

BILATERAL MERCHANDISE TRADE STATISTICS RECONCILIATION:
AUSTRALIA AND THE EUROPEAN UNION, 1992 TO 1997

INTRODUCTION

The Australian Bureau of Statistics (ABS) and the Statistical Office of the European Communities (Eurostat) have recently undertaken a bilateral reconciliation study covering merchandise trade flows between Australia and the European Union (EU). The reconciliation exercise was initiated by Eurostat and was carried out for the period 1992 to 1997. The ABS acknowledges Eurostat's significant contribution to this study.

If viewed as a single market, the EU is Australia's largest trading partner for imports and the second largest for exports. In the year ended December 1997 Australia's recorded imports from the EU were valued at \$20.3 billion, which represented 24% of Australia's total imports. The EU country which was the major source of Australia's imports for 1997 was Germany (\$4.7 billion). In the same period, Australia's recorded exports to the EU amounted to \$8.7 billion, accounting for 10% of Australia's total exports. The EU countries which were the main destinations for Australian exports were the United Kingdom and Italy (\$2.4 billion and \$1.6 billion respectively).

From the EU perspective, Australia is much less significant as a trading partner. In 1997, trade with Australia accounted for 2% of total EU exports and 1% of EU imports.

The purpose of this reconciliation was to identify and explain, to the extent possible, any discrepancies existing in the recording of trade flows between Australia and the EU.

DATA SOURCE

Detailed merchandise trade data, based on Customs documentation, were provided to Eurostat by the ABS for all calendar years from 1992 to 1997. These data were compared with data from Comext, the EU trade database.

Data exchanged were at the most detailed commodity level. Both the EU and Australia base their commodity classifications on the international Harmonised System, so at the 6 digit level the data could be expected to be comparable. However, Australia's method of concealing confidential data, which involves removing it from the relevant code and regrouping it in chapter 99, limits comparability at the commodity level.

The EU export data were valued on a 'free on board' (FOB) basis and their import data on a 'cost, insurance and freight' (CIF) basis while Australian data for both exports and imports were valued using an FOB based valuation method.

The currency used in the reconciliation study was United States dollars. Both Australia and the EU converted exports and import values to US dollars on the basis of an average annual exchange rate. The rates used to convert Australian data were \$US1 = \$A1.3616 for 1992, \$US1 = \$A1.4789 for 1993, \$US1 = \$A1.3736 for 1994, \$US1 = \$A1.3554 for 1995, \$US1 = \$A1.2830 for 1996 and \$US1 = \$A1.3479 for 1997. For the purposes of this article, all figures have been reconverted to Australian dollars.

COMPARISON BEFORE
RECONCILIATION

Northbound trade

Table A shows the value of Australian exports to the EU and EU imports from Australia. The value of EU recorded imports exceeded that of Australian recorded exports by at least 10% in all years from 1992 to 1997 except 1993 and 1996. In 1993 the value of Australian recorded exports was 4% higher than the EU recorded imports in 1993, while in 1996 the EU recorded imports were 2% higher than Australian recorded exports.

EU import figures are expected to be significantly higher than Australian export figures since the cost of overseas freight and insurance is included in EU import values but excluded from Australian export values. Data for all years except 1993 and 1996 were broadly in line with this expectation.

COMPARISON BEFORE
RECONCILIATION *continued*

TABLE A: NORTHBOUND TRADE

		1992	1993	1994	1995	1996	1997
Australian exports (FOB)	\$A m	7 711	7 476	7 247	8 007	8 381	8 678
EU imports (CIF)	\$A m	8 721	7 159	7 979	8 813	8 526	9 570
Discrepancy	\$A m	1 010	-316	732	806	145	892
	%	13	-4	10	10	2	10



NORTHBOUND TRADE



Southbound trade

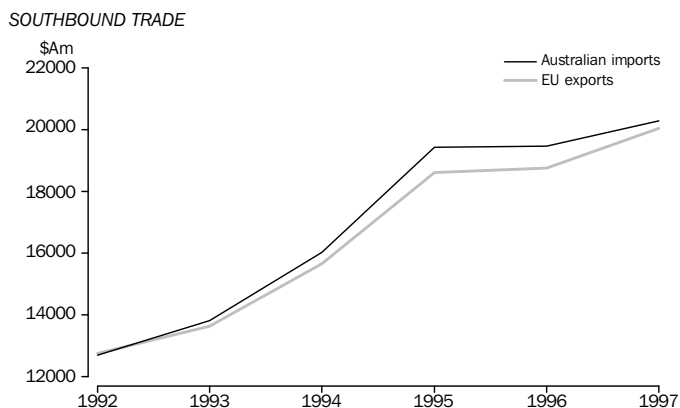
Table B shows the value of Australian imports from the EU and EU exports to Australia. For southbound trade both the EU and Australia use similar valuation methods. The percentage difference between EU exports and Australian imports ranged from close to nil in 1992 to 4% in 1995 and 1996. The stability and small magnitude of this difference suggests that for southbound trade the data are likely to be relatively reliable.

TABLE B: SOUTHBOUND TRADE

		1992	1993	1994	1995	1996	1997
Australian imports (FOB)	\$A m	12 698	13 818	16 026	19 436	19 482	20 291
EU exports (FOB)	\$A m	12 758	13 649	15 671	18 610	18 761	20 039
Discrepancy	\$A m	60	-170	-354	-827	-721	-252
	%	—	-1	-2	-4	-4	-1



COMPARISON BEFORE
RECONCILIATION *continued*



Balance of trade

The balance of trade is shown in Table C. Both the Australian and the EU figures indicate the same trend, a steady increase in the surplus for the EU and the deficit for Australia until 1996, followed by a slight decrease for 1997. The maximum discrepancy amounts to about \$A1.6 billion in 1995.

TABLE C: BALANCE OF TRADE (BOT)

	1992	1993	1994	1995	1996	1997
	\$A m	\$A m	\$A m	\$A m	\$A m	\$A m
Australian BOT with EU	-4 988	-6 343	-8 779	-11 429	-11 102	-11 614
EU BOT with Australia	4 037	6 489	7 692	9 797	10 236	10 469

Summary

In summary, the initial comparison of EU and Australian data indicated that the data line up fairly well, with the exception of 1993 and 1996 northbound data. It was decided therefore to limit the reconciliation work to northbound trade, with the main aim being to understand the underlying reasons for the distortions in the 1993 and 1996 data.

RECONCILIATION METHOD

The reconciliation for northbound trade was carried out by quantifying and adjusting for conceptual and methodological differences in recording and then investigating any major coverage or quality deficiencies in the statistics produced by each agency. Australia's main trading partners within the EU were also consulted by Eurostat to identify potential sources of discrepancies and to investigate particular discrepancies.

CONCEPTUAL AND
METHODOLOGICAL DIFFERENCES

This section outlines possible sources of discrepancies and provides a description of the associated adjustments made. It was not possible to adjust for all the sources of discrepancies listed below. This was partly because of the short time available to complete the exercise, and partly because some data were either not available or could only be collated at high cost.

CONCEPTUAL AND
METHODOLOGICAL DIFFERENCES
continued

For more detailed information on the possible causes of differences between the exports of one country and the imports of the other, 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.

TRADE SYSTEMS

The EU trade data are recorded on a 'special trade' basis, while Australian data are on a 'general trade' basis. The main difference between the two systems relates to the treatment of warehouse trade. When Australia declares an export to a warehouse located in the EU, no import is declared by the EU until the imported goods are released for free circulation or consumption. Discrepancies may therefore occur due to the time lag between warehouse inflows and outflows. In addition, if Australian goods exported to an EU warehouse were re-exported to a non-EU country the related import would never be declared by the EU. No information was available on these transactions, so no adjustment was made. However, the discrepancies arising from the use of differing trade systems are not likely to be significant.

COVERAGE

International trade statistics measure, in principle, all goods that add to (imports) or subtract from (exports) a nation's stock of material resources. In practice both Australia and the EU rely on data collected by national Customs agencies as the primary source of their statistics, and some goods that fall within the scope of merchandise trade are omitted as customs entries are not required.

After comparing the goods excluded from each country's statistics, the following were identified as possible causes of discrepancy in the data on northbound trade.

Low value trade

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 \$A2,000 are excluded. In the EU, the Member States apply a transaction threshold of 800 ECU (approximately \$A1,400) for both exports and imports. However, not all EU traders apply these thresholds; traders who declare their trade electronically often find it simpler to declare all transactions regardless of their value. No adjustments have been made for the differing thresholds as they are likely to have little influence on the overall discrepancies.

Military material

Most military goods are included in Australia's trade statistics, although certain materials under inter-governmental agreements for defence and similar projects are excluded. The EU Member States of France, Greece and Portugal excluded military goods from their trade statistics in the period covered by the reconciliation exercise. Military goods trade is included and supplied to Eurostat by the other 12 EU Member States, however this data cannot be released due to confidentiality restrictions. Trade in military goods was therefore unable to be reconciled, but is not likely to be significant.

Repairs

Australian merchandise trade figures exclude repair trade while the EU includes repair trade. Although nine of the EU Member States can separately identify data on repairs, this information was not available to Eurostat by partner country, so no adjustment was able to be made.

CONCEPTUAL AND
METHODOLOGICAL DIFFERENCES
continued

VALUATION In accordance with international recommendations, Australia values its exports on a 'free on board' (FOB) transactions value basis, while the EU values its imports on a 'cost, insurance and freight' (CIF) basis. As discussed briefly above, the difference between the two valuation methods is significant. The EU does not collect separate information on the freight and insurance component, so this was estimated for the purposes of the reconciliation using annual conversion rates calculated by the German Central Bank. As expected, the resulting valuation adjustments accounted for a large component of the northbound discrepancy. The following table shows the conversion rates used and the adjustments made.

TABLE D: VALUATION ADJUSTMENT

	1992	1993	1994	1995	1996	1997
Conversion rate FOB/CIF	0.917	0.916	0.918	0.916	0.917	0.917
<i>EU imports</i> Adjustment in \$A m	-728	-605	-658	-737	-708	-795

COUNTRY CLASSIFICATION Australia classifies its exports by country of final destination and the EU 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.

Exports and imports 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 northbound trade, the following adjustments were applied to adjust for differences in country attribution principles.

Australia's re-exports

Goods which are imported by Australia and are subsequently re-exported to the EU should be recorded in Australia's exports to the EU but not in the EU's imports from Australia. Consequently, for data reconciliation purposes, the value of Australia's re-exports to the EU needs to be subtracted from Australia's export statistics. These adjustments are shown in the table below. If some of these transactions have been recorded in the EU'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.

CONCEPTUAL AND
METHODOLOGICAL DIFFERENCES
continued

TABLE E: AUSTRALIAN RE-EXPORTS ADJUSTMENT

<i>Australian exports</i>	1992	1993	1994	1995	1996	1997
Adjustment in \$A m	-400	-417	-327	-451	-394	-333

EU indirect imports

When the EU imports goods of Australian origin from a country other than Australia, they will be included in the EU's imports from Australia, but will generally not be included in Australia's exports to the EU. 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 the EU. It is impossible to distinguish between these two circumstances.

In the reconciliation the EU indirect import adjustment which is shown in the table below has been calculated based on data provided by France, the Netherlands, Germany, Italy and the United Kingdom. These trading partners together account for approximately 80% of total EU imports from Australia. While the indirect imports of the remaining EU member states are excluded, this understatement of the adjustment is offset, at least to some degree, by the fact that some of the EU indirect imports would undoubtedly be already included in Australian exports to the EU.

TABLE F: EU INDIRECT IMPORTS ADJUSTMENT

<i>Australian exports</i>	1992	1993	1994	1995	1996	1997
Adjustment in \$A m	101	133	120	137	242	185

The large increase in indirect imports in 1996 was mainly due to indirect imports declared by Italy. Most of the increase relates to non-monetary gold imported from Australia by Italy via Switzerland. In Australian statistics, this gold was shown as having been exported to Switzerland.

EU re-imports

Re-imports are goods originally exported which are imported to the originating country in either the same condition in which they were exported or after undergoing repair or minor operations which leave them essentially unchanged.

Goods of EU origin that have been re-imported into the EU from Australia are included in EU imports from Australia. In Australian statistics these goods would be recorded as re-exports to the EU, and would have been removed from the reconciliation as part of the re-export adjustment. A further adjustment is therefore necessary to ensure treatment of these transactions is comparable. The EU re-imports adjustments, which are presented below, were calculated using data from France, the Netherlands, Germany, Italy and the United Kingdom.

CONCEPTUAL AND
METHODOLOGICAL DIFFERENCES
continued

TABLE G: EU RE-IMPORTS ADJUSTMENT

<i>Australian exports</i>	1992	1993	1994	1995	1996	1997
Adjustment in \$A m	215	195	240	245	275	315

Rotterdam effect

EU imports from third countries are attributed to the EU Member State where the goods are released for free circulation or consumption.

When Australia exports goods to the EU, the declared country of final destination may in some cases not coincide with the country where these goods are released for free circulation. Such cases result in discrepancies between Australia and the specific EU Member States involved. Eurostat noted that in the Australian statistics, exports to the EU are often attributed to the Member State where the port of discharge is located, rather than the Member State of final destination. This particular mismatch is referred to 'the Rotterdam effect' because of the importance of Rotterdam as a transit port. Such flows have a significant impact on the mirror results between Australia and the individual EU Member States but not between Australia and the EU as a whole.

TIMING The issue of timing can impact on the comparability of trade statistics. Given the geographic distance between Australia and the European Union, there is a time lag between when a shipment departs from Australia and when it arrives in an EU Member State. This time lag for sea cargo is approximately 31 days, which means that a shipment departing by sea from Australia in December would be recorded in different calendar years by Australia and the EU. In addition, the time necessary to establish the Customs declaration could increase this delay and in some cases the time lag could be about two months. In the reconciliation, the timing adjustment has been calculated by reassigning the portion of monthly EU trade shipped by sea from Australia to the previous calendar month (goods transported by sea account for 65% to 80% of total annual trade over the period from 1992 to 1997).

TABLE H: TIMING ADJUSTMENT

<i>EU imports</i>	1992	1993	1994	1995	1996	1997
Adjustment in \$A m	-93	25	81	54	62	23

EXCHANGE RATE The conversion of reported data to a common currency by using an annual exchange rate can contribute to data discrepancies. Use of monthly rates should provide more accurate results. Adjustments for this were calculated by converting total monthly EU imports and Australian exports to US dollars using monthly rates and comparing the resulting annual totals with the reconciliation data which had been converted using annual rates. The adjustments applied were minor.

CONCEPTUAL AND
METHODOLOGICAL DIFFERENCES
continued

TABLE I: EXCHANGE RATE ADJUSTMENT

	1992	1993	1994	1995	1996	1997
<i>Australian exports</i>						
Adjustment in \$A m	-25	-4	7	-1	1	-28
<i>EU imports</i>						
Adjustment in \$A m	-41	13	-7	—	-6	-15

DOMESTIC TERRITORY DEFINITION

In carrying out a reconciliation study it is important to compare the definition of each partner territory.

Both Australia and the EU use the same definition for the Australian domestic territory in their trade statistics. However, differences exist in the definition of EU territory by Australia and the EU. Australia attributes trade with Andorra to France, with Greenland and Faeroe Islands to Denmark, and with San Marino and Vatican City to Italy. These territories are not, however, included in the EU statistical territory. In addition, the Canary Islands are considered by Australia to be part of Spain, whereas the EU has only included these islands since 1997. The EU has also included the French Overseas Departments (Reunion, Guadeloupe, Martinique and French Guyana) as part of the EU territory since 1997, but these are not included by Australia as part of France. The differences caused by the minor variations in definition of the EU are assumed to be negligible.

OTHER DIFFERENCES

Comparison of data at the commodity level identified discrepancies in ships and in non-monetary gold.

Ships and ferries

The reconciliation exercise highlighted several discrepancies in the recording of trade in ships and ferries. In 1992 the United Kingdom declared imports of ships from Australia valued at \$A105 million, while Australian exports under this code only amounted to \$A25 million. According to the information provided by the United Kingdom, these vessels have been declared by UK Customs. It may be the case that some of these did not cross the Australian frontier and as such were not all recorded in Australian exports.

TABLE J: SHIPS ADJUSTMENT—AUSTRALIA

	1992	1993	1994	1995	1996	1997
<i>Australian exports</i>						
Adjustment in \$A m	80	—	—	—	—	—

There are also a number of cases of Australian exports of ferries which were not registered in the EU statistics. In 1996 Australia recorded exports of four ferries to the United Kingdom and one to Germany which were not recorded in EU imports. The EU records an import of a ship only if it is purchased by a resident from a non-resident. It is quite possible that although these vessels are operating within the EU they are owned by foreign companies. Adjustments have been made to account for these ferries.

CONCEPTUAL AND
METHODOLOGICAL DIFFERENCES
continued

TABLE K: SHIPS ADJUSTMENT–EU

<i>EU imports</i>	1992	1993	1994	1995	1996	1997
Adjustment in \$A m	—	—	—	—	236	—

Non-monetary gold

In accordance with UN recommendations, both Australia and the EU include trade in non-monetary gold in their statistics. However, Australian exports of non-monetary gold in unwrought and semi-manufactured forms to the United Kingdom were significantly higher than the United Kingdom's imports from Australia over the studied period. Based on an investigation conducted by Eurostat, this trade appears to be non-monetary gold. Consequently, an adjustment has been made to EU imports for the difference between Australian exports and the United Kingdom's imports of this gold.

TABLE L: GOLD ADJUSTMENT

<i>EU imports</i>	1992	1993	1994	1995	1996	1997
Adjustment in \$A m	63	484	126	–4	119	—

COMPARISON AFTER
RECONCILIATION

The results of the reconciliation study are shown in the tables below. All the adjustments to northbound trade discussed above have been applied to either the Australian export values (Table M) or the EU import values (Table N). It should be noted however that the adjustments do not represent revisions to previously published statistics. In most cases they merely reflect the conceptual and methodological differences underlying the compilation of the data.

TABLE M: AUSTRALIAN EXPORTS

	1992	1993	1994	1995	1996	1997
	\$A m	\$A m	\$A m	\$A m	\$A m	\$A m
Australian exports	7 711	7 476	7 247	8 007	8 381	8 678
Adjustments						
Country classification						
Australian re-exports	–400	–417	–327	–451	–394	–333
EU indirect imports	101	133	120	137	242	185
EU re-imports	215	195	240	245	275	315
Exchange rate	–25	–4	7	–1	1	–28
Ships	80	—	—	—	—	—
Adjusted Australian exports	7 682	7 383	7 286	7 937	8 504	8 815

COMPARISON AFTER
RECONCILIATION *continued*

TABLE N: EU IMPORTS

	1992	1993	1994	1995	1996	1997
	\$A m	\$A m	\$A m	\$A m	\$A m	\$A m
EU imports	8 721	7 159	7 979	8 813	8 526	9 570
Adjustments						
Valuation	-728	-605	-658	-737	-708	-795
Timing	-93	25	81	54	62	23
Exchange rate	-41	13	-7	—	-6	-15
Ships	—	—	—	—	236	—
Non monetary gold	63	484	126	-4	119	—
Adjusted EU imports	7 922	7 077	7 520	8 124	8 228	8 782

For each of the years studied, the CIF/FOB adjustment on EU imports was the most significant adjustment, accounting for approximately 8% of the total value of EU imports.

The residual discrepancy for northbound trade is shown in Table O—this is the discrepancy that remains between the two sets of figures after all the conceptual and other adjustments have been made. For the years 1992, 1994, 1995 and 1997 the residual discrepancies are significantly lower than the initial discrepancies shown in Table A. For 1993 there is no change in the residual discrepancy and for 1996 the residual discrepancy is -3%, compared with an initial discrepancy of +2%.

TABLE O: NORTHBOUND TRADE, After Reconciliation

		1992	1993	1994	1995	1996	1997
Adjusted Australian exports	\$A m	7 682	7 383	7 286	7 937	8 504	8 815
Adjusted EU imports	\$A m	7 922	7 077	7 520	8 124	8 228	8 782
Discrepancy	\$A m	240	-306	235	187	-276	-34
	%	3	-4	3	2	-3	—

COMPARISON AFTER RECONCILIATION *continued*

NORTHBOUND TRADE, After Reconciliation

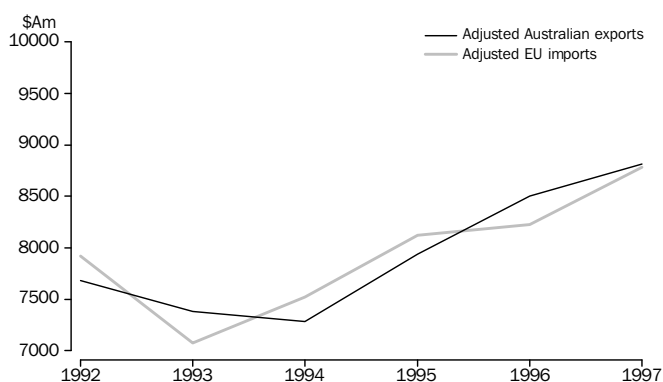


Table P shows the balance of trade after making the adjustments to the northbound data. The effect of the reconciliation on the trade balances was relatively small. After reconciliation, the maximum discrepancy is \$A1.0 billion, in 1995. Readers should note that there has been no investigation into discrepancies in recorded southbound trade, because they were relatively minor. However, such investigations may have resulted in smaller balance of trade discrepancies.

TABLE P: BALANCE OF TRADE (BOT)

	1992	1993	1994	1995	1996	1997
	\$A m	\$A m	\$A m	\$A m	\$A m	\$A m
Adjusted Australian BOT with EU	-5 016	-6 436	-8 740	-11 499	-10 979	-11 476
Adjusted EU BOT with Australia	4 836	6 572	8 151	10 485	10 533	11 258

CONCLUSION

The reconciliation study has demonstrated that a significant part of the 'asymmetry' in the EU-Australia 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 trading partner, nor do they imply in general, errors in either partner's published statistics.

For southbound trade, the initial discrepancies were stable and small in magnitude. Reconciliation work therefore concentrated on northbound trade where the initial discrepancy ranged from -4 to +13% of Australian exports. After adjustments the residual discrepancy ranged from -4 to +3% of Australia's exports. The greatest contributor to the narrowing of the gap was the adjustment relating to insurance and freight, which are included in published EU imports statistics, but not in Australian exports. The other major contributing factor for calendar years 1993 and 1996 were several adjustments made to account for transactions which had not been included in the EU statistics.

CONCLUSION *continued*

The small magnitude of the residual discrepancy encourages a reasonable level of confidence in the accuracy of Australian and EU data, at least at the aggregate level. At detailed levels it is more difficult to make comparisons. This is partly because of Australia's treatment of confidential data which can affect comparability at all levels of the commodity classification; and partly because of the Rotterdam effect which makes it difficult to compare Australian and EU data by EU Member State.

Further reconciliation studies with the EU are not planned at this stage. However, more targeted reconciliation studies may be considered based on specific user requests.

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