



REBUILD OF THE OVERSEAS ARRIVALS AND DEPARTURES SYSTEM FACTSHEET

The ABS has undertaken a rebuild of its Overseas Arrivals and Departures (OAD) system. The primary aim of this project was to improve the quality of OAD data, given its importance as an input to a broad range of statistical collections.

Why rebuild the OAD system?

OAD data is a key economic indicator, providing important information on cross-border movements. The data feeds into a number of important collections at the ABS including International Trade; National Income & Consumption; International Accounts and the Tourism Satellite Account. It is also a major input for estimating Net Overseas Migration (NOM) and therefore the Estimated Resident Population (ERP).

The data is also used extensively by other government departments, such as the Department of Immigration and Border Protection, and by business, particularly within the tourism industry.

The OAD system had not been reviewed in over 10 years and some assumptions and methodologies were in need of updating. The focus of the rebuild has been on improving the quality of OAD data through an enhanced processing methodology, with a particular emphasis on introducing more robust imputations for missing traveller data.

Improved imputations

Through the process of the rebuild, all derivations, logical edits and imputations have been re-designed based on the best information, practices and methodology available at the time. All imputations within the new OAD system now use a hot deck imputation method. There are a number of imputations undertaken that specifically improve the quality of variables. These include country of stay, duration of stay, initial category of travel, passenger card box type, reason for journey and a specific one for the country of birth of New Zealand (NZ) citizens.

The specific imputation for country of birth of NZ citizens has improved country of birth statistics in the OAD, NOM, and ERP by country of birth collections. It has been introduced in the OAD collection for the first time with the release of the January 2014 OAD data and has been revised back to July 2004; for the NOM collection and the Travellers' Characteristics Database it has been revised back to December quarter 2003, and for the ERP collection by country of birth it has been revised back to 2006.

What data has changed?

Nearly all of the data have changed to some degree. The main variables that have changed due to the improved imputations include:

- Country of Birth - particularly for NZ citizens,
- Country of Embarkation/Disembarkation,
- Country of Stay/Residence,
- Reason for Journey,
- State of Stay/Residence, and
- Duration of Stay - the main categories of travel that have changed are:
 - Long-Term Visitor Arrivals (LTVA) - average increase 24%;
 - Long-Term Resident Departures (LTRD) - average increase 11%;
 - Short-Term Visitor Arrivals (STVA) - average decrease 1.3%; and
 - Short-Term Resident Departures (STRD) - average decrease 0.1%.

Table 1, Comparing versions of OAD data over time: Arrivals, Australia - 2005 to 2013

Category of movement	STVA (a) old (c)	STVA (a) new (d)	Diff btw STVA old & new	LTVA (b) old (c)	LTVA (b) new (c)	Diff btw LTVA old & new	Total arrivals old (c) (e)	Total arrivals new (d) (e)	Diff btw Total arrivals old & new
Year	'000	'000	'000	'000	'000	'000	'000	'000	'000
2005	5 499	5 463	-36	210	246	36	10 666	10 666	0
2006	5 532	5 493	-39	239	278	39	10 910	10 911	0
2007	5 644	5 589	-55	286	341	55	11 584	11 584	0
2008	5 586	5 512	-74	359	432	74	12 031	12 031	0
2009	5 584	5 490	-94	377	471	94	12 430	12 431	0
2010	5 885	5 790	-95	341	435	95	13 503	13 504	0
2011	5 875	5 771	-104	362	466	104	14 222	14 222	0
2012	6 146	6 032	-113	394	508	113	14 958	14 958	0
2013	6 482	6 381	-102	404	506	102	15 826	15 826	0

(a) Short-term visitor arrivals.

(b) Long-term visitor arrivals.

(c) OAD data published prior to the introduction of improved methodology with the rebuild of the OAD system released in January 2014.

(d) OAD data based on the improved methodology with the rebuild of the OAD system released in January 2014 and revised back to July 2004.

(e) Total number of movements may vary slightly between old and new methodology due to the difference caused by weighting.

Table 2, Comparing versions of OAD data over time: Departures, Australia - 2005 to 2013

Category of movement	STRD (a) old (c)	STRD (a) new (d)	Diff btw STRD old & new	LTRD (b) old (c)	LTRD (b) new (d)	Diff btw LTRD old & new	Total departures old (c) (e)	Total departures new (d) (e)	Diff btw Total departures old & new
Year	'000	'000	'000	'000	'000	'000	'000	'000	'000
2005	4 756	4 746	-10	94	104	10	10 540	10 540	0
2006	4 941	4 932	-8	101	110	9	10 744	10 744	0
2007	5 462	5 454	-8	102	111	9	11 456	11 456	0
2008	5 808	5 799	-9	100	110	10	11 740	11 740	0
2009	6 285	6 276	-9	76	85	9	12 271	12 271	0
2010	7 112	7 103	-8	86	95	8	13 459	13 459	0
2011	7 795	7 788	-7	69	77	7	14 124	14 124	0
2012	8 220	8 212	-8	69	77	8	14 794	14 794	0
2013	8 776	8 768	-8	62	71	8	15 702	15 702	0

(a) Short-term resident departures.

(b) Long-term resident departures.

(c) OAD data published prior to the introduction of improved methodology with the rebuild of the OAD system released in January 2014.

(d) OAD data based on the improved methodology with the rebuild of the OAD system released in January 2014 and revised back to July 2004.

(e) Total number of movements may vary slightly between old and new methodology due to the difference caused by weighting.

Update to country classification

Since October 2013 onwards, an excel spreadsheet outlining the country classification to be used with the improved OAD data has been available from the *Data Cubes* section under the [Downloads](#) tab. This country classification is based on the latest version of the Australian Standard Classification of Countries (SACC) 2011 Version 2.2 and has been introduced from 11 March 2014 onwards.

Has there been a break in series?

Yes, there has been a break in series from July 2004. With the rebuild of the OAD system all OAD data have been revised back to July 2004 based on the improved methodology.

When were the changes published?

The improved OAD data was made available from the reference month of January 2014 in [Overseas Arrivals and Departures—Australia, January 2014](#) (cat. no. 3401.0), released on 11 March 2014.

A revised time series based on the improved methodology replaced all existing data for the reference period July 2004 to December 2013. Access to the previous time series remains available in [Overseas Arrivals and Departures—Australia, December 2013](#) (cat. No. 3401.0).

Has this affected other ABS data?

Yes. All data that uses OAD data as a major input to their collection has been affected to some degree. Each area of the ABS, International Trade; National Income & Consumption; International Accounts and the Tourism Satellite Account provided their own additional information prior to the March 2014 OAD release.

Has this affected the NOM time series?

Yes. The data from the rebuilt OAD system has already been used to produce final NOM from September quarter 2006 onwards which has already been released in [Australian Demographic Statistics, December Quarter 2012](#) (cat. no 3101.0). It made minimal change to the final NOM estimate, with analysis of the change included on page 22 of the same publication.

It has also affected preliminary NOM. The testing undertaken to date showed an improvement in accuracy for estimating preliminary NOM. Preliminary NOM data based on the improved OAD data became available from June Quarter 2013, in [Australian Demographic Statistics, June Quarter 2013](#) (cat. no 3101.0) released on 17 December 2013.

An [Information Paper: Further Improvements to Net Overseas Migration Estimation, Dec 2013](#) (cat. no. 3412.0.55.002) was also released on 17 December 2013.

Has this affected the Labour Force time series?

The impact on the Final NOM time series data is only marginal (i.e. generally less than 30 people), which in turn results in a similarly negligible impact on revisions to population estimates used to produce Labour Force Survey benchmarks. However, due to the rebuild there have been some small improvements to preliminary NOM estimates, which in turn results in small improvements to the quality of Labour Force Survey benchmarks. Historical Labour Force data will not be specifically revised as final NOM was not affected prior to 2011 and the small improvements after this time will be reflected in the regular rebenchmarking processes noted in 'Rebenchmarking in Labour Force Series' in [Labour Force, Australia, Nov 2012](#) (cat. no. 6202.0).

Where do I look for more information?

Information on the improved methodology, particularly on the enhanced imputations, is available with the release of [Overseas Arrivals and Departures—Australia, January 2014](#) (cat. no. 3401.0) release on 11 March 2014.