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EXPERIMENTAL ESTIMATES OF FREIGHT MOVEMENTS, AUSTRALIA, DECEMBER QUARTER 1994

Introduction

This is the second publication providing estimates from the Freight Movements Survey (FMS) of Australia. For more details on the background and development of the survey, refer to *Information Paper - Freight Movements, Australia* (9218.0) which is available on request. The Freight Movements Survey replaces the Interstate Freight Movement Survey which ceased in the June quarter 1994.

The statistics are compiled on the basis of data collected from transport operators and other private and government-owned organisations involved in moving freight in Australia.

Cautionary notes

The ABS has been conducting the quarterly survey of freight movements since the June quarter 1994. The estimates presented in this release are regarded as experimental at this stage and should be used with caution. For more information, refer to the comments below and the section, Reliability of estimates, on page 4.

As the ABS collected information on individual movements rather than consignments, freight movements which involved more than one operator or mode could have been counted more than once (see Scope of the survey, on page 3).

At this stage, estimates have not been weighted to provide an indication of tonnes moved by distance. Data on a tonne-kilometre basis will be considered for future issues.

Care should be used in interpreting quarterly changes as freight movements can be influenced by seasonal fluctuations. As this is a new survey, the extent of seasonality in the series is unknown.

Care should also be taken in comparing data for the different transport modes as scope and coverage differences affect the estimates for each mode. In particular, road freight information collected was limited to freight carried by vehicles over 3.5 tonnes and excluded freight moved within urban areas or over distances of less than 25 kilometres in rural areas. The road freight movements excluded are thought to represent a large portion of all road freight moved in Australia. Urban movements were also excluded for rail but, in contrast to road freight, are expected to constitute a relatively small proportion of the freight moved by that mode (see the paragraph under Road in the section on scope, below).

Road operators with relatively simple information systems were asked to provide information for a specified two week period in the middle of the quarter. That

INQUIRIES

- for further information about statistics in this publication and the availability of related unpublished statistics, contact Sharyn Marken on (07) 3222 6190 or any ABS office.
 - for information about other ABS statistics, please refer to the back page of this publication.
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information was then expanded to produce quarterly estimates. In other situations, respondents with large numbers of movements were asked to provide information relating to a sample of those movements and the results were also expanded. Where sophisticated information systems existed, total movement information was often provided for the whole quarter.

As a result, error could have been introduced due to:

- the sub-quarterly reporting period used by most road freight respondents (see Road in the section on scope, below); and
- sampling of records by those respondents who were asked to report in respect of a specified sub-sample of their movement records (see Road in the section on scope below)

Further error could have resulted from:

- any inaccuracies in the sample framework affecting road freight movement estimates (see Road in the section on coverage below);
- non-response affecting the estimates for road freight movements (see Reliability of estimates below); and,
- respondent errors and omissions. For instance, where incomplete information was provided, the ABS estimated for missing data using previous information and/or conversion factors (see Reliability of estimates, below).

The estimates are also subject to sampling error. Where the sampling error associated with a particular estimate is large, this is indicated by an asterisk beside the figure (see Reliability of estimates, below, for a fuller explanation).

It is expected that total error will reduce as procedures and frameworks improve, respondents become more familiar with the survey and response rates increase.

The estimates in this release may be revised as results from successive surveys become available for analysis.

The ABS is very interested in feedback from users of these statistics. Users are invited to provide comments to the ABS on any aspect of this release, including particular estimates contained within it.

Survey findings

Estimates from the survey indicate that total freight moved in Australia rose 13.1 per cent between September and December quarters 1994 (from 178.5 million tonnes to 201.8 million tonnes). However, the proportions of freight carried by rail, road and sea were similar in both quarters, with rail at 61.0 per cent and 61.2 per cent, road at 32.0 per cent and 32.2 per cent and sea at 7.0 per cent and 6.5 per cent for the September and December quarters, respectively.

Major commodities moved by rail in the December quarter 1994 were coal, coke and briquettes at 50.9 million tonnes, metalliferous ores at 44.7 million tonnes and vegetables and fruit at 10.9 million tonnes of which sugar cane was a large proportion.

Stone, sand and gravel, at 6.3 million tonnes, was the major identifiable commodity moved by road in the December quarter. Other foodstuffs, wood products, petroleum products, cereal grains and live animals were also significant in the December quarter. General freight (unspecified) and other freight (miscellaneous materials and manufactured goods) comprised a large proportion of total freight moved.

For sea, the three major commodities moved in December quarter 1994 were metalliferous ores and metal scrap (5.7 million tonnes), petroleum products, motor spirit and other light oils (3.1 million tonnes) and other freight (1.1 million tonnes).

Of the total measured freight moved in Australia by rail, intrastate movements accounted for 97.7 per cent in the December quarter 1994. For road, intrastate movements were 80.2 per cent of the total in the December quarter.

Information sought

Respondents were asked to supply information on type and quantity of goods or materials moved and to specify the origin and destination of those goods and materials. Information was also obtained on whether the commodity was moved in bulk, was dangerous, containerised or refrigerated.

Scope of the survey

The statistics in this publication relate to freight movements by all industries and sectors of the Australian economy whether carried by transport (hire and reward) operators or moved by ancillary operators (i.e. manufacturers, retailers, wholesalers, etc. moving goods on their own account). Freight moved by vehicles belonging to the defence forces and by pipeline are excluded from the survey.

Movements made under prime contract or own account arrangements were reported. In order to avoid double counting, freight moved under subcontract arrangements was excluded as it is covered under the prime contract.

Movements involving more than one mode of transportation were recorded as separate movements. For example, freight moved from Sydney to Hobart by road and sea was recorded as 'road' from Sydney to Melbourne, 'sea' from Melbourne to Devonport and 'road' from Devonport to Hobart. Freight moved interstate by rail which involved two rail authorities was recorded as two separate movements. For example, a consignment moved from Melbourne to Townsville was recorded as one movement from Melbourne to Brisbane and a separate movement from Brisbane to Townsville.

Road

The survey covers the freight movements undertaken by businesses which are the registered owners of:

- commercial rigid or articulated trucks, with gross vehicle/combination mass of 3.5 tonnes or more; or
- trailers forming part of an articulated truck combination.

All movements within urban areas or those of less than 25 kilometres in rural areas, except those that cross State or urban boundaries, were excluded from the survey. Freight movements involving tools of trade were also excluded.

As a minimum requirement, respondents were asked to provide information on the movements of freight for a specified two-week period in the middle of the quarter. Information for longer periods up to three months was obtained from some operators.

Additionally, some respondents were asked to provide information for a sample of movements within the reporting period. Where necessary, the data were expanded to represent freight movements for the quarter.

Rail, sea and air

Excluding freight carried solely within urban areas, all rail, sea and air movements within Australia and its Territories for public and private organisations were included. International freight moving into or out of Australia or in transit was excluded.

Coverage of the survey

Road

The registers of motor vehicle registration authorities at 30 June 1993 were used to identify the registered owners of commercial rigid and articulated trucks or trailers forming part of an articulated truck combination.

The resulting population (approximately 340,000 organisations) was divided into four strata depending on how many trucks/trailers were registered to that

organisation: 1 to 2 trucks/trailers = Stratum 1; 3 to 9 trucks/trailers = Stratum 2; 10 to 19 trucks/trailers = Stratum 3; 20 or more trucks/trailers = Stratum 4. For the survey, a simple random sample of organisations was selected from strata 1 to 3, while all organisations in Stratum 4 were approached. In total, 4,400 organisations were included in the data collection phase of the survey.

Rail, sea and air

For rail, sea and air, all public authority and private business operators were included.

Definitions

A *prime contract* is an agreement to move freight, made between the original consignor of the freight and the transporter.

Own account freight is that owned and transported by the same legal entity.

Freight includes all goods and materials transported except tools of trade and freight moved by vehicles of the defence forces and by pipeline.

Bulk goods are those moved in an unpackaged or loose form, e.g. stone, sand, gravel, petroleum.

Containerised goods are those transported in a shipping container, e.g. a 20-foot equivalent unit (TEU).

Dangerous goods are those classified as dangerous or hazardous according to the *Australian Code for the Transport of Dangerous Goods by Road and Rail* (fifth edition).

Refrigerated goods are those requiring insulation, chilling or freezing during transportation.

Commodities are classified according to the 1 to 3-digit level codes of the *Australian Transport Freight Commodity Classification* (ATFCC) and *Australian Pack Classification* (APC). Information is aggregated and available for 32 broad commodity descriptions. See Table 2 for commodity descriptions. For air freight, only broad commodity descriptions are available.

Origin and *destination* represent the points at which the goods were picked up and to which they were delivered in accordance with the prime contract. This information was coded to statistical subdivision level. In this publication only statistical division level is shown.

Quantity. The unit of measurement is tonnes. Appropriate conversions were applied to data that are supplied as litres, cubic metres, etc.

Mode identifies whether the movement was by road, rail, sea or air.

Reliability of estimates

As with any new survey, some data collection problems were encountered, particularly in the road freight area. Below is a brief account of some of the issues that arose together with the solutions adopted.

- Some companies recorded freight movements on the basis of regional zones and could not identify specific origins and destinations. In cases of large movements of a specific commodity, the company was usually able to supply sufficient information to code the relevant origin and destination. Where parcel or general freight was involved, the movement was split between the major statistical subdivisions based on population distribution or other relevant information provided by the company.
- Some companies provided only the dollar value of goods transported as no measure of weight was available from their information systems. Average prices of these goods were used to estimate the weight in tonnes.

- Some companies made many deliveries along a route and could not provide all the relevant details of the tonnage involved, drop-off points, etc. Discussions with respondents usually elicited sufficient information to estimate these movements. Where this was not satisfactory, an average weight of the freight was recorded between the origin and final destination.
- As names and addresses of survey respondents were obtained from the State motor vehicle registration authorities in 1993, company closures, take-overs and postal address changes, etc. led to difficulties in contacting some organisations. This contributed to the non-response and had an effect on the survey estimates. Where no previous information was available on which to base estimates for these companies, imputed values were not included for these units.

Since the estimates for road freight are based on data obtained from a sample rather than a complete enumeration, the data are subject to sampling variability; that is, they may differ from the figures that would have been obtained if all units had been included. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample of units was included. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all units had been included, and about 19 chances in 20 that the difference will be less than two standard errors.

Another measure of sampling variability is the relative standard error (RSE) which is obtained by expressing the standard error as a percentage of the estimate to which it refers. The relative standard error is a useful measure in that it provides an indication of the percentage errors likely to have occurred due to sampling. The accuracy of the estimates of different magnitude can be readily compared using the relative standard error.

As an example of the above, in Table 1 the estimate of total road freight in the June quarter 1994 is 68,192,000 tonnes. The RSE for this estimate is 5.9 per cent i.e. 4,023,328 tonnes. That is, there are about 2 chances in 3 that the value which would have been obtained from a complete enumeration would have been a figure in the range 64,168,672 tonnes to 72,215,328 tonnes and about 19 chances in 20 that it would have been in the range 60,145,344 tonnes to 76,238,656 tonnes.

In this publication, only estimates with relative standard errors of less than 25 per cent are considered sufficiently reliable for most purposes. Data items with a relative standard error from 25 per cent to 49.9 per cent are preceded by a single asterisk (*) while those with a relative standard error of 50 per cent or more are not available for publication. Relative standard errors for estimates contained in the tables are available from the ABS.

Sampling error is not the only type of inaccuracy which affects the quality of the data. Other types of error, referred to as non-sampling error, can be present in any type of collection, whether it be a complete enumeration or a sample survey. For example, non-sampling error can occur because of the inability to identify all freight movers in Australia, non-response to the survey, imperfections in reporting by respondents, definition or classification difficulties, or errors in transcribing and processing the data. While the effects of non-sampling error are not quantifiable, every effort is made to minimise the effect through the design and testing of questionnaires and the use of efficient operating procedures which are continually reviewed.

As the size of standard errors associated with some estimates is very large and the effect of non-sampling error on all estimates is unknown, it is important for users to consider whether the estimates from the survey are reliable enough for their purposes. Users should contact the ABS if they have any queries on the reliability of estimates for particular purposes.

Australian Standard Geographical Classification

Statistics from the survey are classified according to the *Australian Standard Geographical Classification* (ASGC), Edition 2.4. This classification incorporates a number of hierarchic structures of geographic areas. The appropriate spatial units of the main structure of the ASGC used in the survey are defined as follows.

Statistical Subdivisions (SSDs) consist of one or more legal local government areas (LGAs) or suburbs in certain urban LGAs. They form intermediate size spatial units for the presentation of regional data. A listing of statistical subdivisions appears on pages 12 and 13. For maps showing the boundaries of the statistical areas, contact your nearest ABS office. *Statistical Divisions* (SDs), which consist of one or more SSDs, are designed to be relatively homogeneous regions characterised by identifiable social and economic units within a region, under the unifying influence of one or more major towns or cities.

A listing of statistical divisions and subdivisions is shown at the end of this publication.

Unpublished statistics

At some time in the future, the ABS may have unpublished data available. Inquiries should be made to the contact shown at the front of this publication.

Symbols and other usages

n.a.	not available
n.e.s.	not elsewhere specified
n.p.	not available for publication but included in totals where applicable
r	figure or series revised since previous issue
*	relative standard error between 25 and 49.9 per cent.
..	not applicable
—	nil or rounded to zero (including null cells)

Where figures have been rounded, discrepancies may occur between sums of the component items and totals.

RICHARD MADDEN
Acting Australian Statistician

TABLE 1. FREIGHT MOVEMENTS(a) BY MODE, AUSTRALIA
(^{'000 tonnes)}

<i>Period</i>	<i>Road</i>	<i>Rail</i>	<i>Sea</i>	<i>Air</i>	<i>Total</i>
1994					
June quarter	68,192	81,248	11,349	43	160,833
September quarter	157,107	108,831	12,546	53	178,537
December quarter	65,008	123,611	13,165	55	201,840

(a) Freight movements which involve more than one operator or mode may be counted more than once.

TABLE 2. FREIGHT MOVEMENTS(a): COMMODITY BY MODE, AUSTRALIA, DECEMBER QUARTER 1994
(^{'000 tonnes)}

<i>Commodity</i>	<i>Road</i>	<i>Rail</i>	<i>Sea</i>	<i>Air</i>	<i>Total</i>
Food and live animals					
Live animals	*3,944	174	7	n.a.	4,124
Meat and meat preparations	338	105	6	n.a.	449
Cereal grains	4,165	3,309	376	n.a.	7,849
Vegetables and fruit	*3,036	(b)10,919	72	n.a.	14,027
Sugar, sugar preparations and honey	804	2,244	140	n.a.	3,188
Other foodstuffs	5,899	65	37	n.a.	6,001
Beverages (alcoholic and non-alcoholic)	512	1	5	n.a.	519
Crude materials, inedible, except fuels					
Cork and wood	4,889	288	32	n.a.	5,210
Textile fibres	*771	57	6	n.a.	834
Fertilizers (crude and manufactured)	*1,388	72	130	n.a.	1,590
Stone, sand and gravel	6,319	732	16	n.a.	7,067
Metalliferous ores and metal scrap	*1,587	44,691	5,711	n.a.	51,989
Mineral fuels, lubricants and related materials					
Coal, coke and briquettes	n.p.	50,903	630	n.a.	n.p.
Petroleum oil, motor spirit and other light oils	*4,761	304	3,122	n.a.	8,188
Other petroleum oils and products	*1,184	371	448	n.a.	2,003
Gases (natural and manufactured)	n.p.	11	137	n.a.	n.p.
Chemicals and related products, n.e.s.	867	401	147	n.a.	1,415
Manufactured goods (classified chiefly by material)					
Paper and paper products	512	53	123	n.a.	688
Cement and cement clinker	737	615	416	n.a.	1,769
Clay products (bricks, tiles, pipes, etc.)	*996	17		n.a.	1,013
Other building materials	1,083	68	7	n.a.	1,158
Iron and steel	1,578	873	239	n.a.	2,690
Non-ferrous metals	*454	160	32	n.a.	646
Machinery and transport equipment					
Machinery and equipment	*685	33	6	n.a.	725
Motor vehicles	*642	14	7	n.a.	662
Motor vehicle parts and accessories	48	—	1	n.a.	49
Other road vehicles/transport equipment	*5	1	5	n.a.	10
Miscellaneous manufactured articles					
Furniture	*125	—	2	n.a.	128
Commodities and transactions, n.e.s.					
Mail and postal packages	279	—	2	11	292
General freight(c)	6,934	2,821	144	44	9,943
Empty used containers and packaging	*224	63	35	n.a.	322
Other freight(d)	5,034	4,246	1,125	n.a.	10,406
Total	65,008	123,611	13,165	55	201,840

(a) Freight movements which involve more than one operator or mode may be counted more than once. (b) Mainly sugar cane moved from Queensland cane fields to sugar mills. (c) Commodities not classified by type, including personal effects and furniture, not for sale. (d) All other commodities not elsewhere specified including animal feed, crude rubber, slag, ships and boats.

TABLE 3. FREIGHT MOVEMENTS: ORIGIN OF FREIGHT BY MODE, AUSTRALIA, DECEMBER QUARTER 1994
('000 tonnes)

State/Territory Statistical division	Road	Rail	Sea	Air	Total
<i>New South Wales and Australian Capital Territory</i>					
Capital Territory	17,887	(a) 17,990	1,267	16	(a) 37,161
Sydney	5,984	1,065	223	15	7,288
Hunter	3,838	10,731	405	—	14,973
Illawarra	2,267	2,057	638	—	4,962
Richmond-Tweed	*283	95	—	—	378
Mid North Coast	*371	81	1	—	454
Northern	*780	600	—	—	1,380
North Western	432	215	—	—	648
Central West	803	2,256	—	—	3,059
South Eastern	*736	25	—	—	761
Murrumbidgee	1,086	140	—	—	1,226
Murray	*741	113	—	—	854
Far West	n.p.	6	—	—	n.p.
Australian Capital Territory(b)	n.p.	—	—	1	n.p.
<i>Victoria</i>	15,595	(a) 1,867	2,379	17	(a) 19,857
Melbourne	6,115	610	2,036	17	8,777
Barwon	1,309	178	292	—	1,779
Western District	1,552	9	20	—	1,581
Central Highlands	*760	13	—	—	773
Wimmera	n.p.	295	—	—	n.p.
Mallee	n.p.	304	—	—	n.p.
Loddon-Campaspe	1,170	74	—	—	1,243
Goulburn	1,338	133	—	—	1,472
Ovens-Murray	364	34	—	—	398
East Gippsland	805	2	1	—	807
Gippsland	1,127	63	31	—	1,221
<i>Queensland</i>	16,100	57,615	3,313	9	77,037
Brisbane	*7,567	1,664	481	7	9,719
Moreton	*1,345	841	—	—	2,186
Wide Bay-Burnett	*1,094	1,257	68	—	2,419
Darling Downs	1,137	287	—	—	1,425
South-West	*397	60	—	—	457
Fitzroy	756	21,813	372	—	22,941
Central-West	n.p.	42	—	—	n.p.
Mackay	*1,049	17,541	59	—	18,649
Northern	800	9,065	25	1	9,892
Far North	*1,825	4,606	2,299	1	8,732
North-West	n.p.	440	7	—	n.p.
Off-shore areas	—	—	1	—	1
<i>South Australia</i>	5,255	(a) 2,641	1,874	3	(a) 9,773
Adelaide	1,277	480	318	3	2,078
Outer Adelaide	546	121	5	—	673
Yorke and Lower North	*502	—	670	—	1,172
Murray Lands	321	107	—	—	428
South-East	*2,154	35	—	—	2,188
Eyre	*278	348	425	—	1,050
Northern	*178	1,351	455	—	1,983
<i>Western Australia</i>	8,444	(a) 42,882	3,056	5	(a) 54,387
Perth	2,225	2,170	418	4	4,816
South-West	*1,791	1,333	236	—	3,360
Lower Great Southern	n.p.	19	16	—	n.p.
Upper Great Southern	310	1,106	—	—	1,416
Midlands	1,592	1,532	—	—	3,124
South Eastern	372	250	27	—	649
Central	n.p.	4,534	—	—	n.p.
Pilbara	n.p.	31,938	2,350	—	n.p.
Kimberley	*196	—	9	—	205
<i>Tasmania</i>	1,405	574	1,021	4	3,004
Greater Hobart	*185	49	138	2	374
Southern	*260	—	—	—	260
Northern	577	148	85	1	811
Mersey-Lyell	383	377	798	—	1,558
<i>Northern Territory</i>	322	43	254	1	620
Darwin	*58	—	22	1	81
Northern Territory - Balance	265	43	232	—	540
Total	65,008	123,611	13,165	55	201,840

(a) Including rail movements for which no origin at statistical division level was supplied. (b) Canberra and Australian Capital Territory - Balance Statistical Divisions.

TABLE 4. FREIGHT MOVEMENTS: DESTINATION OF FREIGHT BY MODE, AUSTRALIA, DECEMBER QUARTER 1994
(^{'000 tonnes})

State/Territory Statistical division	Road	Rail	Sea	Air	Total
<i>New South Wales and Australian Capital Territory</i>					
<i>Capital Territory</i>	17,501	(a)17,388	5,067	15	(a)39,971
Sydney	6,310	1,276	1,592	14	9,192
Hunter	3,034	11,808	839	—	15,681
Illawarra	2,215	3,564	2,614	—	8,392
Richmond-Tweed	*480	75	—	—	555
Mid North Coast	475	37	1	—	514
Northern	*791	203	—	—	994
North Western	330	72	—	—	402
Central West	1,366	112	—	—	1,478
South Eastern	*879	9	21	—	908
Murrumbidgee	689	73	—	—	762
Murray	425	7	—	—	432
Far West	n.p.	6	—	—	n.p.
Australian Capital Territory(b)	n.p.	53	—	1	n.p.
<i>Victoria</i>	15,781	(a)1,976	1,433	13	(a)19,203
Melbourne	6,138	1,074	995	13	8,220
Barwon	787	157	158	—	1,102
Western District	1,948	182	248	—	2,378
Central Highlands	*720	30	—	—	751
Wimmera	*655	68	—	—	723
Mallee	*522	73	—	—	595
Loddon-Campaspe	1,101	82	—	—	1,183
Goulburn	n.p.	22	—	—	n.p.
Ovens-Murray	n.p.	40	—	—	n.p.
East Gippsland	448	1	—	—	449
Gippsland	1,260	5	—	—	1,265
Off-shore areas	—	—	31	—	31
<i>Queensland</i>	16,216	57,912	4,145	12	78,285
Brisbane	6,227	2,246	1,198	9	9,680
Moreton	*2,516	221	—	—	2,737
Wide Bay-Burnett	*1,470	1,271	35	—	2,777
Darling Downs	902	313	—	—	1,215
South-West	*439	24	—	—	464
Fitzroy	744	13,039	2,464	—	16,247
Central-West	*67	17	—	—	83
Mackay	n.p.	25,365	39	1	n.p.
Northern	n.p.	10,168	203	1	n.p.
Far North	1,793	4,858	200	1	6,852
North-West	100	390	3	—	493
Off-shore areas	—	—	2	—	2
<i>South Australia</i>	5,249	(a)2,545	819	4	(a)8,617
Adelaide	2,155	870	441	4	3,470
Outer Adelaide	296	—	5	—	301
Yorke and Lower North	*300	—	—	—	300
Murray Lands	*343	12	—	—	355
South-East	*1,636	4	—	—	1,640
Eyre	*243	348	56	—	647
Northern	*276	1,297	316	—	1,889
<i>Western Australia</i>	8,473	(a)43,119	639	6	(a)52,237
Perth	*2,704	3,795	330	5	6,834
South-West	*1,854	1,915	—	—	3,768
Lower Great Southern	n.p.	102	—	—	n.p.
Upper Great Southern	258	116	—	—	373
Midlands	1,437	109	—	—	1,546
South Eastern	*495	763	64	—	1,323
Central	758	383	72	—	1,214
Pilbara	*197	35,930	162	—	36,290
Kimberley	n.p.	—	9	—	n.p.
Off-shore areas	—	—	1	—	1
<i>Tasmania</i>	1,405	574	978	3	2,960
Greater Hobart	290	92	301	1	685
Southern	244	—	—	—	244
Northern	521	69	297	2	890
Mercy-Lyell	350	412	380	—	1,142
<i>Northern Territory</i>	384	97	84	1	566
Darwin	96	—	63	1	160
Northern Territory - Balance	288	97	9	1	394
Off-shore areas	—	—	12	—	12
Total	65,008	123,611	13,165	55	201,840

(a) Including rail movements for which no destination at statistical division level was supplied. (b) Canberra and Australian Capital Territory - Balance Statistical Divisions.

TABLE 5. FREIGHT MOVEMENTS: ORIGIN AND DESTINATION BY STATE AND MODE, AUSTRALIA,
DECEMBER QUARTER 1994
(^{'000 tonnes})

Origin	Destination						
	New South Wales and Australian Capital Territory	Victoria	Queensland	South Australia	Western Australia	Tasmania	Northern Territory
ROAD							
New South Wales and Australian Capital Territory	13,359	2,466	1,361	*573	n.p.	..	n.p.
Victoria	2,250	11,479	663	1,065	n.p.	..	n.p.
Queensland	1,424	465	14,035	113	n.p.	..	n.p.
South Australia	398	*1,214	99	3,457	*47	..	39
Western Australia	n.p.	n.p.	n.p.	n.p.	8,130	..	n.p.
Tasmania	..	..	..	..	..	1,405	..
Northern Territory	n.p.	n.p.	n.p.	n.p.	n.p.	..	296
RAIL							
New South Wales and Australian Capital Territory	16,911	357	327	229	155	..	12
Victoria	166	1,225	139	191	138	..	8
Queensland	150	65	57,368	14	17	..	—
South Australia	87	248	50	2,029	152	..	75
Western Australia	64	75	24	61	42,656	..	1
Tasmania	..	..	..	..	..	574	..
Northern Territory	9	7	4	22	..	..	—
SEA							
New South Wales	349	273	188	262	13	181	1
Victoria	1,087	31	701	97	74	372	17
Queensland	330	145	2,770	7	43	17	—
South Australia	631	235	418	401	49	139	—
Western Australia	2,134	321	67	31	455	3	45
Tasmania	490	427	—	21	5	79	—
Northern Territory	46	—	—	—	1	186	21

TABLE 6. FREIGHT MOVEMENTS BY SELECTED METHOD OF TRANSPORT(a), AUSTRALIA
(^{'000 tonnes})

Period	Bulk	Dangerous	Refrigerated	Containerised
1994				
June quarter	107,591	9,436	1,797	3,610
September quarter	r144,333	r11,357	r2,386	r3,791
December quarter	159,947	11,328	3,743	4,238

(a) Excluding freight not transported by any of the methods shown. A single freight movement can appear under more than one method of transport, e.g. chemicals and related products, n.e.s. can appear under both *Bulk* and *Dangerous*.

TABLE 7. FREIGHT MOVEMENTS: COMMODITY BY METHOD OF TRANSPORT(a), AUSTRALIA, DECEMBER QUARTER 1994
(^{'000 tonnes})

Commodity	Bulk	Dangerous	Refrigerated	Containerised
Food and live animals				
Live animals	—	—	—	—
Meat and meat preparations	—	—	413	125
Cereal grains	6,989	—	—	79
Vegetables and fruit	11,495	—	n.p.	18
Sugar, sugar preparations and honey	2,898	—	—	5
Other foodstuffs	2,147	—	2,422	*176
Beverages (alcoholic and non-alcoholic)	n.p.	—	n.p.	*25
Crude materials, inedible, except fuels				
Cork and wood	1,974	—	—	n.p.
Textile fibres	—	—	—	42
Fertilizers (crude and manufactured)	*670	n.p.	—	22
Stone, sand and gravel	6,505	—	—	—
Metalliferous ores and metal scrap	51,152	—	—	n.p.
Mineral fuels, lubricants and related materials				
Coal, coke and briquettes	n.p.	—	—	2
Petroleum oil, motor spirit and other light oils	*8,057	*8,188	—	—
Other petroleum oils and products	1,482	1,566	—	*4
Gases (natural and manufactured)	n.p.	n.p.	—	1
Chemicals and related products, n.e.s.	800	761	—	*133
Manufactured goods (classified chiefly by material)				
Paper and paper products	n.p.	—	—	64
Cement and cement clinker	1,477	—	—	13
Clay products (bricks, tiles, pipes, etc.)	—	—	—	18
Other building materials	551	n.p.	—	n.p.
Iron and steel	—	—	—	n.p.
Non-ferrous metals	—	—	—	25
Machinery and transport equipment				
Machinery and equipment	—	—	—	13
Motor vehicles	—	—	—	—
Motor vehicle parts and accessories	—	—	—	n.p.
Other road vehicles/transport equipment	—	—	—	—
Miscellaneous manufactured articles				
Furniture	—	—	—	2
Commodities and transactions, n.e.s.				
Mail and postal packages	—	—	—	2
General freight	—	—	—	3,135
Empty used containers and packaging	—	—	—	26
Other freight	7,015	—	n.p.	284

(a) Excluding freight not transported by any of the methods shown. A single freight movement can appear under more than one method of transport, e.g. chemicals and related products, n.e.s. can appear under both *Bulk* and *Dangerous*.

LISTING OF SUBDIVISIONS IN STATISTICAL DIVISIONS

New South Wales

Sydney
 Inner Sydney
 Eastern Suburbs
 St George-Sutherland
 Canterbury-Bankstown
 Fairfield-Liverpool
 Outer South Western Sydney
 Inner Western Sydney
 Central Western Sydney
 Outer Western Sydney
 Blacktown-Baulkham Hills
 Lower Northern Sydney
 Hornsby-Ku-ring-gai
 Northern Beaches
 Gosford-Wyong

Hunter
 Newcastle
 Hunter SD Bal.

Illawarra
 Wollongong
 Illawarra SD Bal.

Richmond-Tweed
 Tweed Heads
 Richmond-Tweed SD Bal.

Mid-North Coast
 Clarence
 Hastings

Northern
 Northern Slopes
 Northern Tablelands
 North Central Plain

North Western
 Central Macquarie
 Macquarie-Barwon
 Upper Darling

Central West
 Bathurst-Orange
 Central Tablelands (excl.
 Bathurst-Orange)
 Lachlan

South Eastern
 Queanbeyan
 Southern Tablelands (excl.
 Queanbeyan)
 Lower South Coast
 Snowy

Murrumbidgee
 Central Murrumbidgee
 Lower Murrumbidgee

Murray
 Albury
 Upper Murray (excl. Albury)
 Central Murray
 Murray-Darling

Far West

Off-Shore Areas & Migratory

Victoria

Melbourne
 Central Melbourne
 Western Inner Melbourne
 Western Outer Melbourne
 Western Fringe Melbourne
 Northern Inner Melbourne
 Northern Middle Melbourne
 Northern Fringe Melbourne
 Northern Outer Melbourne
 Eastern Inner Melbourne
 Eastern Middle Melbourne
 Eastern Outer Melbourne
 Eastern Fringe Melbourne
 Southern Inner Melbourne
 Southern Outer Melbourne
 South Eastern Inner Melbourne
 South Eastern Outer Melbourne
 Mornington Peninsula Inner
 Mornington Peninsula Outer

Barwon
 Greater Geelong City Part A
 East Barwon
 West Barwon

Western District
 Hopkins
 Glenelg

Central Highlands
 Ballarat City
 East Central Highlands
 West Central Highlands

Wimmera
 South Wimmera
 North Wimmera

Mallee
 Mildura
 West Mallee
 East Mallee

Loddon-Campaspe
 Greater Bendigo City Part A
 Northern Loddon-Campaspe
 Central Loddon-Campaspe
 South Loddon-Campaspe

Goulburn
 Shepparton-Mooroopna
 North Goulburn
 South Goulburn
 South West Goulburn

Ovens-Murray
 Wodonga
 North Ovens-Murray
 South Ovens-Murray

East Gippsland
 Gippsland Lakes
 Mitchell-Snowy
 Macalister-Avon

Gippsland
 Latrobe Valley
 West Gippsland
 Strzelecki
 South Gippsland

Off-Shore Areas & Migratory

Queensland

Brisbane
 Brisbane City
 Albert Shire Part A
 Beaudesert Shire Part A
 Caboolture Shire Part A
 Ipswich - Moreton Shire Part A
 Logan City
 Pine Rivers Shire
 Redcliffe City
 Redland Shire

Moreton
 Gold Coast City
 Albert Shire Part B
 Sunshine Coast
 Moreton SD Bal.

Wide Bay-Burnett
 Bundaberg
 Wide Bay-Burnett SD Bal.

Darling Downs

South-West

Fitzroy
 Rockhampton
 Gladstone
 Fitzroy SD Bal.

Central-West

Mackay
 Mackay City Part A
 Mackay SD Bal.

LISTING OF SUBDIVISIONS IN STATISTICAL DIVISIONS — *continued*

	Western Australia	Tasmania
Northern	Perth	Greater Hobart
Townsville City Part A	Central Metropolitan	
Thuringowa City Part A	East Metropolitan	Southern
Northern SD Bal.	North Metropolitan	
	South-West Metropolitan	Northern
Far North	South-East Metropolitan	Greater Launceston
Cairns		Central North
Far North SD Bal.	South West	North Eastern
	Dale	
North-West	Preston	Mersey-Lyell
	Vasse	Burnie-Devonport
Off-Shore Areas & Migratory	Blackwood	North Western Rural
		Lyell
South Australia	Lower Great Southern	Off-Shore Areas & Migratory
Adelaide	Pallinup	
Northern	King	Northern Territory
Western	Upper Great Southern	
Eastern	Hotham	Darwin
Southern	Lakes	Darwin City
		Palmerston-East Arm
Outer Adelaide	Midlands	Northern Territory - Bal.
Barossa	Moore	Darwin Rural Areas
Kangaroo Island	Avon	Bathurst-Melville
Onkaparinga	Campion	Alligator
Fleurieu		Daly
Yorke and Lower North	South Eastern	East Arnhem
Yorke	Lefroy	Lower Top End NT
Lower-North	Johnstone	Barkly
		Central NT
Murray Lands	Central	Off-Shore Areas & Migratory
Riverlands	Gascoyne	
Murray Mallee	Carnegie	Australian Capital Territory
	Greenough River	
South-East	Pilbara	Canberra
Upper South-East	De Grey	Central Canberra
Lower South-East	Fortescue	Belconnen
		Woden Valley
Eyre	Kimberley	Weston Creek
Lincoln	Ord	Tuggeranong
West Coast	Fitzroy	Outer Canberra
Northern	Off-Shore Areas & Migratory	Australian Capital Territory - Bal.
Whyalla		
Pirie		Other Territories
Flinders Ranges		
Far-North		
Off-Shore Areas & Migratory		



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