

Collecting statistical information at Australia's borders

Australia Overseas Arrivals and Departures statistics are compiled from information entered on incoming and outgoing passenger cards, visa and other information available to the Department of Immigration and Multicultural and Indigenous Affairs (DIMIA).

Overseas Arrivals and Departures statistics are derived from a combination of full enumeration and sampling. All permanent movements and all movements with a duration of stay of one year or more are fully enumerated (i.e. every movement within the category is recorded); those movements with a duration of stay of less than one year (tourist movements) are sampled (i.e. only a specific proportion of movements within the category is recorded). Statistics relating to these movements are therefore estimates which may differ from statistics which would have been obtained if details of all these movements had been processed.

Statistics on Overseas Arrivals and Departures relate to the number of movements of travellers rather than the number of travellers (i.e. the multiple movements of individual persons during a given reference period are all counted).

SAMPLING METHODS

The Australian Bureau of Statistics (ABS) supplies the Department of Immigration, Multicultural and Indigenous Affairs (DIMIA) with the skips required to select an appropriate sample.

The proportion sampled is based on the traveller's country of citizenship and reflects the number of movements for each citizenship group. Statistics relating to these movements are therefore estimates which may differ from statistics that would have been obtained if the movements had been fully enumerated. Estimates which are subject to high sampling variability are annotated.

Since January 1997 variable sample skips have been used in the selection of records to be sampled (3.5% of all short-term movements are selected for sampling). Separate skips are applied for each country of citizenship, and the skips may vary for each processing month.

CORRECTIONS AND IMPUTATIONS

The imprecision due to sampling errors should not be confused with errors arising from imperfections in reporting, which may occur in any data collection, whether sampled or not. Every effort is made to minimise such errors, both through careful design of the passenger cards and through checks on the information once it is received.

During the edit process some items are corrected where they conflict with other known information. Non-response and missing replies to certain items such as age, state and country of stay/residence are also imputed by reference to other related items. Information on non-response rates and data imputation appears in the Appendix linked to the Main Features of this issue.

Errors of this kind differ from discrepancies arising from the fact that certain information reflects the travellers' intentions at the time the passenger cards were completed. These intentions are, of course, subject to change. Particularly affected is the distinction between permanent and temporary movement and, in the latter case, length of intended stay, country in which most time will be spent and main reason for journey.

DATA VALIDATION

DIMIA has a visa processing system which is linked to its movements (border crossings) processing system. The passenger card data is matched to the movement record which includes visa information for all visaed movements (i.e. non-residents).

The data validation takes place at the matching stage where the passenger card data may be edited in cases where it conflicts with visa information. The variables affected are box type and duration of stay.

(I.e. A non-resident departing Australia ticks on the passenger card box A: "visitor or temporary entrant departing", for these people, "duration of stay" is taken not from the passenger card, but from the actual duration implied from the previous border crossing by the movements system)

More information on the data source and sampling methodology used by Australia for overseas arrivals and departures statistics is available in the ABS publication 'Overseas Arrivals and Departures', Catalogue No. 3401.0.