries was examined with a view to subtracting these from New Zealand's indirect imports, but the commodity match between this and New Zealand's indirect imports data was not particularly good, so the extra adjustment was not made.

Timing

The timing adjustment accounts for merchandise which is likely to have been recorded in different years in the statistics of the exporting and importing countries. For eastbound trade, it is based on the amount of time it takes a shipment to reach New Zealand. As there is no significant processing lag in the recording of New Zealand's imports, no additional processing adjustments are required. Adjustments are made for each end of the reference period.

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CONCEPTUAL AND METHODOLOGICAL DIFFERENCES *continued*

When calculating the shipping adjustment it was assumed that it took, on average, 5 days to ship goods by sea from Australia to New Zealand. Based on this journey length, an estimate of the value of goods that left Australia by sea after 26 December was calculated, as these goods were likely to have arrived in New Zealand in January of the following year.

Using these assumptions, the value of goods in Australia's 1993 exports that are assumed to be in New Zealand's 1994 imports was calculated as \$17 million and Australia's 1994 exports assumed to be in New Zealand's 1995 imports was \$27 million. The overall eastbound timing adjustments was therefore –\$10 million in 1994. Using similar calculations, the timing adjustment for 1993 was \$2 million.

RESIDUAL DISCREPANCIES WESTBOUND TRADE

The residual discrepancies of -\$49 million in 1993 and -\$60 million in 1994, shown in Table A, represent the difference remaining after the application of the adjustments to westbound trade described above. The residual discrepancies are negative, indicating that the adjusted Australian merchandise imports figures are higher than the published New Zealand merchandise exports figures.

One reason identified for the residual discrepancy is the differing application of rules of origin by Australia and New Zealand when determining whether goods are domestic produce or foreign produce (re-exports). In Australian statistics, a re-export is defined as a good imported into a country and subsequently exported in the same condition or after undergoing minor operations which leave it essentially unchanged, such as shelling, bottling or labelling. If the good is processed to any greater extent, such as the assembly of a computer from imported parts, it is then considered to be the produce of the processing country. New Zealand's definition of domestic produce is stricter than this - the amount of further manufacturing must increase the value of the good by at least 50% before it is classified as a good originating from the processing country. The differing application of rules of origin leads to differences in country attribution which affect the reconciliation results. Several examples in westbound trade have been identified where goods are imported into New Zealand from a third country, undergo significant further manufacturing, although less than 50% value added, and are then exported to Australia. In such an instance, New Zealand identifies the transaction as a re-export, deeming it to originate from the third country. In the reconciliation procedure the transaction is included in the re-exports adjustment which is added to Australia's imports figure, as it is assumed that re-exports are not included in Australia's imports figure. Under Australia's rules of origin, however, the good is regarded as originating from New Zealand and is already included in its imports. The re-exports adjustment (calculated using New Zealand's figures) is thus overstated by this amount. It has not been possible to quantify this overstatement, so no further adjustment has been made for it in the reconciliation process.

Other possible reasons for the residual discrepancy include: valuation differences; additional timing differences; minor coverage differences; and currency conversion practices.

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EASTBOUND TRADE The application of the adjustments to eastbound trade described above have reduced the discrepancies to –\$226 million in 1993 and –\$336 million in 1994.

A large proportion of the relatively high residual discrepancy is likely to be due to problems associated with correct country attribution for goods imported by Australia from third countries and re-exported to New Zealand. This is similar to the problem described above in westbound trade but it is more significant in eastbound trade. Any good which is imported from a third country by Australia, undergoes manufacturing that changes the essential nature of the good, and is then exported to New Zealand, is treated by Australia as an export of domestic produce rather than a re-export. If the value of the good has been increased by less than 50%, however, it is not classified by New Zealand as an import from Australia. In addition, even when by Australian rules the goods are re-exports, they may not be identified as such by the exporter in the documentation supplied to Australian Customs. The re-exports adjustment in the reconciliation is understated by such transactions. Several instances of this problem have been identified, however as with westbound trade it has not been possible to quantify the effect, so no further adjustment has been made.

Other possible reasons for the residual discrepancy include: valuation differences; additional timing differences; minor coverage differences; and currency conversion practices.

CONCLUSION This reconciliation study has demonstrated that a significant part of the ‘asymmetry’ in Australia-New Zealand bilateral merchandise trade data results from the conceptual factors underlying the compilation of the data. As previously indicated, the adjustments presented in the reconciliation do not represent revisions to the official published statistics of either country, nor do they imply, in general, errors in either country's published statistics.

For westbound trade the initial discrepancies were 2.7% and 5.4% of Australia's imports in 1993 and 1994 respectively, and the residual discrepancies are 1.6% and 1.8% respectively. The greatest contributor to the narrowing of the gap was the adjustment for New Zealand's re-exports of goods originating from third countries to Australia.

For eastbound trade in 1993 and 1994, the initial discrepancies were 23.8% and 26.1% respectively of Australia's exports, and the residual discrepancies were 6.1% and 7.7% respectively. The greatest contributor to the narrowing of the gap in each year was the adjustment relating to Australia's re-exports to New Zealand of goods originating from third countries. The residual discrepancies that remain after adjusting for conceptual differences are likely to be largely due to differing treatment of re-export transactions.

A further reconciliation study for the two countries is planned. This study will concentrate on analysing areas where country attribution appears to be a problem. Results will be published in a later issue of this publication.

REFERENCES

ABS, International Trade database

Statistics New Zealand, Overseas Trade database

United Nations, *International Trade Statistics, Concepts and Definitions*, Statistical Papers, Series M, No. 52 Rev. 1

A U S T R A L I A – N E W Z E A L A N D M E R C H A N D I S E T R A D E

BILATERAL RECONCILIATION OF STATISTICS, 1993 AND 1994

TABLE A

AUSTRALIA/NZ MERCHANDISE TRADE RECONCILIATION, Westbound Trade

	1993	1994
	\$A m	\$A m
Australia's published imports	3 035	3 382
Adjustments		
Coverage		
Low value trade	-11	-17
Country classification		
New Zealand's re-exports	180	264
Australia's indirect imports	-9	-8
Timing	-18	11
Other differences	-12	-8
Residual discrepancy	-49	-60
New Zealand's published exports	3 116	3 564

TABLE B

AUSTRALIA/NZ MERCHANDISE TRADE RECONCILIATION, Eastbound Trade

	1993	1994
	\$A m	\$A m
Australia's published exports	3 691	4 390
Adjustments		
Coverage		
Low value trade	20	21
Country classification		
Australia's re-exports	-694	-852
New Zealand's indirect imports	21	31
Timing	2	-10
Residual discrepancy	-226	-336
New Zealand's published imports	2 814	3 244