



Australian Government

**Department of Infrastructure, Transport,
Regional Development and Local Government**

Bureau of Infrastructure, Transport and Regional Economics



Australian Transport Statistics

Yearbook 2007

Bureau of Infrastructure, Transport and Regional Economics

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Foreword

The Department of Infrastructure, Transport, Regional Development and Local Government is committed to fostering an efficient, sustainable, competitive, safe and secure transport system, and assisting regions to manage their own futures. These goals cannot be achieved without ready reference to a wide range of up-to-date statistics.

Australian Transport Statistics Yearbook 2007 is the first issue of a new annual BITRE publication.

The main aim of this publication, which complements the annual *Australian Transport Statistics* Booklet, is to provide a single comprehensive annual source of Australian transport statistics for use by policymakers, industry leaders, transport analysts and the wider Australian community.

The publication is primarily a source of long-term, aggregate time series transport statistics. A brief introduction is provided to explain the structure of the publication and areas identified for further development. Most statistics included in the dataset are currently collected by BITRE or other Australian, State or Territory Government agencies.

The preparation of this first issue has identified a number of areas where further data collection may be needed to provide a more complete statistical picture of Australian transport. BITRE invites comment from users to assist in developing future issues of the *Australian Transport Statistics Yearbook* (please contact bitre@infrastructure.gov.au).

The compilation of the publication has involved input from the Australian Transport Safety Bureau, the Australian Bureau of Statistics, and State and Territory Government transport departments in addition to BITRE.

Glen Malam at BITRE managed and coordinated the project.

Michael J Taylor
Secretary
Department of Infrastructure,
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December 2007

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Chapter 1

Introduction



Chapter 1

Introduction

The goal of the *Australian Transport Statistics Yearbook* is to provide a comprehensive, coherent summary of transport activity in Australia. A framework of time series statistics was developed with this end in mind. A range of datasets are available to populate the framework. Datasets that meet BITRE requirements for accuracy and reliability are included; however, there are a number of areas of the framework where suitable datasets are not currently compiled. These areas of unmet statistical demand are highlighted in the section headed For further development.

As the focus is on long time series, the structure of this publication differs slightly from the existing *Australian Transport Statistics* booklet and some statistics differ between the two publications. Please see the End notes for further information.

The framework

The framework for Australian transport statistics has four main components:

- The relationship between the transport industry and the rest of the Australian economy;
- Freight and passenger transport activity;
- Transport activity by mode of transport; and
- Impacts of transport—transport safety and transport energy and the environment.

Transport and the economy

Chapter 2 summarises key macroeconomic indicators that are likely to influence transport activity. Where available, the contribution of the hire and reward transport industry to the key macroeconomic indicator is provided. This chapter provides estimates of production, employment, wages and salaries, prices, international trade, interest rates, the Australian currency exchange rate and the Australian resident population.

Freight and passenger activity

In its broadest sense, freight transport describes the movement of physical items between locations. The framework for this publication provides a summary of freight statistics classified by mode of transport. Freight is further classified into bulk and non-bulk segments. Two measures of freight transport are currently provided in the framework: the weight of freight moved in Australia (measured in millions of tonnes) and freight by weight and distance moved (measured in tonne-kilometres—the transport task performed in moving one tonne of freight one kilometre).

In a similar fashion, passenger transport describes the movement of people between locations. This definition of passengers does not include drivers of freight vehicles when they are employed for freight purposes but does include drivers of freight vehicles when they are being used to transport passengers (for example, private use of light commercial vehicles). The framework provides a summary of passenger statistics classified by mode of transport (estimates for walking, cycling and recreational boating are not currently provided in this publication). Two measures of passenger transport are currently provided in the framework: the number of people transported and the number of passenger kilometres travelled (a measure of the transport task performed in moving one passenger one kilometre).

Mode of transport

This publication focuses on the four main motorised modes of transport: road, rail, aviation and shipping. Within each mode, the statistical framework examines a number of key elements:

- Infrastructure;
- Transport activity;
- Prices; and
- Vehicles.

The infrastructure available for each mode of transport can impose limits on the expansion of transport activity. This publication provides data on the length and maintenance of roads and railway tracks, airport performance and port facilities.

The statistical framework includes time series data for transport activity. Where possible, data are classified by location in terms of state or territory (interstate, intrastate, intercapital) or level of urbanisation.

Price data are included in the framework to provide an indication of the costs of each mode of transport. Price estimates for shipping and rail are not provided in this issue.

The framework also includes estimates for the size and characteristics of the various modal vehicle fleets.

Impacts of transport

Chapter 9 (Safety) and Chapter 10 (Energy and the environment) complete the statistical framework with a summary of some key impacts of transport activity.

Chapter 9 presents statistics for transport accidents and casualties with comparisons by mode of transport; state or territory of accident; and severity of injuries.

Direct energy consumption and emissions data are included in the framework. Estimates for fuel sales and the production and international trade of transport fuels are provided, classified by fuel type. Estimates of transport emissions are provided, classified by transport mode and emission type.

For further development

The preparation of the first issue of this publication has highlighted differences between the conceptual framework and the reality of the transport statistics that are currently available. There are several areas of the framework where current statistical coverage is sparse and further compilation work is required to present a complete statistical picture of Australian transport activity.

Freight transport

Statistical collections of freight data currently focus on road, rail and sea freight. Surveys of sea freight compile data that meet the requirements of the framework; however, road and rail requirements are met by BITRE models using partial indicators. There are no known recent surveys of, or other reliable sources of data about, domestic air freight.

Passenger transport

This publication provides estimates of passenger travel by major transport mode. However, these do not include non-motorised transport (walking and cycling), motor vehicle transport that is not on public roads and recreational boating. Greater focus on urban congestion and on issues such as climate change and public health are resulting in greater interest in estimates of walking and cycling.

Rail transport

Statistical collections of rail transport data currently focus on public access freight transport. For a complete summary of Australian rail transport, this publication would benefit from more detailed data for passenger rail transport, rail prices and estimates of the Australian rail fleet.

Sea transport

Sea transport statistics currently focus on trading ships and the freight they carry. To provide a complete summary of Australian sea transport, this publication would benefit from the inclusion of estimates of all passenger transport by sea (estimates of passenger travel by ferry are included in Chapter 4 Passenger transport) and price measures of sea transport.

Transport safety

The statistical framework is designed to provide estimates of transport accidents and injuries classified by injury severity. Current statistics only record fatalities and serious injuries, with data for serious injuries resulting from road accidents not available since 1997 for NSW and 2000 for the other states. Accident and injury statistics classified by the role of the injured in the accident (driver, passenger, pedestrian, etc) are needed to complete the framework.

Energy and the environment

The framework provides scope for the inclusion of all energy use for transport activity within Australia and all emissions from this activity. Statistics provided in this issue are restricted to the supply and sales of petroleum products and the emissions of greenhouse gases. Annual statistics for energy use by transport are not available for non-petroleum products (mainly natural gas and biofuels) or non-greenhouse gases and pollutants; however, sub-annual estimates of ethanol sales have recently been developed which may lead in due course to adequate annual time series data.

Chapter 2

Transport and the economy



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Chapter 2 Transport and the economy

Transport statistics are influenced by a range of economic factors, including changes in the production of physical goods, the demand for passenger travel and changes in international trade in goods. International freight is the transportation of internationally traded goods.

Recent events

- The Australian economy experienced solid growth in 2005–06, with GDP growing 2.8 per cent.
- Australia's terms of trade were high in 2005–06, reflecting strong overseas demand for resource commodities. Australian goods exports increased 20.8 per cent between 2004–05 and 2005–06, while goods imports increased by 12.5 per cent.
- In 2005–06, Australian government policy considered whole-of-government solutions to water, regulatory and infrastructure reform. The AusLink program for cooperative transport infrastructure planning and funding came into effect in July 2005.

Future plans

- The Australian economy is forecast to grow 3.75 per cent in 2007–08 (Treasury 2007).
- The inflation rate in Australia, as measured by the consumer price index (CPI), is forecast to increase by 2.5 per cent in 2007–08 (Treasury 2007).
- Employment in Australia is forecast to grow by 1.5 per cent in 2007–08 (Treasury 2007).
- Australia's mineral and energy production is forecast to increase by 11.6 per cent in 2007–08 (ABARE 2007).
- Australia's gross value of farm production is forecast to increase by 15.9 per cent in 2007–08 (ABARE 2007) after a fall of 11.8 per cent in 2006–07 due to drought.
- The world economy is forecast to increase by 4.2 per cent in 2008 (ABARE 2007).

Table 2.1 Australian gross domestic product, transport and storage industry

Financial year	Chain volume measures ⁽¹⁾						
	Transport and storage gross value added, at basic prices ⁽²⁾						
	Road	Air and space	Rail, pipeline and other	Transport services and storage ⁽³⁾	Total	Gross Domestic Product	Transport and storage as % of GDP
	\$m	\$m	\$m	\$m	\$m	\$m	%
1974–75	3 596	1 040	2 303	6 782	12 758	345 953	3.7
1975–76	3 542	1 090	2 309	6 542	12 691	355 309	3.6
1976–77	3 992	1 104	2 399	6 850	13 743	367 612	3.7
1977–78	4 713	1 209	2 457	7 153	15 478	370 908	4.2
1978–79	4 672	1 339	2 429	7 373	15 727	386 451	4.1
1979–80	4 594	1 474	2 675	7 952	16 195	398 569	4.1
1980–81	5 151	1 448	2 716	7 859	17 187	412 057	4.2
1981–82	5 265	1 485	2 751	7 701	17 448	425 127	4.1
1982–83	5 153	1 410	2 579	7 191	16 812	415 046	4.1
1983–84	5 288	1 484	2 797	8 056	17 660	434 458	4.1
1984–85	5 681	1 601	3 150	8 786	19 095	457 593	4.2
1985–86	5 994	1 740	3 335	9 019	20 266	477 933	4.2
1986–87	5 955	1 923	3 357	9 226	20 643	489 488	4.2
1987–88	6 310	2 152	3 421	9 490	21 503	514 736	4.2
1988–89	6 784	2 283	3 475	9 770	22 430	533 775	4.2
1989–90	7 101	1 978	3 692	10 020	23 015	554 773	4.1
1990–91	6 907	2 299	3 689	10 112	23 179	551 198	4.2
1991–92	7 130	2 679	3 699	10 059	23 725	551 457	4.3
1992–93	6 972	2 958	3 812	10 061	23 790	571 870	4.2
1993–94	7 313	3 237	3 969	10 610	25 141	595 329	4.2
1994–95	8 024	3 520	3 953	11 213	26 657	622 057	4.3
1995–96	8 894	3 751	4 256	11 829	28 686	647 659	4.4
1996–97	9 295	3 998	4 349	12 179	29 771	673 099	4.4
1997–98	9 663	3 971	4 333	12 450	30 353	703 258	4.3
1998–99	9 995	4 066	4 379	12 803	31 170	739 629	4.2
1999–00	10 453	4 282	4 528	13 135	32 330	769 045	4.2
2000–01	10 763	4 623	4 598	13 799	33 717	784 017	4.3
2001–02	11 374	4 340	4 898	14 375	34 947	813 542	4.3
2002–03	12 177	4 914	5 369	14 932	37 385	839 187	4.5
2003–04	13 059	5 327	5 568	15 062	39 028	873 197	4.5
2004–05	13 872	5 866	5 553	15 675	40 966	896 568	4.6
2005–06	14 632	6 193	5 514	15 549	41 888	922 690	4.5
2006–07	16 168	6 807	5 374	16 196	44 545	952 724	4.7

(1) (2) (3) See end notes.

Source: ABS (2007a), Australian National Accounts: National Income, Expenditure and Product (ABS cat. no. 5206.0).

Table 2.2 Australian employment, transport and storage industry

August reference month	Transport and storage total employment									Total Australian employment '000	Transport and storage as % of total employment %		
	Transport					Services to trans- port	Storage	Transport and storage -nfd	Total				
	Road '000	Rail '000	Water '000	Air and space '000	Other '000								
1972	136.3	70.3	30.9	29.1					286.0	5 609.9	5.1		
1973	161.1	68.8	30.9	27.7					312.4	5 783.0	5.4		
1974	158.5	69.5	30.7	33.2					313.4	5 855.2	5.4		
1975	157.5	75.3	36.8	38.1					330.3	5 841.3	5.7		
1976	165.2	68.9	28.7	35.6					321.1	5 897.8	5.4		
1977	165.9	65.4	30.2	32.9					316.0	5 995.4	5.3		
1978	160.4	73.9	31.5	39.3					328.7	6 005.4	5.5		
1979	169.8	79.6	32.0	37.2					345.9	6 078.5	5.7		
1980	155.5	86.9	33.4	35.8					342.9	6 281.4	5.5		
1981	167.9	85.0	30.8	36.3					350.7	6 393.7	5.5		
1982	171.0	93.4	29.7	49.8					375.2	6 379.3	5.9		
1983	173.0	86.4	30.2	41.7					365.2	6 241.1	5.9		
1984	162.5	83.0	29.4	44.4					354.1	6 576.1	5.4		
1985 (4)	159.1	90.9	7.1	33.9	(a) 1.0	65.3	8.6	(a) 0.0	365.9	6 675.5	5.5		
1986 (4)	171.8	89.9	7.8	35.9	(a) 1.8	67.0	11.2	(a) 0.0	385.7	6 928.9	5.6		
1987	170.0	80.7	7.3	33.3	(a) 1.0	64.5	7.8	(a) 0.0	365.1	7 103.7	5.1		
1988	171.8	74.3	6.6	35.2	(a) 2.8	67.0	9.1	(a) 0.0	367.2	7 362.0	5.0		
1989	185.5	72.6	8.1	45.0	(a) 1.7	70.3	11.5	(a) 0.0	395.1	7 726.5	5.1		
1990	193.4	59.7	8.5	41.0	(a) 1.5	66.5	17.0	(a) 0.0	387.7	7 822.4	5.0		
1991	186.3	67.0	9.8	39.8	(a) 0.2	66.0	14.5	(a) 0.0	383.6	7 650.3	5.0		
1992	185.5	52.0	6.9	36.8	(a) 2.0	63.4	13.8	(a) 0.0	360.7	7 636.7	4.7		
1993	172.2	59.0	4.8	36.6	(a) 0.6	63.7	16.5	(a) 0.0	353.3	7 636.3	4.6		
1994	177.0	54.0	9.1	37.4	5.6	67.8	19.2	(a) 0.0	370.4	7 897.4	4.7		
1995	185.5	48.9	9.4	41.5	5.3	73.4	15.2	(a) 0.0	379.4	8 231.3	4.6		
1996	186.4	50.2	13.0	49.3	8.1	65.3	21.0	(a) 0.0	393.6	8 332.8	4.7		
1997	196.3	47.1	9.6	47.6	6.5	67.8	15.9	(a) 0.0	392.6	8 324.3	4.7		
1998	192.9	37.3	10.2	48.1	5.4	66.6	20.0	(a) 0.0	380.6	8 555.6	4.4		
1999	207.8	34.2	10.9	46.2	4.7	84.6	25.4	(a) 0.0	413.7	8 692.1	4.8		
2000	207.2	37.4	12.4	58.1	(a) 0.8	66.0	30.6	(a) 2.6	415.0	8 990.3	4.6		
2001	215.8	35.4	14.4	55.1	(a) 0.6	70.4	27.1	(a) 1.7	420.5	9 040.0	4.7		
2002	205.8	34.8	10.7	47.0	(a) 0.3	68.4	27.9	(a) 2.6	397.5	9 223.1	4.3		
2003	219.4	40.3	11.0	49.9	(a) 0.8	71.4	27.4	(a) 1.0	421.1	9 412.3	4.5		
2004	222.0	36.6	17.5	41.8	(a) 0.9	73.3	36.6	18.5	447.2	9 575.6	4.7		
2005	216.5	37.6	10.9	51.9	(a) 0.3	77.5	41.3	14.9	450.9	9 963.5	4.5		
2006	230.0	37.4	15.3	47.7	(a) 1.0	80.2	43.1	10.1	464.9	10 168.0	4.6		
2007	232.4	40.7	18.0	48.2	(a) 0.4	87.9	47.9	17.3	492.9	10 435.8	4.7		

Data are not readily available for missing years.

nfd: not further defined.

(a) Subject to sampling variability too high for most practical purposes.

(4) See end notes.

Source: ABS (2007f), Labour Force, Australia, Detailed, Quarterly, August 2007 (ABS cat. no. 6291.0.55.003).

Table 2.3 Australian average weekly earnings, transport and storage industry

May reference month	Transport and storage								Australia	
	Transport					Services to transport	Storage	Total		
	Road	Rail	Water	Air and space	Other					
	\$	\$	\$	\$	\$	\$	\$	\$	\$	
1984								416.10	333.40	
1985								421.40	344.10	
1986								441.50	366.50	
1987								461.20	387.30	
1988								489.20	411.90	
1989								521.30	442.20	
1990								544.90	470.00	
1991								575.80	484.30	
1992								591.50	504.50	
1993								623.80	517.50	
1994								676.20	531.80	
1995	598.00	811.30	695.50	992.90	532.20	703.20	724.40	727.20	548.10	
1996	651.30	860.90	801.10	994.80	(b)408.10	696.40	688.60	741.20	564.40	
1997	674.40	877.80	967.60	993.40	(b)366.30	718.20	747.10	765.30	577.80	
1998	610.10	931.70	I 201.10	I 040.40	730.60	730.20	830.70	768.10	(b)596.20	
1999	553.50	855.20	I 274.90	I 089.00	608.50	690.90	652.90	747.30	611.10	
2000	629.80	911.40	(b)I 028.50	I 203.90	643.70	750.40	810.90	782.10	634.70	
2001	691.50	I 023.70	(b)I 010.40	I 182.40	839.00	764.10	781.90	805.10	662.60	
2002	723.90	I 071.00	717.70	I 197.50	(b)891.60	770.70	819.20	817.40	686.90	
2003	750.60	I 116.70	(b)I 002.40	I 187.90	(b)347.00	835.00	933.60	874.30	724.90	
2004	795.70	I 144.20	I 334.40	I 277.10	(b)394.50	866.50	I 001.80	928.70	746.30	
2005	872.90	I 152.10	I 487.00	I 211.90	(b)545.20	943.70	969.80	987.10	789.70	
2006	907.00	I 347.90	I 259.70	I 325.60	(b)764.20	955.10	990.50	I 032.60	826.90	
2007	856.20	I 436.70	I 200.00	I 321.50	np	I 050.00	953.70	I 047.40	863.40	

Data are not readily available for missing years.

np: not available for publication.

(a) Estimate has a relative standard error greater than 50 per cent and is considered too unreliable for general use.

(b) Use estimate with caution as it is subject to a relative standard error between 25 per cent and 50 per cent.

Source: ABS (2007b), Average Weekly Earnings, Australia (ABS cat. no. 6302.0) and unpublished ABS data.

Table 2.4 Australian producer price indexes, transport and storage industry

Financial year	Transport					Services to transport	Storage	Total
	Road	Rail	Water	Air and space	Other			
1996–97		109.8					95.9	
1997–98	98.8	105.1					99.4	
1998–99	100.0	100.0	100.0	100.0		100.0	100.0	100.0
1999–2000	101.0	94.4	103.8	99.1		97.2	100.9	100.2
2000–01	103.1	95.3	109.8	102.7	101.8	97.2	102.1	102.3
2001–02	105.0	94.9	109.4	103.5	102.9	97.0	102.2	103.2
2002–03	107.3	94.8	106.3	111.4	103.4	100.2	103.3	105.2
2003–04	110.2	95.7	105.2	114.4	101.7	101.4	104.9	107.1
2004–05	115.8	96.7	114.3	111.1	107.8	104.2	107.6	111.2
2005–06	123.0	98.0	111.2	119.5	107.5	106.6	113.6	115.9
2006–07	126.9	100.1	110.6	116.6	107.7	110.9	118.2	118.6

Data are not readily available for missing years.

Base of each index: 1998–99 = 100.0.

Source: ABS (2007g), Producer Price Indexes, Australia, June 2007 (ABS cat. no. 6427.0).

Table 2.5 Key indicators influencing the Australian transport industry

Financial year	Rate at close of financial year			
	Goods credits (exports) \$m	Goods debits (imports) \$m	Exchange rate ⁽⁵⁾ \$US	Interest rate ⁽⁶⁾ %
1971–72	4 746	−3 814	1.1910	5.75
1972–73	6 086	−3 831	1.4167	6.40
1973–74	6 833	−5 795	1.4875	18.80
1974–75	8 620	−7 728	1.3258	8.80
1975–76	9 589	−7 999	1.2356	10.27
1976–77	11 572	−10 428	1.1155	10.95
1977–78	12 158	−11 242	1.1475	10.63
1978–79	14 234	−13 506	1.1211	10.26
1979–80	18 869	−16 066	1.1576	13.83
1980–81	19 018	−19 486	1.1480	15.58
1981–82	19 662	−22 699	1.0223	18.57
1982–83	21 226	−22 047	0.8745	14.24
1983–84	23 968	−23 797	0.8613	12.81
1984–85	30 102	−30 402	0.6655	15.75
1985–86	32 492	−36 053	0.6772	14.68
1986–87	36 487	−37 370	0.7203	13.68
1987–88	41 903	−40 640	0.7940	13.10
1988–89	44 187	−47 232	0.7553	18.37
1989–90	48 927	−51 326	0.7890	15.02
1990–91	52 568	−49 681	0.7681	10.39
1991–92	55 427	−51 469	0.7488	6.42
1992–93	60 634	−59 934	0.6722	5.22
1993–94	64 419	−64 863	0.7291	5.12
1994–95	67 101	−75 317	0.7086	7.55
1995–96	76 146	−77 729	0.7890	7.57
1996–97	80 934	−79 438	0.7455	5.35
1997–98	88 538	−92 084	0.6135	5.32
1998–99	85 783	−98 430	0.6596	4.93
1999–00	97 625	−110 810	0.5986	6.23
2000–01	120 231	−120 524	0.5075	4.97
2001–02	120 940	−121 943	0.5648	5.07
2002–03	115 803	−134 273	0.6674	4.67
2003–04	109 459	−133 018	0.6889	5.49
2004–05	127 867	−150 873	0.7637	5.66
2005–06	154 425	−169 716	0.7433	5.96
2006–07	169 617	−183 407	0.8487	6.42

(5) (6) See end notes.

Source: ABS (2007c), Balance of Payments and International Investment Position (ABS cat. no. 5302.0) and RBA (2007), Bulletin.

Table 2.6a Australian population, by state/territory—capital city

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i> ⁽⁷⁾⁽⁸⁾
1970–71	2 977 300	2 515 400	891 100	850 700	711 800	153 100	37 100	160 800
1971–72	3 017 700	2 559 000	915 900	864 100	734 700	153 800	39 900	174 150
1972–73	3 040 800	2 597 200	941 800	877 800	751 700	155 500	42 800	185 100
1973–74	3 063 300	2 632 100	967 400	892 700	775 000	157 800	46 700	197 400
1974–75	3 082 500	2 658 800	979 000	905 100	799 600	160 600	25 700	209 900
1975–76	3 143 800	2 723 700	1 000 900	924 000	832 800	164 400	44 200	226 500
1976–77	3 168 100	2 740 800	1 012 200	934 200	851 800	165 800		232 600
1977–78	3 197 700	2 757 200	1 028 300	942 900	869 000	167 300		236 900
1978–79	3 226 800	2 771 000	1 046 400	944 800	882 900	168 400		239 700
1979–80	3 257 500	2 787 400	1 063 300	948 000	899 400	169 400		243 200
1980–81	3 279 500	2 806 300	1 096 200	953 700	922 000	171 100	56 400	246 500
1981–82	3 318 700	2 833 800	1 128 700	962 500	952 400	172 200	61 800	252 100
1982–83	3 350 700	2 861 700	1 148 300	973 400	976 800	173 400	65 100	258 400
1983–84	3 382 900	2 884 600	1 161 200	984 300	995 600	175 500	68 900	265 200
1984–85	3 425 200	2 909 100	1 176 500	994 000	1 018 200	177 500	72 200	272 300
1985–86	3 471 567	2 966 901	1 217 348	1 003 548	1 050 120	182 071	75 360	257 852
1986–87	3 528 486	3 003 582	1 238 378	1 011 904	1 079 603	183 321	77 047	264 405
1987–88	3 590 980	3 042 608	1 264 491	1 021 117	1 110 469	184 186	75 888	271 044
1988–89	3 622 859	3 085 580	1 300 218	1 033 471	1 147 375	185 938	76 025	275 334
1989–90	3 643 660	3 125 919	1 330 879	1 044 602	1 175 362	189 039	76 542	281 099
1990–91 ⁽⁹⁾	3 672 855	3 155 576	1 357 993	1 056 561	1 188 762	190 739	86 415	288 195
1991–92	3 710 168	3 182 441	1 388 383	1 065 647	1 207 350	192 439	87 836	293 554
1992–93	3 734 809	3 197 927	1 422 783	1 068 616	1 225 552	193 627	89 908	298 222
1993–94	3 769 641	3 213 021	1 455 195	1 071 672	1 246 266	194 519	91 133	301 131
1994–95	3 821 233	3 243 707	1 486 730	1 074 679	1 271 738	195 026	93 238	304 463
1995–96 ⁽¹⁰⁾	3 881 136	3 283 278	1 500 803	1 078 437	1 295 092	195 718	95 829	307 917
1996–97	3 928 658	3 309 601	1 524 315	1 083 906	1 316 274	195 976	98 891	308 700
1997–98	3 969 649	3 342 230	1 548 584	1 090 526	1 334 992	195 913	101 165	309 539
1998–99	4 019 954	3 379 714	1 572 204	1 096 934	1 355 373	196 011	103 064	311 967
1999–2000	4 069 093	3 422 722	1 598 585	1 102 445	1 372 947	196 468	105 113	314 848
2000–01	4 128 272	3 471 625	1 629 133	1 107 986	1 393 002	197 282	106 842	318 939
2001–02	4 163 892	3 524 302	1 667 060	1 115 003	1 413 725	197 964	107 456	322 335
2002–03	4 192 689	3 578 162	1 709 042	1 121 759	1 435 802	199 904	107 471	325 396
2003–04	4 217 342	3 627 208	1 749 453	1 127 213	1 460 471	202 160	108 645	327 240
2004–05	4 247 556	3 682 067	1 786 079	1 134 579	1 486 125	203 567	111 309	329 950
2005–06	4 284 379	3 744 373	1 820 400	1 146 119	1 519 510	205 566	114 368	333 940

(7) (8) (9) (10) See end notes.

Source: ABS (2007h), Regional Population Growth, Australia (ABS cat. no. 3218.0).

Table 2.6b Australian population, by state/territory—rest of state⁽¹¹⁾

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT⁽⁷⁾⁽⁸⁾</i>
1970–71	1 748 203	1 085 952	960 385	349 414	342 034	244 973	48 635	
1971–72	1 777 406	1 102 254	982 578	350 528	347 317	246 508	52 181	
1972–73	1 801 098	1 110 453	1 010 151	350 675	349 341	247 587	54 327	
1973–74	1 830 753	1 123 626	1 040 940	348 838	352 598	248 351	56 224	
1974–75	1 849 516	1 128 641	1 072 362	360 164	355 348	249 488	67 169	
1975–76	1 815 788	1 086 726	1 091 475	350 070	345 542	247 914	54 028	
1976–77	1 833 788	1 096 564	1 117 639	351 919	352 566	249 232		
1977–78	1 856 090	1 106 559	1 143 747	353 305	358 851	250 342		
1978–79	1 884 330	1 115 406	1 168 371	356 309	363 711	252 356		
1979–80	1 914 027	1 126 903	1 202 635	360 397	369 668	254 190		
1980–81	1 955 389	1 140 617	1 249 008	365 069	378 056	256 124	66 216	
1981–82	1 984 880	1 159 070	1 295 886	368 608	386 499	257 645	68 514	
1982–83	2 002 259	1 174 002	1 333 982	372 375	392 250	259 405	70 816	
1983–84	2 019 829	1 191 892	1 362 659	375 748	395 637	262 260	73 254	
1984–85	2 039 312	1 210 968	1 394 718	377 197	400 364	265 328	76 336	
1985–86	2 059 959	1 193 955	1 407 247	379 002	408 899	264 402	79 061	
1986–87	2 088 250	1 206 529	1 436 729	380 860	416 645	265 905	81 158	
1987–88	2 116 329	1 219 961	1 475 416	383 792	424 698	266 962	83 138	
1988–89	2 153 424	1 234 584	1 527 419	385 558	431 059	269 320	85 154	
1989–90	2 190 361	1 252 673	1 568 404	387 454	437 687	273 149	87 186	
1990–91 ⁽⁹⁾	2 225 876	1 264 797	1 602 958	389 738	447 305	276 063	79 078	1 125
1991–92	2 252 401	1 272 561	1 641 567	390 865	450 695	277 387	80 250	1 120
1992–93	2 270 071	1 274 460	1 687 005	392 058	452 117	278 032	80 826	1 080
1993–94	2 290 549	1 274 549	1 731 918	394 466	456 743	278 420	82 242	355
1994–95	2 305 748	1 273 680	1 778 379	394 750	462 049	278 647	84 314	342
1995–96 ⁽¹⁰⁾	2 323 592	1 276 877	1 818 699	395 816	470 164	278 725	86 014	334
1996–97	2 348 303	1 287 600	1 850 852	397 451	478 718	277 629	88 021	342
1997–98	2 369 422	1 295 590	1 879 729	399 026	487 676	276 054	88 715	349
1998–99	2 391 416	1 306 688	1 909 141	400 885	494 360	275 419	89 671	359
1999–00	2 417 120	1 318 617	1 962 952	402 593	501 512	274 941	90 448	367
2000–01	2 446 945	1 333 101	1 999 813	403 742	508 157	274 513	90 926	378
2001–02	2 465 937	1 339 244	2 047 877	406 116	511 916	274 835	91 986	378
2002–03	2 481 683	1 346 307	2 100 522	409 500	516 570	277 775	92 636	359
2003–04	2 493 150	1 355 848	2 152 358	413 186	521 535	280 639	93 511	376
2004–05	2 510 716	1 368 453	2 210 485	417 944	530 270	282 813	95 184	376
2005–06	2 532 803	1 383 937	2 271 146	422 085	539 535	284 356	96 306	376

(7) (8) (9) (10) (11) See end notes.

Source: ABS (2007h), Regional Population Growth, Australia (ABS cat. no. 3218.0).

Table 2.6c Australian population, by state/territory—total

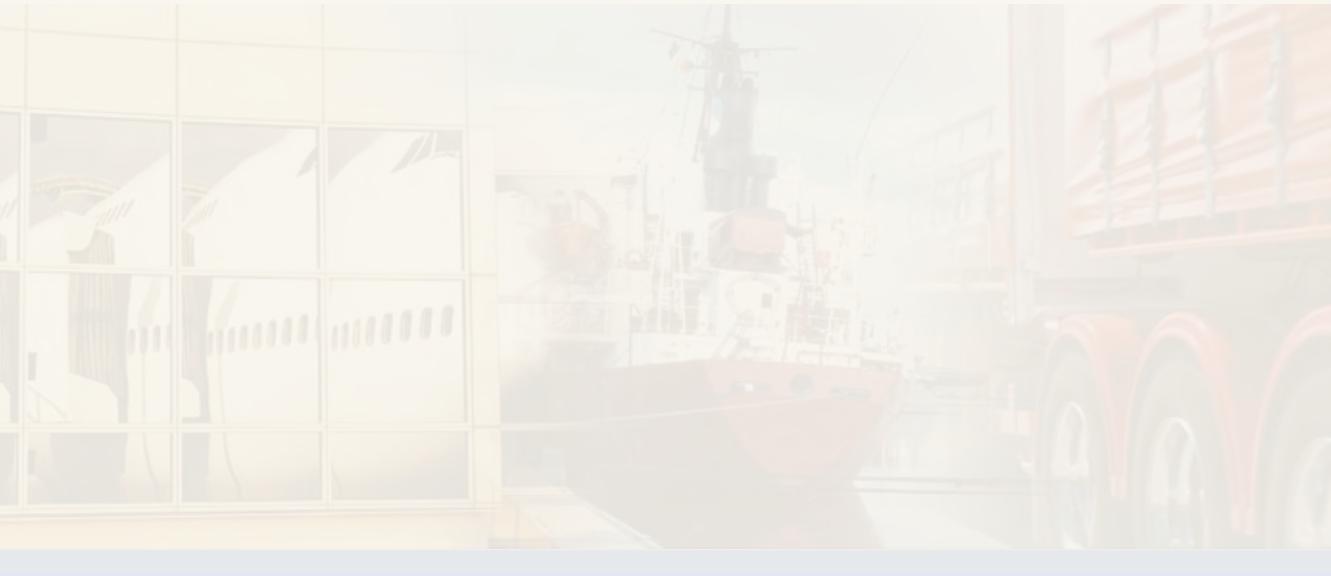
<i>Financial year</i>	NSW	VIC	QLD	SA	WA	TAS	NT	ACT ⁽⁷⁾⁽⁸⁾
1970–71	4 725 503	3 601 352	1 851 485	1 200 114	1 053 834	398 073	85 735	151 169
1971–72	4 795 106	3 661 254	1 898 478	1 214 628	1 082 017	400 308	92 081	159 792
1972–73	4 841 898	3 707 653	1 951 951	1 228 475	1 101 041	403 087	97 127	173 306
1973–74	4 894 053	3 755 726	2 008 340	1 241 538	1 127 598	406 151	102 924	186 241
1974–75	4 932 016	3 787 441	2 051 362	1 265 264	1 154 948	410 088	92 869	199 007
1975–76	4 959 588	3 810 426	2 092 375	1 274 070	1 178 342	412 314	98 228	207 740
1976–77	5 001 888	3 837 364	2 129 839	1 286 119	1 204 366	415 032	103 938	213 688
1977–78	5 053 790	3 863 759	2 172 047	1 296 205	1 227 851	417 642	109 980	217 981
1978–79	5 111 130	3 886 406	2 214 771	1 301 109	1 246 611	420 756	114 149	220 797
1979–80	5 171 527	3 914 303	2 265 935	1 308 397	1 269 068	423 590	118 245	224 291
1980–81	5 234 889	3 946 917	2 345 208	1 318 769	1 300 056	427 224	122 616	227 581
1981–82	5 303 580	3 992 870	2 424 586	1 331 108	1 338 899	429 845	130 314	233 045
1982–83	5 352 959	4 035 702	2 482 282	1 345 775	1 369 050	432 805	135 916	238 983
1983–84	5 402 729	4 076 492	2 523 859	1 360 048	1 391 237	437 760	142 154	245 112
1984–85	5 464 512	4 120 068	2 571 218	1 371 197	1 418 564	442 828	148 536	251 389
1985–86	5 531 526	4 160 856	2 624 595	1 382 550	1 459 019	446 473	154 421	258 910
1986–87	5 616 736	4 210 111	2 675 107	1 392 764	1 496 248	449 226	158 205	265 477
1987–88	5 707 309	4 262 569	2 739 907	1 404 909	1 535 167	451 148	159 026	272 129
1988–89	5 776 283	4 320 164	2 827 637	1 419 029	1 578 434	455 258	161 179	276 432
1989–90	5 834 021	4 378 592	2 899 283	1 432 056	1 613 049	462 188	163 728	282 211
1990–91	5 898 731	4 420 373	2 960 951	1 446 299	1 636 067	466 802	165 493	289 320
1991–92	5 962 569	4 455 002	3 029 950	1 456 512	1 658 045	469 826	168 086	294 674
1992–93	6 004 880	4 472 387	3 109 788	1 460 674	1 677 669	471 659	170 734	299 302
1993–94	6 060 190	4 487 570	3 187 113	1 466 138	1 703 009	472 939	173 375	301 486
1994–95	6 126 981	4 517 387	3 265 109	1 469 429	1 733 787	473 673	177 552	304 805
1995–96	6 204 728	4 560 155	3 338 690	1 474 253	1 765 256	474 443	181 843	308 251
1996–97	6 276 961	4 597 201	3 394 671	1 481 357	1 794 992	473 605	186 912	309 042
1997–98	6 339 071	4 637 820	3 447 725	1 489 552	1 822 668	471 967	189 880	309 888
1998–99	6 411 370	4 686 402	3 501 421	1 497 819	1 849 733	471 430	192 735	312 326
1999–00	6 486 213	4 741 339	3 561 537	1 505 038	1 874 459	471 409	195 561	315 215
2000–01	6 575 217	4 804 726	3 628 946	1 511 728	1 901 159	471 795	197 768	319 317
2001–02	6 629 829	4 863 546	3 714 937	1 521 119	1 925 641	472 799	199 442	322 695
2002–03	6 674 372	4 924 469	3 809 564	1 531 259	1 952 372	477 679	200 107	325 719
2003–04	6 710 492	4 983 056	3 901 811	1 540 399	1 982 006	482 799	202 156	327 562
2004–05	6 758 272	5 050 520	3 996 564	1 552 523	2 016 395	486 380	206 493	330 253
2005–06	6 817 182	5 128 310	4 091 546	1 568 204	2 059 045	489 922	210 674	334 225

(7) (8) See end notes.

Source: ABS (2007h), Regional Population Growth, Australia (ABS cat. no. 3218.0).

Chapter 3

Domestic freight transport



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Chapter 3 Domestic freight transport

In its broadest sense, freight describes physical items transported between locations. Domestic freight can usefully be divided into bulk and non-bulk, and urban, interstate and rest of state.

International sea freight statistics are included in Chapter 8 Shipping (Table 8.4), while international air freight statistics are included in Chapter 7 Aviation (Table 7.2).

Recent events

- February 2006: Council of Australian Governments (COAG) endorsed the Performance Based Standards (PBS) reform. Previous regulations were based on the heavy road vehicle's length and mass dimensions, while the new PBS focuses on how well the vehicle behaves on the road.
- March 2006: The Australian Competition and Consumer Commission approved the Toll Group's takeover of Patrick Corporation Ltd.
- July 2007: The Australian Transport Council endorsed new SMART (Safer Management of Australian Road Transport) blueprint designs, which are pre-approved to meet PBS.
- July 2007: An initial network for B-triples (a B-double with an additional trailer at the front), based on existing road train routes, became operational.

Future plans

- Late 2007: Construction is to start on the Southern Sydney Freight Line between Macarthur and Sefton.
- 2007–08: Duplication of the Port Botany to Cooks River freight line.
- July 2008: The National Transport Commission is developing advice on a new national heavy vehicle charging determination to apply from July 2008.

**Table 3.1a Total, bulk and non-bulk domestic freight, by transport mode
— Bulk**

Financial year	Goods moved (billion tkm)				Goods moved (million tonnes)			
	Road	Rail	Coastal shipping	Total freight task	Road	Rail	Coastal shipping	Total freight weight
1970–71	7.6	26.1						
1971–72	8.1	29.3						
1972–73	8.6	32.7						
1973–74	9.1	40.2						
1974–75	9.6	45.3						
1975–76	10.1	41.4						
1976–77	11.4	43.7						
1977–78	12.6	45.2						
1978–79	13.8	43.9						
1979–80	14.9	47.9						
1980–81	16.0	50.6						
1981–82	17.1	51.2						
1982–83	18.3	47.9						
1983–84	19.5	51.8						
1984–85	20.7	58.8		309.2				
1985–86	21.5	62.0		305.3				
1986–87	22.4	64.3		301.3				
1987–88	23.3	64.5		297.4				
1988–89	23.9	60.9		301.6				
1989–90	24.5	68.4		305.9				
1990–91	25.1	72.0		310.1				
1991–92	26.9	79.6		324.4				
1992–93	28.8	79.0		338.7				
1993–94	30.7	81.6		353.0				
1994–95	32.6	84.5		367.4				
1995–96	34.1	89.4	102.4	225.8	379.5		43.5	
1996–97	35.6	97.4	109.0	241.9	391.7		44.7	
1997–98	37.0	100.1	112.1	249.3	403.9		47.6	
1998–99	40.1	101.6	104.4	246.1	439.5		43.3	
1999–00	41.9	106.2	102.6	250.6	440.7		45.1	
2000–01	42.7	109.0	97.1	248.8	444.6		45.3	
2001–02	44.4	120.9	102.8	268.1	499.2		46.1	
2002–03	46.0	130.1	106.3	282.4	465.9		45.7	
2003–04	48.2	nya	108.2	nya	508.8		45.4	
2004–05	50.7	nya	106.7	nya	526.8		45.9	
2005–06	nya	nya	115.3	nya	nya	nya	48.6	nya

Data are not readily available for missing years.

nya: not yet available.

Note: Tonnes of goods moved by domestic air freight data are not currently available.

Source: ARA (2006), Australian Rail Industry Report, BTRE (2006b), Freight Measurement and Modelling in Australia (Report 112), BITRE estimates and BTRE (2007i), Domestic sea freight database.

**Table 3.1b Total, bulk and non-bulk domestic freight, by transport mode
— Non-bulk**

Financial year	Goods moved (billion tkm)				Goods moved (million tonnes)			
	Road	Rail	Coastal shipping	Total freight task	Road	Rail	Coastal shipping	Total freight weight
1970–71	17.8	13.6						
1971–72	19.0	13.4						
1972–73	20.2	14.0						
1973–74	21.3	13.9						
1974–75	22.5	13.7						
1975–76	23.7	14.2						
1976–77	26.5	14.0						
1977–78	29.4	14.6						
1978–79	32.3	15.9						
1979–80	34.8	15.8						
1980–81	37.4	15.1						
1981–82	40.0	14.1						
1982–83	42.7	12.0						
1983–84	45.4	13.6						
1984–85	48.2	13.9			721.5			
1985–86	50.3	15.4			712.3			
1986–87	52.4	16.1			703.1			
1987–88	54.5	17.4			693.9			
1988–89	55.8	19.7			703.8			
1989–90	57.1	19.5			713.7			
1990–91	58.5	19.2			723.5			
1991–92	62.9	19.7			756.9			
1992–93	67.2	21.8			790.3			
1993–94	71.6	22.7			823.7			
1994–95	76.0	21.7			857.2			
1995–96	79.5	20.9	3.7	104.0	885.6			4.3
1996–97	83.0	22.3	3.6	108.9	914.0			4.4
1997–98	86.4	25.5	4.8	116.8	942.4			4.9
1998–99	93.5	26.3	4.4	124.2	1 025.5			5.1
1999–00	97.7	27.4	6.3	131.4	1 028.3			6.2
2000–01	99.7	28.0	7.4	135.1	1 037.4			6.7
2001–02	103.7	29.6	7.6	140.9	1 164.8			6.3
2002–03	107.3	31.0	8.5	146.8	1 087.1			7.1
2003–04	112.4	nya	8.7	nya	1 187.2			7.7
2004–05	118.2	nya	7.4	nya	1 229.2			7.7
2005–06	nya	nya	6.7	nya	nya			6.7
								nya

Data are not readily available for missing years.

nya: not yet available.

Note: Tonnes of goods moved by domestic air freight data are not currently available.

Source: ARA (2006), Australian Rail Industry Report, BTRE (2006b), Freight Measurement and Modelling in Australia (Report 112), BITRE estimates and BTRE (2007i), Domestic sea freight database.

Table 3.1c Total, bulk and non-bulk domestic freight, by transport mode
— Total bulk and non-bulk

Financial year	Goods moved (billion tkm)				Goods moved (million tonnes)			
	Road	Rail	Coastal shipping	Total freight task	Road	Rail	Coastal shipping	Total freight weight
1970–71	25.5	39.7	72.0	137.2				
1971–72	27.1	42.7	83.2	153.0				44.6
1972–73	28.8	46.7	89.5	165.0				43.3
1973–74	30.5	54.1	96.1	180.6				46.3
1974–75	32.1	59.0	101.2	192.3				46.4
1975–76	33.8	55.6	104.6	194.1				47.5
1976–77	37.9	57.7	102.3	197.9				47.2
1977–78	42.0	59.8	105.1	206.9				48.0
1978–79	46.1	59.8	104.7	210.6				47.4
1979–80	49.8	63.7	105.1	218.6				48.1
1980–81	53.4	65.7	110.3	229.4				47.3
1981–82	57.1	65.4	97.8	220.3				43.1
1982–83	61.0	59.8	80.9	201.7				38.3
1983–84	64.9	65.4	94.3	224.7				42.7
1984–85	68.8	72.6	96.3	237.7	1 030.6			42.7
1985–86	71.8	77.3	101.8	251.0	1 017.5			44.7
1986–87	74.8	80.4	95.2	250.4	1 004.4			44.4
1987–88	77.8	81.9	93.6	253.3	991.3			43.2
1988–89	79.7	80.6	90.7	251.0	1 005.4			43.0
1989–90	81.6	87.9	94.2	263.8	1 019.5			44.5
1990–91	83.5	91.1	93.8	268.5	1 033.6			44.2
1991–92	89.8	99.3	96.4	285.5	1 081.3			43.6
1992–93	96.0	100.8	96.0	292.8	1 129.1			44.2
1993–94	102.3	104.2	98.8	305.3	1 176.8			45.3
1994–95	108.5	106.2	109.2	323.9	1 224.5			49.2
1995–96	113.5	110.3	106.1	329.9	1 265.1			47.8
1996–97	118.5	119.6	112.6	350.7	1 305.7			49.1
1997–98	123.5	125.6	116.9	366.0	1 346.3			52.5
1998–99	133.6	128.0	108.8	370.3	1 465.0			48.4
1999–00	139.6	133.6	108.9	382.0	1 469.0			51.3
2000–01	142.5	136.9	104.5	383.9	1 482.0			52.0
2001–02	148.1	150.5	110.4	409.0	1 664.0			52.4
2002–03	153.3	158.1	114.8	426.2	1 553.0	576.0		52.8
2003–04	160.5	168.1	117.0	445.6	1 696.0	594.7		53.0
2004–05	168.9	183.0	114.0	465.9	1 756.0	635.0		53.7
2005–06	nya	nya	122.0	nya	nya	nya		55.2
								nya

Data are not readily available for missing years.

nya: not yet available.

Note: Tonnes of goods moved by domestic air freight data are not currently available.

Source: ARA (2006), Australian Rail Industry Report, BTRE (2006b), Freight Measurement and Modelling in Australia (Report 112), BITRE estimates and BTRE (2007i), Domestic sea freight database.

Table 3.2a Total domestic freight by state/territory, by transport mode—road

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>billion tonne-kilometres</i>									
1970–71	9.3	6.3	2.8	2.7	3.1	0.7	0.5	0.1	25.5
1971–72	10.0	6.7	3.0	2.9	3.2	0.7	0.6	0.2	27.1
1972–73	10.6	7.1	3.2	3.1	3.3	0.8	0.6	0.2	28.8
1973–74	11.2	7.6	3.3	3.3	3.4	0.8	0.7	0.2	30.5
1974–75	11.8	8.0	3.5	3.5	3.5	0.8	0.7	0.2	32.1
1975–76	12.4	8.5	3.7	3.7	3.6	0.9	0.8	0.2	33.8
1976–77	14.0	9.3	4.5	4.0	4.0	1.0	0.9	0.2	37.9
1977–78	15.5	10.0	5.3	4.4	4.5	1.1	1.0	0.2	42.0
1978–79	17.1	10.7	6.2	4.7	4.9	1.2	1.1	0.2	46.1
1979–80	18.3	11.4	6.8	5.1	5.2	1.3	1.2	0.2	49.8
1980–81	19.6	12.1	7.5	5.5	5.6	1.4	1.4	0.3	53.4
1981–82	20.8	12.9	8.2	5.9	6.0	1.5	1.5	0.3	57.1
1982–83	22.1	13.6	8.9	6.3	6.5	1.6	1.6	0.3	61.0
1983–84	23.4	14.3	9.7	6.8	6.9	1.8	1.7	0.3	64.9
1984–85	24.6	15.0	10.5	7.2	7.4	1.9	1.8	0.3	68.8
1985–86	25.3	15.6	11.2	7.3	8.1	2.0	1.9	0.4	71.8
1986–87	26.0	16.2	12.0	7.3	8.8	2.1	2.0	0.4	74.8
1987–88	26.7	16.8	12.8	7.4	9.5	2.2	2.0	0.4	77.8
1988–89	26.9	17.3	13.6	7.4	9.8	2.3	2.2	0.4	79.7
1989–90	27.2	17.8	14.4	7.3	10.0	2.3	2.3	0.4	81.6
1990–91	27.5	18.2	15.2	7.3	10.3	2.3	2.4	0.4	83.5
1991–92	29.5	19.7	16.5	7.8	11.0	2.4	2.6	0.4	89.8
1992–93	31.4	21.1	17.8	8.3	11.7	2.5	2.7	0.4	96.0
1993–94	33.4	22.6	19.2	8.9	12.4	2.5	2.9	0.4	102.3
1994–95	35.3	24.1	20.6	9.4	13.1	2.6	3.1	0.4	108.5
1995–96	37.0	25.2	21.7	9.8	13.8	2.6	3.0	0.4	113.5
1996–97	38.7	26.4	22.7	10.2	14.4	2.7	2.9	0.4	118.5
1997–98	40.5	27.6	23.8	10.6	15.1	2.7	2.8	0.4	123.5
1998–99	44.5	29.7	25.7	11.4	16.2	2.8	3.1	0.4	133.6
1999–00	46.6	31.0	27.0	11.9	16.6	2.8	3.2	0.5	139.6
2000–01	47.4	31.6	28.1	12.1	16.6	2.9	3.3	0.5	142.5
2001–02	48.9	32.6	29.6	12.5	17.7	3.0	3.4	0.5	148.1
2002–03	50.2	33.8	30.7	13.1	18.4	3.1	3.5	0.5	153.3
2003–04	52.0	35.5	32.3	14.1	19.4	3.2	3.7	0.5	160.5
2004–05	54.6	37.2	33.8	15.3	20.3	3.4	3.8	0.5	168.9
2005–06	nya	nya	nya	nya	nya	nya	nya	nya	nya

nya: not yet available.

Source: BTRE (2006b), Freight Measurement and Modelling in Australia (Report 112) and BITRE estimates.

Table 3.2b Total domestic freight by state/territory, by transport mode—rail

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>billion tonne-kilometres</i>									
1970–71	6.9	2.7	6.5	3.0	20.5	0.2	na	na	39.7
1971–72	7.4	2.9	7.0	3.2	22.0	0.2	na	na	42.7
1972–73	8.1	3.2	7.6	3.5	24.1	0.2	na	na	46.7
1973–74	8.5	3.1	7.7	3.9	30.6	0.3	na	na	54.1
1974–75	8.6	3.0	9.0	3.8	34.2	0.3	na	na	59.0
1975–76	8.3	3.0	9.8	3.8	30.4	0.2	na	na	55.6
1976–77	9.1	3.0	10.0	4.0	31.4	0.2	na	na	57.7
1977–78	9.2	3.1	10.4	4.1	32.9	0.2	na	na	59.8
1978–79	9.1	3.3	11.3	4.5	31.4	0.3	na	na	59.8
1979–80	10.6	3.9	11.4	4.7	32.9	0.2	na	na	63.7
1980–81	10.6	3.7	12.0	4.9	34.2	0.2	na	na	65.7
1981–82	10.8	3.5	13.2	4.9	32.7	0.2	na	na	65.4
1982–83	9.2	2.5	13.3	4.6	30.1	0.2	na	na	59.8
1983–84	11.2	3.1	15.5	5.0	30.3	0.2	na	na	65.4
1984–85	12.5	3.6	16.9	5.3	34.0	0.2	na	na	72.6
1985–86	14.1	3.2	18.5	6.1	35.2	0.3	na	na	77.3
1986–87	14.4	3.3	19.8	5.9	36.7	0.3	na	na	80.4
1987–88	14.4	3.4	20.7	6.4	36.7	0.2	na	na	81.9
1988–89	13.6	3.3	21.9	6.7	34.9	0.2	na	na	80.6
1989–90	14.7	3.8	22.8	6.9	39.5	0.2	na	na	87.9
1990–91	14.7	3.8	23.4	6.6	42.4	0.3	na	na	91.1
1991–92	15.4	3.6	27.2	7.2	45.7	0.3	na	na	99.3
1992–93	16.2	4.0	26.7	7.6	46.0	0.3	na	na	100.8
1993–94	17.3	4.5	26.7	8.0	47.5	0.3	na	na	104.2
1994–95	16.9	4.6	28.7	7.9	47.7	0.3	na	na	106.2
1995–96	18.1	4.8	28.4	7.8	50.8	0.4	na	na	110.3
1996–97	20.0	5.5	30.9	10.2	52.7	0.4	na	na	119.6
1997–98	20.0	4.5	32.0	9.8	58.9	0.5	na	na	125.6
1998–99	19.5	4.6	33.2	9.9	60.2	0.5	na	na	128.0
1999–00	19.9	4.8	35.5	9.6	63.3	0.5	na	na	133.6
2000–01	21.0	5.0	39.4	10.0	60.8	0.7	na	na	136.9
2001–02	23.1	5.5	43.3	11.0	66.8	0.8	na	na	150.5
2002–03	24.3	5.7	45.5	11.5	70.2	0.8	na	na	158.1
2003–04	25.8	6.1	48.4	12.3	74.7	0.9	na	na	168.1
2004–05	28.1	6.6	52.7	13.4	81.3	0.9	na	na	183.0
2005–06	nya	nya	nya	nya	nya	nya	na	na	nya

na: not applicable.

nya: not yet available.

Source: ARA (2006), Australian Rail Industry Report, BTRE (2006b), Freight Measurement and Modelling in Australia (Report 112) and BITRE estimates.

Table 3.2c Total domestic freight by state/territory, by transport mode—shipping

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>billion tonne-kilometres</i>									
1995–96	4.7	8.6	24.1	9.1	54.2	3.7	1.6	na	106.1
1996–97	5.5	8.8	25.6	9.7	57.6	3.2	2.2	na	112.6
1997–98	5.6	10.3	25.6	9.7	60.5	2.4	2.8	na	116.9
1998–99	4.9	7.9	24.8	9.7	55.1	3.5	2.9	na	108.8
1999–00	6.4	8.9	30.3	9.6	46.5	4.0	3.3	na	108.9
2000–01	7.4	9.4	30.7	9.2	41.8	2.9	3.1	na	104.5
2001–02	5.2	6.6	30.9	9.6	49.9	5.7	2.4	na	110.4
2002–03	5.7	7.6	31.7	10.1	51.8	5.8	2.3	na	114.8
2003–04	4.9	6.6	33.7	8.2	55.5	5.5	2.5	na	117.0
2004–05	5.3	6.6	37.1	8.5	48.4	4.6	3.5	na	114.0
2005–06	5.3	9.0	41.2	8.9	50.8	4.4	2.4	na	122.0

na: not applicable.

Source: BTRE (2007*i*), Domestic sea freight database.**Table 3.2d Total domestic freight by state/territory, by transport mode—total**

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>billion tonne-kilometres</i>									
1995–96	59.9	38.6	74.2	26.7	118.8	6.7	4.6	0.4	329.9
1996–97	64.2	40.7	79.3	30.0	124.8	6.3	5.1	0.4	350.7
1997–98	66.1	42.4	81.4	30.1	134.5	5.6	5.6	0.4	366.0
1998–99	68.8	42.1	83.7	31.0	131.4	6.8	6.0	0.4	370.3
1999–00	72.8	44.7	92.8	31.0	126.3	7.4	6.5	0.5	382.0
2000–01	75.8	46.0	98.3	31.2	119.2	6.5	6.4	0.5	383.9
2001–02	77.2	44.7	103.9	33.0	134.4	9.5	5.8	0.5	409.0
2002–03	80.2	47.1	107.9	34.8	140.5	9.6	5.7	0.5	426.2
2003–04	82.7	48.1	114.4	34.5	149.5	9.6	6.1	0.5	445.6
2004–05	88.0	50.5	123.6	37.1	149.9	8.9	7.4	0.5	465.9
2005–06	nya	nya	nya	nya	nya	nya	nya	nya	nya

nya: not yet available.

Source: ARA (2006), Australian Rail Industry Report, BTRE (2006*b*), Freight Measurement and Modelling in Australia (Report 112), BITRE estimates and BTRE (2007*i*) Domestic sea freight database.

Table 3.3a Intrastate freight by state/territory, by transport mode—road

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>billion tonne-kilometres</i>									
1970–71	7.7	5.1	2.3	2.2	3.0	0.6	0.5	0.1	21.5
1971–72	8.1	5.3	2.5	2.3	3.1	0.7	0.5	0.1	22.6
1972–73	8.4	5.6	2.6	2.4	3.1	0.7	0.6	0.1	23.6
1973–74	8.8	5.8	2.7	2.6	3.2	0.8	0.7	0.1	24.7
1974–75	9.1	6.1	2.8	2.7	3.3	0.8	0.7	0.1	25.7
1975–76	9.5	6.4	3.0	2.8	3.3	0.8	0.8	0.1	26.7
1976–77	10.8	7.1	3.7	3.1	3.8	0.9	0.9	0.1	30.4
1977–78	12.2	7.7	4.5	3.4	4.2	1.0	1.0	0.2	34.1
1978–79	13.5	8.3	5.4	3.7	4.6	1.1	1.0	0.2	37.8
1979–80	14.4	8.9	5.9	3.9	5.0	1.2	1.2	0.2	40.6
1980–81	15.2	9.4	6.4	4.2	5.3	1.3	1.3	0.2	43.3
1981–82	16.1	10.0	7.0	4.4	5.7	1.4	1.5	0.2	46.1
1982–83	16.8	10.6	7.7	4.7	6.1	1.5	1.6	0.2	49.1
1983–84	17.6	11.2	8.4	5.0	6.5	1.6	1.7	0.2	52.1
1984–85	18.3	11.8	9.1	5.3	7.0	1.8	1.8	0.2	55.2
1985–86	18.5	12.3	9.9	5.2	7.6	1.9	1.8	0.2	57.5
1986–87	18.7	12.9	10.6	5.2	8.3	2.0	1.9	0.2	59.9
1987–88	18.9	13.5	11.4	5.2	9.0	2.1	1.9	0.3	62.2
1988–89	19.0	14.0	12.1	5.1	9.3	2.1	2.0	0.3	63.9
1989–90	19.0	14.6	12.7	5.1	9.5	2.1	2.2	0.3	65.5
1990–91	19.1	15.1	13.4	5.0	9.8	2.2	2.3	0.3	67.1
1991–92	20.2	16.3	14.5	5.3	10.3	2.3	2.4	0.3	71.5
1992–93	21.4	17.5	15.6	5.6	10.7	2.4	2.4	0.3	75.8
1993–94	22.6	18.7	16.7	5.9	11.2	2.5	2.5	0.3	80.2
1994–95	23.8	19.9	17.8	6.2	11.6	2.6	2.5	0.3	84.6
1995–96	24.7	20.9	18.6	6.5	12.2	2.6	2.4	0.3	88.1
1996–97	25.5	21.8	19.5	6.7	12.8	2.6	2.3	0.3	91.5
1997–98	26.3	22.8	20.4	7.0	13.4	2.7	2.2	0.2	95.0
1998–99	28.5	24.4	22.0	7.4	14.6	2.7	2.4	0.3	102.2
1999–2000	28.8	25.6	22.9	7.6	15.2	2.8	2.4	0.3	105.6
2000–01	28.6	26.1	23.9	7.6	15.0	2.8	2.5	0.2	106.7
2001–02	28.6	26.9	25.1	7.7	15.9	2.9	2.5	0.3	109.9
2002–03	28.9	27.8	25.9	8.2	16.6	3.0	2.6	0.3	113.2
2003–04	29.7	29.2	27.3	8.9	17.4	3.2	2.7	0.3	118.7
2004–05	31.4	30.8	28.6	9.9	18.1	3.3	2.9	0.3	125.3

Source: BTRE (2006b), Freight Measurement and Modelling in Australia (Report 112) and BITRE estimates.

Table 3.3b Intrastate freight by state/territory, by transport mode—shipping

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>billion tonne-kilometres</i>									
1995–96	0.1	0.0	19.3	0.1	3.6	0.2	0.0	na	23.4
1996–97	0.1	0.0	20.9	0.2	3.8	0.0	0.0	na	25.0
1997–98	0.2	0.0	20.8	0.1	4.0	0.1	0.0	na	25.3
1998–99	0.1	0.1	19.8	0.1	2.9	0.2	0.1	na	23.3
1999–00	0.1	0.0	23.7	0.2	3.4	0.2	0.1	na	27.7
2000–01	0.1	0.0	24.2	0.2	6.6	0.1	0.1	na	31.2
2001–02	0.1	0.0	24.1	0.2	5.7	0.6	0.1	na	30.7
2002–03	0.0	0.0	24.4	0.2	5.7	0.1	0.1	na	30.6
2003–04	0.0	0.0	24.7	0.2	5.3	0.1	0.0	na	30.3
2004–05	0.0	0.0	27.5	0.2	4.5	0.1	0.1	na	32.4
2005–06	0.0	0.0	31.3	0.2	3.6	0.1	0.0	na	35.3

na: not applicable.

Source: BTRE (2007i), Domestic sea freight data base.

Table 3.4a Interstate freight by state/territory, by transport mode—road

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>billion tonne-kilometres</i>									
1970–71	1.6	1.2	0.4	0.5	0.1	0.0	0.0	0.0	3.9
1971–72	1.9	1.4	0.5	0.6	0.1	0.0	0.0	0.0	4.5
1972–73	2.1	1.6	0.6	0.6	0.2	0.1	0.0	0.0	5.2
1973–74	2.4	1.7	0.6	0.7	0.2	0.1	0.0	0.0	5.8
1974–75	2.7	1.9	0.7	0.8	0.2	0.1	0.0	0.1	6.4
1975–76	2.9	2.1	0.7	0.9	0.3	0.1	0.0	0.1	7.1
1976–77	3.1	2.2	0.8	0.9	0.3	0.1	0.0	0.1	7.5
1977–78	3.4	2.3	0.8	1.0	0.3	0.1	0.0	0.1	7.9
1978–79	3.6	2.4	0.8	1.0	0.3	0.1	0.0	0.1	8.3
1979–80	4.0	2.6	0.9	1.2	0.3	0.1	0.1	0.1	9.2
1980–81	4.4	2.7	1.0	1.4	0.3	0.1	0.1	0.1	10.1
1981–82	4.8	2.9	1.2	1.6	0.3	0.1	0.1	0.1	11.0
1982–83	5.3	3.0	1.2	1.7	0.4	0.1	0.1	0.1	11.9
1983–84	5.8	3.1	1.3	1.8	0.4	0.1	0.1	0.1	12.8
1984–85	6.4	3.3	1.3	1.9	0.4	0.1	0.1	0.1	13.7
1985–86	6.8	3.3	1.4	2.0	0.5	0.1	0.1	0.1	14.3
1986–87	7.3	3.3	1.4	2.1	0.5	0.1	0.1	0.1	14.9
1987–88	7.8	3.3	1.4	2.2	0.5	0.1	0.1	0.1	15.6
1988–89	8.0	3.3	1.5	2.2	0.5	0.1	0.1	0.1	15.9
1989–90	8.2	3.2	1.6	2.3	0.5	0.2	0.1	0.1	16.2
1990–91	8.4	3.1	1.7	2.3	0.5	0.2	0.1	0.1	16.5
1991–92	9.2	3.4	2.0	2.5	0.7	0.1	0.2	0.1	18.3
1992–93	10.0	3.7	2.3	2.7	1.0	0.1	0.3	0.1	20.2
1993–94	10.8	3.9	2.5	3.0	1.2	0.1	0.4	0.1	22.1
1994–95	11.5	4.1	2.8	3.2	1.5	0.0	0.5	0.2	23.9
1995–96	12.4	4.4	3.0	3.3	1.6	0.0	0.6	0.2	25.4
1996–97	13.2	4.6	3.2	3.4	1.7	0.0	0.6	0.2	27.0
1997–98	14.1	4.8	3.4	3.6	1.7	0.0	0.6	0.2	28.5
1998–99	16.0	5.3	3.7	3.9	1.6	0.0	0.7	0.2	31.4
1999–00	17.8	5.5	4.1	4.3	1.4	0.0	0.8	0.2	34.0
2000–01	18.9	5.5	4.3	4.5	1.6	0.0	0.8	0.2	35.8
2001–02	20.3	5.7	4.5	4.8	1.8	0.1	0.9	0.2	38.2
2002–03	21.3	6.0	4.8	5.0	1.8	0.1	0.9	0.2	40.0
2003–04	22.3	6.3	5.0	5.1	1.9	0.1	0.9	0.2	41.8
2004–05	23.2	6.4	5.2	5.4	2.2	0.1	1.0	0.2	43.6

Source: BTRE (2006b), Freight Measurement and Modelling in Australia (Report 112) and BITRE estimates.

Table 3.4b Interstate freight by state/territory, by transport mode—shipping

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>billion tonne-kilometres</i>									
1995–96	4.6	8.5	4.8	9.0	50.7	3.5	1.6	na	82.7
1996–97	5.4	8.8	4.7	9.5	53.8	3.2	2.2	na	87.6
1997–98	5.4	10.3	4.8	9.6	56.5	2.3	2.8	na	91.7
1998–99	4.8	7.8	4.9	9.6	52.2	3.3	2.8	na	85.4
1999–00	6.2	8.8	6.6	9.4	43.1	3.9	3.2	na	81.2
2000–01	7.3	9.4	6.5	9.0	35.2	2.8	3.1	na	73.3
2001–02	5.1	6.6	6.8	9.4	44.2	5.1	2.4	na	79.7
2002–03	5.6	7.5	7.2	9.9	46.1	5.6	2.2	na	84.2
2003–04	4.9	6.5	9.0	8.0	50.3	5.4	2.5	na	86.6
2004–05	5.3	6.6	9.6	8.3	43.9	4.5	3.5	na	81.6
2005–06	5.3	9.0	9.9	8.7	47.2	4.3	2.4	na	86.8

na: not applicable.

Source: BTRE (2007i), Domestic sea freight data base.

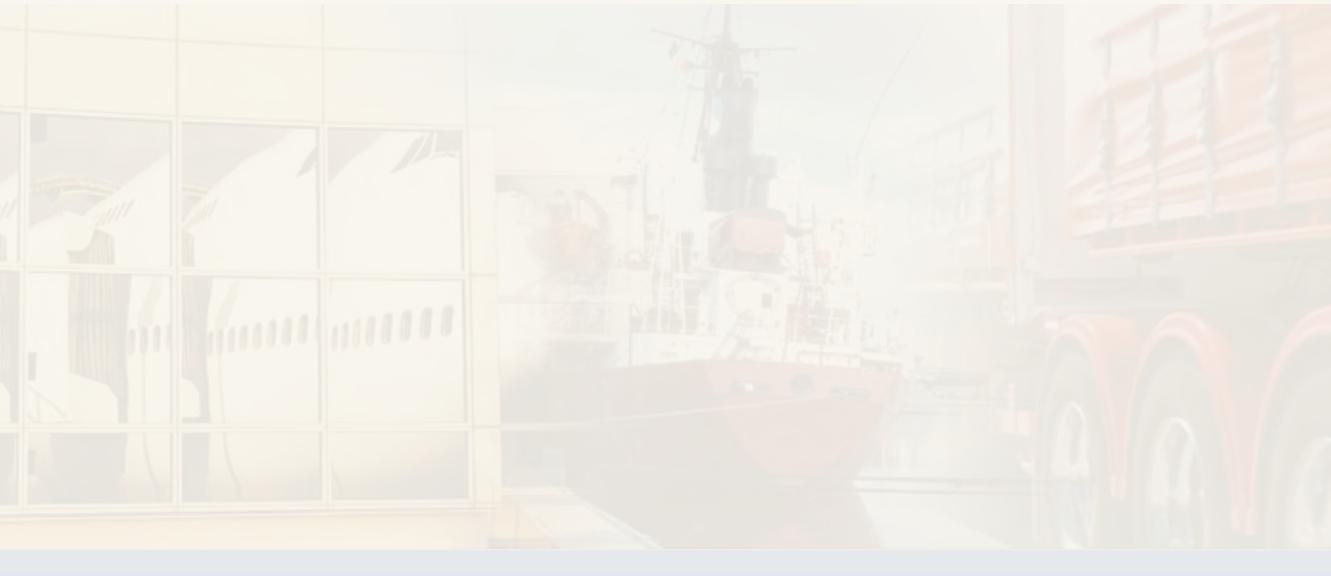
Table 3.5 Urban road freight by capital city

<i>Financial year</i>	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Darwin</i>	<i>Canberra</i>	<i>Total</i>
<i>billion tonne kilometres</i>									
1970–71	2.85	1.97	0.62	0.67	0.79	0.11	0.04	0.10	7.17
1971–72	3.01	2.10	0.69	0.72	0.84	0.13	0.05	0.11	7.64
1972–73	3.17	2.23	0.75	0.76	0.90	0.14	0.05	0.11	8.11
1973–74	3.32	2.36	0.82	0.80	0.95	0.15	0.06	0.12	8.58
1974–75	3.48	2.49	0.89	0.84	1.01	0.16	0.06	0.13	9.05
1975–76	3.62	2.63	0.96	0.88	1.06	0.18	0.06	0.13	9.52
1976–77	3.89	2.86	1.13	0.95	1.16	0.19	0.06	0.15	10.39
1977–78	4.14	3.09	1.31	1.01	1.26	0.21	0.06	0.16	11.25
1978–79	4.38	3.32	1.51	1.08	1.36	0.23	0.06	0.17	12.11
1979–80	4.58	3.51	1.68	1.06	1.43	0.24	0.09	0.18	12.77
1980–81	4.77	3.70	1.86	1.03	1.50	0.25	0.13	0.19	13.43
1981–82	4.96	3.89	2.05	1.00	1.58	0.25	0.17	0.19	14.09
1982–83	5.13	4.06	2.14	1.04	1.62	0.27	0.18	0.20	14.66
1983–84	5.29	4.24	2.24	1.08	1.67	0.30	0.19	0.21	15.22
1984–85	5.45	4.41	2.33	1.12	1.72	0.32	0.20	0.22	15.78
1985–86	5.74	4.72	2.47	1.19	1.82	0.33	0.21	0.23	16.71
1986–87	6.02	5.04	2.61	1.26	1.93	0.34	0.21	0.24	17.64
1987–88	6.29	5.36	2.75	1.33	2.04	0.34	0.21	0.26	18.57
1988–89	6.45	5.58	2.84	1.36	2.12	0.35	0.22	0.26	19.18
1989–90	6.61	5.80	2.92	1.40	2.20	0.35	0.23	0.27	19.78
1990–91	6.76	6.03	3.00	1.43	2.29	0.35	0.24	0.28	20.39
1991–92	7.08	6.39	3.18	1.51	2.42	0.35	0.24	0.28	21.44
1992–93	7.41	6.75	3.36	1.58	2.54	0.35	0.24	0.27	22.49
1993–94	7.73	7.12	3.53	1.65	2.67	0.34	0.24	0.26	23.54
1994–95	8.04	7.50	3.71	1.72	2.79	0.33	0.23	0.25	24.58
1995–96	8.28	7.76	3.90	1.78	2.89	0.31	0.24	0.25	25.40
1996–97	8.51	8.01	4.09	1.84	2.98	0.29	0.25	0.24	26.22
1997–98	8.74	8.27	4.28	1.90	3.08	0.27	0.26	0.24	27.03
1998–99	8.99	8.65	4.66	1.94	3.18	0.27	0.29	0.24	28.23
1999–00	9.26	9.11	5.32	1.99	3.37	0.28	0.26	0.25	29.83
2000–01	9.60	9.43	5.33	2.04	3.51	0.29	0.22	0.23	30.64
2001–02	9.80	9.83	5.75	2.10	3.67	0.30	0.19	0.24	31.88
2002–03	10.21	10.18	6.23	2.23	3.84	0.31	0.18	0.26	33.44
2003–04	10.48	10.44	6.63	2.31	4.13	0.34	0.19	0.27	34.80
2004–05	10.84	10.75	7.10	2.46	4.31	0.36	0.20	0.28	36.28

Source: BTRE (2006b), Freight Measurement and Modelling in Australia (Report 112) and BITRE estimates.

Chapter 4

Passenger transport



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Chapter 4

Passenger transport

The passenger transport task is a function of the number and movement of passenger vehicles (including aircraft and freight vehicles when used as passenger vehicles) and the occupancy rate of the vehicles. See also passenger statistics in Chapter 7 Aviation.

Drivers of freight vehicles travelling for business purposes and passenger vehicles with fare paying passengers are excluded from the passenger transport task. Conceptually, this measure could include passenger travel by foot, bicycle and recreational water craft; however, robust datasets for these forms of passenger travel do not yet exist.

Recent events

- January 2007: Public transport smart cards were trialled in several Australian cities (Brisbane, Geelong and Sydney) and introduced in Perth. The cards store value and are useable on rail, bus and ferry services.
- May 2007: Extension of the Melbourne urban electrified rail service to Craigieburn, with the new platform opened in May 2007.

Future plans

- Late 2007: Scheduled opening of the Southern Suburbs Railway linking Perth with Mandurah.
- Late 2007: Expected completion of the Glenelg tramline from Victoria Square to the vicinity of the Adelaide Railway Station.
- 2004–08: Staged opening of Brisbane's Inner North Busway.
- 2008: Expected opening of the Epping to Chatswood rail line in Sydney.
- 2007–09: Extension of the Brisbane to Gold Coast railway to Reedy Creek.

Table 4.1 Total passenger travel by transport mode

<i>Financial year</i>	<i>Passenger cars</i>	<i>Buses</i>	<i>Rail</i>	<i>Air</i>	<i>Other^(I)</i>	<i>Total</i>
<i>billion passenger km</i>						
1970–71	107.53	6.58	13.41	5.28	7.20	139.99
1971–72	111.21	6.72	11.65	5.70	8.40	143.68
1972–73	114.23	6.87	11.21	6.26	9.40	147.97
1973–74	121.59	6.97	10.07	7.45	10.71	156.79
1974–75	128.39	7.14	9.20	8.05	11.84	164.61
1975–76	131.84	7.18	8.57	7.87	12.58	168.03
1976–77	137.67	7.25	8.59	7.61	13.63	174.74
1977–78	142.59	7.31	8.42	8.48	14.10	180.90
1978–79	145.38	7.40	8.32	8.97	14.34	184.41
1979–80	146.82	7.85	8.74	9.90	14.22	187.52
1980–81	149.00	8.37	9.26	10.21	14.61	191.44
1981–82	157.62	8.88	9.34	10.67	14.80	201.31
1982–83	158.11	10.28	9.25	9.89	14.55	202.09
1983–84	164.94	11.75	9.14	10.29	15.36	211.47
1984–85	172.90	13.23	9.14	11.05	16.25	222.58
1985–86	178.76	14.25	9.37	11.98	15.56	229.92
1986–87	182.98	15.31	9.53	12.77	15.25	235.84
1987–88	189.83	16.30	9.97	14.05	15.30	245.46
1988–89	197.40	17.17	10.18	14.53	15.84	255.12
1989–90	200.95	17.43	9.72	10.92	15.76	254.78
1990–91	201.75	16.73	9.86	15.54	14.99	258.87
1991–92	204.72	16.19	9.85	20.23	15.09	266.08
1992–93	209.38	16.30	9.67	20.25	14.92	270.52
1993–94	213.06	15.79	9.75	24.31	15.34	278.25
1994–95	221.63	15.61	10.10	26.92	16.32	290.58
1995–96	227.30	16.41	10.18	28.91	16.42	299.23
1996–97	228.94	16.62	10.35	29.89	16.65	302.46
1997–98	232.88	16.94	9.93	30.32	17.49	307.57
1998–99	238.60	17.23	10.22	30.94	18.26	315.25
1999–00	243.06	17.34	10.71	32.71	18.35	322.17
2000–01	242.03	17.64	11.26	33.99	18.83	323.74
2001–02	251.48	17.74	11.36	32.56	19.54	332.67
2002–03	254.65	17.85	11.14	35.74	20.06	339.44
2003–04	265.43	18.08	11.35	40.93	20.99	356.79

(I) See end notes.

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 4.2 Intercapital city passenger travel by city pair

<i>Financial year</i>	<i>Syd – Mel</i>	<i>Syd – Canb</i>	<i>Syd – Bne</i>	<i>Mel – Adl</i>	<i>Mel – Bne</i>	<i>Syd – Adl</i>
	<i>thousand passenger km</i>					
1970–71	2 163	1 548	1 056	803	208	347
1971–72	2 172	1 575	1 082	805	211	346
1972–73	2 326	1 695	1 145	861	229	363
1973–74	2 447	1 803	1 272	927	268	391
1974–75	2 505	1 797	1 309	946	268	423
1975–76	2 482	1 754	1 285	944	266	438
1976–77	2 678	1 739	1 279	948	274	451
1977–78	2 771	1 835	1 384	957	292	476
1978–79	2 657	1 877	1 223	1 046	279	487
1979–80	2 702	1 616	1 257	1 051	315	524
1980–81	2 845	2 056	1 390	970	359	479
1981–82	2 597	2 321	1 625	1 178	332	506
1982–83	2 771	2 828	1 825	1 046	326	469
1983–84	2 571	3 563	1 430	969	331	416
1984–85	2 830	4 166	1 931	888	304	603
1985–86	3 010	4 837	1 708	1 276	341	528
1986–87	2 881	4 543	1 383	1 299	321	508
1987–88	3 280	3 942	1 778	1 160	466	613
1988–89	2 978	5 166	2 496	1 317	619	523
1989–90	2 930	4 671	1 760	1 287	510	496
1990–91	3 387	5 168	1 788	1 613	449	504
1991–92	4 049	4 990	2 176	1 589	534	598
1992–93	3 830	5 268	1 947	1 532	604	689
1993–94	3 948	4 974	1 878	1 454	666	664
1994–95	4 528	5 448	2 103	1 404	752	762
1995–96	4 880	6 767	2 183	1 612	861	821
1996–97	5 168	5 532	2 253	1 712	902	813
1997–98	5 384	5 854	2 265	1 756	937	904
1998–99	5 567	5 935	2 309	1 775	955	983
1999–00	5 843	6 405	2 318	1 826	1 002	1 093
2000–01	6 801	5 787	2 915	1 901	1 208	1 355
2001–02	5 866	5 755	2 733	1 922	1 355	969
2002–03	5 850	6 190	2 505	1 862	1 288	902
2003–04	5 807	5 325	2 621	1 917	1 396	1 092

Source: BTRE (2006e), Passenger movements between Australian cities 1970–71 to 2030–31.

Table 4.3a Total passenger kilometres travelled, by capital city—Sydney

<i>Financial year</i>	<i>Passenger cars</i>	<i>Light commercial vehicles</i>	<i>Motor cycles</i>	<i>Rail</i>	<i>Light rail</i>	<i>Bus</i>	<i>Ferry</i>	<i>Total</i>
<i>billion passenger kilometres</i>								
1976–77	24.66	1.43	0.24	3.08	0.00	1.51	0.11	31.03
1977–78	25.57	1.54	0.26	3.09	0.00	1.56	0.11	32.12
1978–79	26.10	1.62	0.27	3.11	0.00	1.61	0.11	32.82
1979–80	26.39	1.55	0.29	3.52	0.00	1.66	0.11	33.52
1980–81	26.81	1.53	0.32	3.64	0.00	1.71	0.11	34.11
1981–82	28.40	1.50	0.34	3.76	0.00	1.74	0.11	35.84
1982–83	28.52	1.48	0.35	3.55	0.00	1.78	0.11	35.78
1983–84	29.78	1.59	0.36	3.47	0.00	1.81	0.11	37.12
1984–85	31.25	1.71	0.37	3.45	0.00	1.85	0.11	38.74
1985–86	32.32	1.73	0.36	3.69	0.00	1.88	0.11	40.08
1986–87	33.09	1.76	0.35	3.74	0.00	1.91	0.11	40.95
1987–88	34.33	1.85	0.34	4.01	0.00	1.95	0.11	42.58
1988–89	35.71	1.84	0.33	4.06	0.00	1.99	0.11	44.03
1989–90	36.36	1.82	0.32	4.17	0.00	1.99	0.11	44.77
1990–91	36.54	1.82	0.29	4.25	0.00	2.06	0.11	45.07
1991–92	36.79	1.78	0.29	4.13	0.00	2.08	0.11	45.19
1992–93	37.66	1.79	0.30	3.94	0.00	2.12	0.11	45.92
1993–94	38.35	1.84	0.29	4.02	0.00	2.16	0.11	46.77
1994–95	39.92	2.02	0.29	4.25	0.00	2.20	0.11	48.80
1995–96	40.97	2.04	0.27	4.35	0.00	2.23	0.12	49.99
1996–97	41.40	2.00	0.27	4.48	0.00	2.27	0.12	50.55
1997–98	41.84	2.03	0.26	4.51	0.01	2.32	0.11	51.09
1998–99	42.72	2.09	0.25	4.58	0.02	2.36	0.11	52.13
1999–00	44.01	2.16	0.25	4.74	0.02	2.37	0.11	53.66
2000–01	43.93	2.15	0.26	5.14	0.02	2.45	0.13	54.08
2001–02	45.72	2.25	0.26	5.09	0.02	2.37	0.12	55.83
2002–03	46.38	2.26	0.27	5.03	0.02	2.36	0.12	56.44
2003–04	47.83	2.37	0.29	5.19	0.02	2.38	0.13	58.20

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 4.3b Total passenger kilometres travelled, by capital city—Melbourne

<i>Financial year</i>	<i>Passenger cars</i>	<i>Light commercial vehicles</i>	<i>Motor cycles</i>	<i>Rail</i>	<i>Light rail</i>	<i>Bus</i>	<i>Ferry</i>	<i>Total</i>
<i>billion passenger kilometres</i>								
1976–77	22.70	1.14	0.18	1.66	0.62	0.55	na	26.84
1977–78	23.59	1.21	0.17	1.60	0.59	0.55	na	27.72
1978–79	24.13	1.27	0.16	1.57	0.58	0.56	na	28.27
1979–80	24.48	1.19	0.18	1.51	0.56	0.57	na	28.49
1980–81	24.95	1.17	0.19	1.49	0.55	0.58	na	28.95
1981–82	26.51	1.13	0.21	1.49	0.55	0.60	na	30.49
1982–83	26.70	1.10	0.21	1.49	0.55	0.62	na	30.67
1983–84	27.95	1.17	0.21	1.52	0.56	0.64	na	32.05
1984–85	29.40	1.24	0.21	1.67	0.61	0.67	na	33.80
1985–86	30.57	1.24	0.21	1.71	0.63	0.70	na	35.07
1986–87	31.46	1.25	0.21	1.77	0.65	0.74	na	36.08
1987–88	32.82	1.29	0.21	1.81	0.66	0.77	na	37.56
1988–89	34.32	1.27	0.21	1.89	0.68	0.81	na	39.18
1989–90	35.13	1.25	0.21	1.73	0.63	0.82	na	39.76
1990–91	35.12	1.26	0.19	1.81	0.65	0.82	na	39.85
1991–92	35.47	1.23	0.19	1.80	0.61	0.82	na	40.12
1992–93	36.32	1.24	0.19	1.81	0.57	0.83	na	40.96
1993–94	37.02	1.28	0.19	1.81	0.57	0.86	na	41.74
1994–95	38.56	1.41	0.19	1.99	0.60	0.90	na	43.65
1995–96	39.59	1.44	0.18	1.98	0.63	0.94	na	44.76
1996–97	39.95	1.42	0.18	1.97	0.63	0.95	na	45.10
1997–98	41.05	1.44	0.17	1.89	0.62	0.98	na	46.16
1998–99	42.17	1.49	0.16	1.98	0.66	1.00	na	47.47
1999–00	42.89	1.55	0.16	2.09	0.71	1.02	na	48.41
2000–01	42.84	1.55	0.17	2.15	0.72	1.06	na	48.49
2001–02	44.61	1.64	0.17	2.24	0.74	1.08	na	50.47
2002–03	45.18	1.66	0.18	2.26	0.74	1.11	na	51.13
2003–04	46.53	1.73	0.19	2.33	0.75	1.12	na	52.65

na: not applicable.

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 4.3c Total passenger kilometres travelled, by capital city—Brisbane

<i>Financial year</i>	<i>Passenger cars</i>	<i>Light commercial vehicles</i>	<i>Motor cycles</i>	<i>Rail</i>	<i>Light rail</i>	<i>Bus</i>	<i>Ferry</i>	<i>Total</i>
<i>billion passenger kilometres</i>								
1976–77	7.53	0.49	0.16	0.38	na	0.42	0.00	8.99
1977–78	8.09	0.54	0.16	0.37	na	0.46	0.00	9.62
1978–79	8.65	0.57	0.16	0.35	na	0.46	0.00	10.20
1979–80	9.29	0.55	0.17	0.38	na	0.46	0.00	10.85
1980–81	9.92	0.55	0.18	0.42	na	0.42	0.00	11.50
1981–82	10.55	0.55	0.19	0.46	na	0.44	0.00	12.19
1982–83	10.72	0.55	0.18	0.47	na	0.46	0.00	12.37
1983–84	10.88	0.59	0.16	0.52	na	0.44	0.00	12.59
1984–85	11.04	0.64	0.15	0.55	na	0.45	0.00	12.83
1985–86	11.67	0.66	0.15	0.62	na	0.45	0.00	13.55
1986–87	12.30	0.67	0.16	0.68	na	0.47	0.00	14.29
1987–88	12.93	0.71	0.17	0.74	na	0.52	0.00	15.07
1988–89	13.55	0.72	0.17	0.85	na	0.60	0.00	15.89
1989–90	14.17	0.72	0.18	0.78	na	0.58	0.00	16.43
1990–91	14.25	0.73	0.17	0.79	na	0.60	0.00	16.55
1991–92	14.63	0.73	0.17	0.75	na	0.62	0.00	16.90
1992–93	14.93	0.74	0.18	0.74	na	0.62	0.00	17.21
1993–94	15.18	0.78	0.17	0.72	na	0.64	0.00	17.50
1994–95	15.79	0.87	0.18	0.70	na	0.72	0.01	18.25
1995–96	16.18	0.89	0.17	0.74	na	0.70	0.01	18.68
1996–97	16.30	0.89	0.17	0.79	na	0.70	0.01	18.86
1997–98	16.56	0.92	0.16	0.80	na	0.71	0.01	19.16
1998–99	17.23	0.96	0.16	0.81	na	0.68	0.01	19.86
1999–00	17.33	1.01	0.16	0.87	na	0.73	0.01	20.11
2000–01	17.33	1.02	0.16	0.94	na	0.74	0.01	20.21
2001–02	18.10	1.09	0.17	0.97	na	0.77	0.01	21.10
2002–03	18.45	1.11	0.17	0.97	na	0.80	0.01	21.51
2003–04	19.11	1.17	0.18	1.01	na	0.83	0.01	22.31

na: not applicable.

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 4.3d Total passenger kilometres travelled, by capital city—Adelaide

<i>Financial year</i>	<i>Passenger cars</i>	<i>Light commercial vehicles</i>	<i>Motor cycles</i>	<i>Rail</i>	<i>Light rail</i>	<i>Bus</i>	<i>Ferry</i>	<i>Total</i>
<i>billion passenger kilometres</i>								
1976–77	7.89	0.35	0.12	0.17	0.02	0.43	na	8.97
1977–78	8.10	0.38	0.12	0.16	0.02	0.43	na	9.21
1978–79	8.19	0.39	0.12	0.16	0.02	0.46	na	9.34
1979–80	8.20	0.37	0.11	0.19	0.02	0.47	na	9.35
1980–81	8.24	0.36	0.11	0.19	0.02	0.53	na	9.46
1981–82	8.63	0.35	0.11	0.21	0.02	0.56	na	9.87
1982–83	8.58	0.34	0.10	0.18	0.02	0.48	na	9.70
1983–84	8.86	0.36	0.10	0.18	0.02	0.50	na	10.02
1984–85	9.19	0.38	0.09	0.15	0.02	0.48	na	10.32
1985–86	9.40	0.38	0.09	0.18	0.02	0.50	na	10.58
1986–87	9.53	0.38	0.09	0.18	0.02	0.49	na	10.68
1987–88	9.78	0.40	0.08	0.13	0.02	0.52	na	10.93
1988–89	10.06	0.39	0.08	0.14	0.02	0.49	na	11.18
1989–90	10.13	0.38	0.07	0.14	0.02	0.52	na	11.27
1990–91	10.29	0.38	0.06	0.12	0.02	0.55	na	11.42
1991–92	10.37	0.38	0.06	0.12	0.01	0.56	na	11.50
1992–93	10.62	0.38	0.06	0.13	0.01	0.54	na	11.74
1993–94	10.79	0.39	0.06	0.15	0.01	0.55	na	11.96
1994–95	11.23	0.43	0.06	0.16	0.01	0.57	na	12.47
1995–96	11.52	0.44	0.06	0.15	0.01	0.57	na	12.76
1996–97	11.60	0.43	0.06	0.15	0.02	0.57	na	12.83
1997–98	12.14	0.44	0.05	0.15	0.02	0.57	na	13.37
1998–99	12.24	0.46	0.05	0.14	0.01	0.56	na	13.46
1999–00	12.54	0.48	0.05	0.13	0.01	0.57	na	13.78
2000–01	12.44	0.48	0.05	0.13	0.01	0.59	na	13.70
2001–02	12.88	0.50	0.05	0.14	0.02	0.60	na	14.19
2002–03	12.99	0.50	0.05	0.14	0.02	0.61	na	14.31
2003–04	13.34	0.52	0.06	0.14	0.01	0.62	na	14.70

na: not applicable.

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 4.3e Total passenger kilometres travelled, by capital city—Perth

<i>Financial year</i>	<i>Passenger cars</i>	<i>Light commercial vehicles</i>	<i>Motor cycles</i>	<i>Rail</i>	<i>Light rail</i>	<i>Bus</i>	<i>Ferry</i>	<i>Total</i>
<i>billion passenger kilometres</i>								
1976–77	8.02	0.56	0.12	0.15	na	0.44	0.00	9.29
1977–78	8.35	0.60	0.12	0.18	na	0.53	0.00	9.77
1978–79	8.56	0.64	0.12	0.17	na	0.52	0.00	10.00
1979–80	8.69	0.61	0.12	0.14	na	0.57	0.00	10.14
1980–81	8.88	0.61	0.13	0.13	na	0.58	0.00	10.32
1981–82	9.45	0.59	0.14	0.12	na	0.56	0.00	10.86
1982–83	9.53	0.59	0.14	0.13	na	0.57	0.00	10.97
1983–84	10.00	0.63	0.14	0.17	na	0.50	0.00	11.45
1984–85	10.54	0.68	0.15	0.17	na	0.49	0.00	12.03
1985–86	10.93	0.69	0.13	0.18	na	0.53	0.00	12.47
1986–87	11.22	0.71	0.12	0.17	na	0.56	0.00	12.77
1987–88	11.68	0.74	0.10	0.15	na	0.56	0.00	13.23
1988–89	12.18	0.74	0.09	0.14	na	0.60	0.00	13.76
1989–90	12.44	0.74	0.07	0.14	na	0.64	0.00	14.03
1990–91	12.44	0.75	0.07	0.12	na	0.63	0.00	14.02
1991–92	12.77	0.73	0.07	0.16	na	0.62	0.00	14.36
1992–93	13.09	0.74	0.07	0.23	na	0.61	0.00	14.75
1993–94	13.34	0.77	0.07	0.40	na	0.61	0.00	15.20
1994–95	13.89	0.84	0.07	0.42	na	0.65	0.00	15.88
1995–96	14.25	0.86	0.06	0.42	na	0.65	0.00	16.24
1996–97	14.38	0.85	0.06	0.47	na	0.70	0.00	16.46
1997–98	14.48	0.86	0.06	0.51	na	0.68	0.00	16.60
1998–99	14.81	0.90	0.06	0.55	na	0.70	0.00	17.02
1999–00	15.23	0.94	0.06	0.55	na	0.71	0.00	17.50
2000–01	15.25	0.94	0.06	0.56	na	0.75	0.00	17.56
2001–02	15.88	0.99	0.06	0.55	na	0.78	0.00	18.27
2002–03	16.17	1.00	0.06	0.56	na	0.81	0.00	18.60
2003–04	16.73	1.04	0.07	0.55	na	0.84	0.00	19.24

na: not applicable.

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 4.3f Total passenger kilometres travelled, by capital city—Hobart

<i>Financial year</i>	<i>Passenger cars</i>	<i>Light commercial vehicles</i>	<i>Motor cycles</i>	<i>Rail</i>	<i>Light rail</i>	<i>Bus</i>	<i>Ferry</i>	<i>Total</i>
<i>billion passenger kilometres</i>								
1976–77	1.15	0.07	0.01	na	na	0.12	na	1.35
1977–78	1.19	0.08	0.01	na	na	0.13	na	1.40
1978–79	1.22	0.08	0.01	na	na	0.11	na	1.42
1979–80	1.23	0.08	0.01	na	na	0.12	na	1.43
1980–81	1.26	0.07	0.01	na	na	0.12	na	1.46
1981–82	1.34	0.07	0.01	na	na	0.10	na	1.52
1982–83	1.35	0.07	0.01	na	na	0.09	na	1.53
1983–84	1.41	0.08	0.01	na	na	0.10	na	1.61
1984–85	1.49	0.08	0.01	na	na	0.10	na	1.69
1985–86	1.55	0.08	0.01	na	na	0.11	na	1.75
1986–87	1.59	0.08	0.01	na	na	0.11	na	1.79
1987–88	1.65	0.09	0.01	na	na	0.10	na	1.85
1988–89	1.72	0.08	0.01	na	na	0.10	na	1.92
1989–90	1.76	0.08	0.01	na	na	0.11	na	1.96
1990–91	1.72	0.08	0.01	na	na	0.10	na	1.92
1991–92	1.78	0.08	0.01	na	na	0.10	na	1.97
1992–93	1.83	0.08	0.01	na	na	0.10	na	2.01
1993–94	1.85	0.08	0.01	na	na	0.11	na	2.04
1994–95	1.94	0.08	0.01	na	na	0.11	na	2.14
1995–96	1.98	0.08	0.01	na	na	0.11	na	2.18
1996–97	2.01	0.07	0.01	na	na	0.11	na	2.20
1997–98	1.96	0.07	0.01	na	na	0.11	na	2.15
1998–99	2.07	0.07	0.01	na	na	0.11	na	2.25
1999–00	2.13	0.07	0.01	na	na	0.11	na	2.31
2000–01	2.09	0.07	0.01	na	na	0.11	na	2.28
2001–02	2.14	0.06	0.01	na	na	0.11	na	2.32
2002–03	2.15	0.06	0.01	na	na	0.11	na	2.33
2003–04	2.19	0.06	0.01	na	na	0.11	na	2.38

na: not applicable.

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 4.3g Total passenger kilometres travelled, by capital city—Darwin

<i>Financial year</i>	<i>Passenger cars</i>	<i>Light commercial vehicles</i>	<i>Motor cycles</i>	<i>Rail</i>	<i>Light rail</i>	<i>Bus</i>	<i>Ferry</i>	<i>Total</i>
<i>billion passenger kilometres</i>								
1976–77	0.34	0.05	0.01	na	na	0.02	na	0.41
1977–78	0.36	0.05	0.01	na	na	0.02	na	0.44
1978–79	0.37	0.06	0.01	na	na	0.02	na	0.46
1979–80	0.38	0.06	0.01	na	na	0.03	na	0.47
1980–81	0.39	0.06	0.01	na	na	0.03	na	0.49
1981–82	0.42	0.06	0.01	na	na	0.03	na	0.52
1982–83	0.43	0.05	0.01	na	na	0.03	na	0.53
1983–84	0.46	0.06	0.01	na	na	0.04	na	0.56
1984–85	0.49	0.06	0.01	na	na	0.04	na	0.60
1985–86	0.51	0.07	0.01	na	na	0.04	na	0.63
1986–87	0.53	0.07	0.01	na	na	0.05	na	0.66
1987–88	0.56	0.07	0.01	na	na	0.06	na	0.70
1988–89	0.59	0.07	0.01	na	na	0.06	na	0.74
1989–90	0.61	0.07	0.01	na	na	0.07	na	0.76
1990–91	0.65	0.07	0.01	na	na	0.07	na	0.80
1991–92	0.69	0.06	0.01	na	na	0.07	na	0.83
1992–93	0.70	0.06	0.01	na	na	0.07	na	0.84
1993–94	0.71	0.06	0.01	na	na	0.07	na	0.85
1994–95	0.73	0.07	0.01	na	na	0.08	na	0.89
1995–96	0.75	0.06	0.01	na	na	0.08	na	0.91
1996–97	0.76	0.06	0.01	na	na	0.09	na	0.91
1997–98	0.79	0.06	0.01	na	na	0.09	na	0.94
1998–99	0.80	0.06	0.01	na	na	0.09	na	0.96
1999–00	0.83	0.05	0.01	na	na	0.09	na	0.99
2000–01	0.83	0.05	0.01	na	na	0.09	na	0.99
2001–02	0.87	0.05	0.01	na	na	0.10	na	1.03
2002–03	0.89	0.05	0.01	na	na	0.10	na	1.04
2003–04	0.93	0.05	0.01	na	na	0.10	na	1.09

na: not applicable.

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 4.3h Total passenger kilometres travelled, by capital city—Canberra

<i>Financial year</i>	<i>Passenger cars</i>	<i>Light commercial vehicles</i>	<i>Motor cycles</i>	<i>Rail</i>	<i>Light rail</i>	<i>Bus</i>	<i>Ferry</i>	<i>Total</i>
<i>billion passenger kilometres</i>								
1976–77	1.97	0.13	0.02	na	na	0.11	na	2.22
1977–78	2.08	0.14	0.02	na	na	0.12	na	2.36
1978–79	2.16	0.15	0.02	na	na	0.12	na	2.46
1979–80	2.22	0.15	0.02	na	na	0.14	na	2.54
1980–81	2.30	0.14	0.03	na	na	0.12	na	2.60
1981–82	2.48	0.14	0.03	na	na	0.13	na	2.78
1982–83	2.53	0.14	0.03	na	na	0.16	na	2.87
1983–84	2.69	0.15	0.03	na	na	0.18	na	3.06
1984–85	2.87	0.16	0.03	na	na	0.19	na	3.26
1985–86	3.02	0.17	0.03	na	na	0.19	na	3.41
1986–87	3.14	0.17	0.03	na	na	0.20	na	3.54
1987–88	3.31	0.18	0.03	na	na	0.21	na	3.73
1988–89	3.50	0.18	0.03	na	na	0.21	na	3.92
1989–90	3.62	0.18	0.03	na	na	0.21	na	4.05
1990–91	3.58	0.17	0.03	na	na	0.22	na	4.01
1991–92	3.75	0.17	0.03	na	na	0.21	na	4.16
1992–93	3.83	0.17	0.03	na	na	0.21	na	4.24
1993–94	3.90	0.17	0.03	na	na	0.21	na	4.31
1994–95	4.06	0.18	0.03	na	na	0.22	na	4.49
1995–96	4.16	0.18	0.03	na	na	0.26	na	4.62
1996–97	4.18	0.17	0.03	na	na	0.27	na	4.65
1997–98	4.15	0.16	0.03	na	na	0.27	na	4.61
1998–99	4.30	0.16	0.03	na	na	0.26	na	4.75
1999–00	4.32	0.16	0.03	na	na	0.27	na	4.78
2000–01	4.29	0.15	0.03	na	na	0.28	na	4.75
2001–02	4.43	0.15	0.03	na	na	0.28	na	4.90
2002–03	4.48	0.15	0.03	na	na	0.29	na	4.95
2003–04	4.62	0.15	0.03	na	na	0.29	na	5.10

na: not applicable.

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 4.3i Total passenger kilometres travelled, by capital city—total metropolitan

<i>Financial year</i>	<i>Passenger cars</i>	<i>Light commercial vehicles</i>	<i>Motor cycles</i>	<i>Rail</i>	<i>Light rail</i>	<i>Bus</i>	<i>Ferry</i>	<i>Total</i>
<i>billion passenger kilometres</i>								
1976–77	74.25	4.22	0.84	5.44	0.64	3.61	0.11	89.11
1977–78	77.32	4.53	0.85	5.39	0.62	3.80	0.11	92.62
1978–79	79.37	4.79	0.85	5.36	0.60	3.87	0.11	94.96
1979–80	80.89	4.56	0.91	5.75	0.58	4.00	0.11	96.79
1980–81	82.76	4.50	0.97	5.87	0.57	4.09	0.11	98.88
1981–82	87.77	4.40	1.02	6.03	0.57	4.16	0.11	104.07
1982–83	88.35	4.33	1.02	5.83	0.57	4.19	0.11	104.40
1983–84	92.02	4.64	1.02	5.85	0.58	4.22	0.11	108.45
1984–85	96.27	4.97	1.02	5.99	0.63	4.28	0.11	113.28
1985–86	99.96	5.02	1.00	6.38	0.65	4.41	0.11	117.52
1986–87	102.86	5.10	0.97	6.54	0.66	4.53	0.11	120.77
1987–88	107.06	5.33	0.95	6.84	0.68	4.68	0.11	125.64
1988–89	111.62	5.31	0.93	7.09	0.70	4.86	0.11	130.61
1989–90	114.22	5.24	0.90	6.96	0.64	4.95	0.11	133.03
1990–91	114.60	5.26	0.84	7.10	0.67	5.04	0.11	133.62
1991–92	116.25	5.15	0.84	6.96	0.63	5.08	0.11	135.03
1992–93	118.97	5.21	0.86	6.85	0.58	5.09	0.11	137.68
1993–94	121.14	5.37	0.84	7.10	0.59	5.22	0.11	140.36
1994–95	126.13	5.89	0.85	7.51	0.61	5.43	0.12	146.55
1995–96	129.41	5.99	0.80	7.65	0.64	5.53	0.12	150.14
1996–97	130.57	5.90	0.80	7.87	0.65	5.65	0.13	151.57
1997–98	132.98	5.99	0.76	7.87	0.65	5.72	0.12	154.08
1998–99	136.33	6.20	0.74	8.06	0.69	5.76	0.12	157.90
1999–00	139.29	6.43	0.74	8.36	0.74	5.87	0.12	161.55
2000–01	139.00	6.41	0.76	8.91	0.76	6.07	0.14	162.05
2001–02	144.63	6.74	0.77	8.98	0.78	6.08	0.13	168.11
2002–03	146.69	6.78	0.79	8.96	0.78	6.19	0.13	170.31
2003–04	151.27	7.11	0.85	9.23	0.78	6.31	0.14	175.68

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Chapter 5

Road



Map and tables

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Chapter 5

Road

This chapter presents a range of statistics on road transport including road length, expenditure on road infrastructure and Australian road vehicle fleet characteristics and usage.

Recent events

February 2006: The Penguin to Ulverstone duplicated section (Bass Highway, northern Tasmania) was opened.

March 2006: The Roe Highway extension Stage 7 (South Street to the Kwinana Freeway in Perth) was opened.

November 2006: The Bundacree Creek-Possum Brush upgrade (New South Wales Mid-North Coast) was opened.

December 2006: Construction of the upgraded Pacific Highway, Karuah to Bulahdelah Section 1 (north of Newcastle, New South Wales) was completed.

December 2006: Transurban acquired the Sydney Roads Group, which has stakes in the Sydney Eastern Distributor, M4 and M5.

Future plans

2009–10: The Australian Government announced in its 2007–08 Budget that it will invest \$22.3 billion in Australia's land transport system from 2009–10 to 2013–14 through AusLink 2. AusLink 1 will cease in 2008–09.

Map 5.1 Auslink national road network and recently completed projects



Source: Department of Infrastructure, Transport, Regional Development and Local Government.

Table 5.1 Intercapital road distances

	Sydney km	Melbourne km	Brisbane km	Adelaide km	Perth km	Darwin km	Canberra km
Sydney		863	939	1 402	3 965	3 998	281
Melbourne			1 736		723	3 420	653
Brisbane				2 118		4 414	3 435
Adelaide					2 698	3 034	1 192
Perth						4 043	3 823
Darwin							3 969

Source: Whereis.com.au.

Table 5.2a Total road expenditure by state/territory, by level of government, 2004–05 prices—Commonwealth

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1985–86	733.3	468.1	471.5	218.1	321.4	95.6	83.5	85.8	2 477.0
1986–87	797.2	443.6	464.3	197.3	287.0	87.7	73.2	89.0	2 439.4
1987–88	702.5	428.6	436.2	159.5	264.2	80.3	66.9	0.0	2 138.2
1988–89	634.0	398.9	398.2	145.8	259.8	77.5	63.5	0.0	1 977.7
1989–90	687.4	434.7	420.2	145.1	249.6	77.3	63.4	18.9	2 096.6
1990–91	773.9	476.6	451.7	157.9	250.2	80.4	82.9	18.8	2 292.3
1991–92	846.4	513.6	479.3	164.4	262.7	87.9	74.4	22.1	2 450.7
1992–93	1 002.1	635.9	646.6	212.2	310.5	111.0	98.6	26.6	3 043.5
1993–94	770.6	451.5	422.1	144.7	209.5	75.0	55.6	15.9	2 144.8
1994–95	750.1	433.0	400.8	136.4	204.0	76.3	53.5	19.0	2 073.1
1995–96	726.5	435.1	423.4	155.5	231.2	82.2	73.0	23.3	2 150.2
1996–97	724.0	392.8	465.2	156.9	238.6	91.2	71.1	25.5	2 165.3
1997–98	784.3	320.3	451.6	203.1	234.5	84.1	71.8	26.2	2 175.8
1998–99	741.2	376.7	460.3	216.9	247.3	89.5	71.3	41.4	2 244.5
1999–00	703.2	337.9	468.2	165.6	217.5	94.1	73.1	58.1	2 117.8
2000–01	585.8	271.3	458.8	99.0	188.5	69.5	53.0	21.4	1 747.3
2001–02	659.4	488.0	458.1	133.3	242.2	63.2	51.4	39.8	2 135.3
2002–03	644.7	396.5	421.9	111.3	206.8	61.7	47.6	22.7	1 913.3
2003–04	735.4	305.9	438.3	126.8	206.6	53.4	44.5	22.4	1 933.3

Source: BTRE (2006d), Public Road Related Expenditure and Revenue in Australia.

Table 5.2b Total road expenditure by state/territory, by level of government, 2004–05 prices—state/territory

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1985–86	1 026.2	627.9	568.9	144.0	226.6	161.2	33.6	na	2 788.4
1986–87	847.3	586.3	530.6	139.3	249.9	135.5	78.7	na	2 567.6
1987–88	935.8	599.1	425.4	161.7	236.4	92.8	65.9	na	2 517.2
1988–89	1 054.4	672.9	498.0	198.8	260.9	114.1	141.5	na	2 940.5
1989–90	1 462.4	574.0	363.3	207.1	288.9	109.6	91.5	162.5	3 259.2
1990–91	2 008.7	419.7	554.8	191.1	252.2	70.1	59.9	116.7	3 673.3
1991–92	1 729.2	375.4	477.0	173.9	277.2	67.6	43.3	147.3	3 290.9
1992–93	1 314.0	336.3	550.6	172.7	321.8	75.2	61.9	87.0	2 919.6
1993–94	1 402.6	435.5	723.9	163.0	341.3	90.5	117.4	97.3	3 371.6
1994–95	1 373.9	649.0	753.7	203.0	344.7	79.0	71.9	33.1	3 508.2
1995–96	1 491.3	564.3	908.9	262.0	713.3	83.4	65.5	25.1	4 113.8
1996–97	1 511.2	588.0	1 007.6	188.8	417.5	80.8	65.9	16.2	3 876.0
1997–98	1 571.6	641.0	1 236.9	284.8	576.2	92.4	70.8	20.2	4 493.9
1998–99	1 335.3	226.4	1 309.4	122.8	520.4	39.5	35.4	- 24.2	3 564.9
1999–2000	1 383.0	293.1	611.0	166.3	592.4	38.9	10.7	- 39.1	3 056.3
2000–01	1 544.4	284.6	1 126.6	264.8	704.4	55.2	53.3	47.0	4 080.4
2001–02	1 774.2	- 166.0	861.7	238.7	704.5	83.5	46.4	43.6	3 586.5
2002–03	1 441.9	347.4	662.7	214.4	586.9	96.2	41.8	52.0	3 443.3
2003–04	1 417.2	601.1	732.9	206.8	613.5	62.9	48.1	44.7	3 727.2

na: not applicable.

Source: BTRE (2006d), Public Road Related Expenditure and Revenue in Australia.

Table 5.2c Total road expenditure by state/territory, by level of government, 2004–05 prices—local

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1985–86	895.6	524.8	462.0	161.9	160.6	59.9	7.4	na	2 272.3
1986–87	958.7	540.8	453.8	166.2	164.0	64.0	5.8	na	2 353.3
1987–88	967.7	525.9	544.0	155.5	142.4	61.1	8.0	na	2 404.6
1988–89	873.5	544.9	492.9	155.4	156.0	62.7	6.1	na	2 291.5
1989–90	920.1	606.6	554.6	170.0	184.4	71.1	6.9	na	2 513.8
1990–91	693.4	544.1	581.7	156.7	180.9	63.2	8.3	na	2 228.3
1991–92	731.7	554.6	551.3	157.9	178.8	51.6	10.3	na	2 236.2
1992–93	706.3	716.6	522.2	173.7	206.5	60.8	13.6	na	2 399.8
1993–94	741.9	610.3	518.0	169.9	191.8	56.7	14.4	na	2 302.9
1994–95	739.7	571.7	532.7	168.7	225.4	62.0	8.3	na	2 308.6
1995–96	752.6	602.1	530.9	173.3	146.9	66.3	14.4	na	2 286.4
1996–97	853.3	504.1	705.5	176.1	141.1	69.8	11.8	na	2 461.7
1997–98	874.4	607.6	738.8	185.3	175.8	61.2	16.5	na	2 659.6
1998–99	1 758.5	685.0	857.2	203.1	429.6	75.1	- 26.1	na	3 982.4
1999–00	1 752.2	700.3	1 040.0	209.8	530.2	71.4	- 10.3	na	4 293.7
2000–01	1 590.6	559.1	718.1	198.7	507.7	64.3	- 11.5	na	3 627.1
2001–02	1 628.2	596.4	740.1	204.2	477.8	73.5	- 12.1	na	3 708.2
2002–03	1 496.1	616.0	1 092.4	190.7	572.9	29.5	- 17.0	na	3 980.6
2003–04	1 332.6	573.7	1 032.7	174.9	556.1	28.9	- 11.6	na	3 687.4

na: not applicable.

Source: BTRE (2006d), Public Road Related Expenditure and Revenue in Australia.

Table 5.2d Total road expenditure by state/territory, by level of government, 2004–05 prices—all levels of government

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1985–86	2 655.1	1 620.8	1 502.4	524.1	708.6	316.7	124.4	85.8	7 537.7
1986–87	2 603.3	1 570.8	1 448.7	502.8	701.0	287.2	157.7	89.0	7 360.4
1987–88	2 606.0	1 553.7	1 405.5	476.7	643.0	234.2	140.8	0.0	7 059.9
1988–89	2 561.8	1 616.7	1 389.1	500.0	676.8	254.3	211.0	0.0	7 209.7
1989–90	3 069.9	1 615.2	1 338.1	522.2	723.0	258.1	161.8	181.5	7 869.7
1990–91	3 476.0	1 440.4	1 588.2	505.7	683.3	213.8	151.0	135.5	8 193.8
1991–92	3 307.2	1 443.6	1 507.5	496.2	718.7	207.1	128.0	169.4	7 977.8
1992–93	3 022.3	1 688.8	1 719.4	558.6	838.9	247.1	174.1	113.6	8 362.9
1993–94	2 915.1	1 497.3	1 663.9	477.5	742.6	222.2	187.4	113.3	7 819.3
1994–95	2 863.7	1 653.8	1 687.1	508.1	774.1	217.3	133.7	52.1	7 890.0
1995–96	2 970.4	1 601.5	1 863.2	590.9	1 091.3	231.8	152.8	48.4	8 550.4
1996–97	3 088.5	1 484.9	2 178.3	521.8	797.2	241.8	148.7	41.7	8 502.9
1997–98	3 230.3	1 568.9	2 427.2	673.2	986.6	237.7	159.1	46.4	9 329.4
1998–99	3 835.0	1 288.0	2 626.9	542.8	1 197.3	204.1	80.5	17.1	9 791.8
1999–00	3 838.5	1 331.3	2 119.2	541.7	1 340.2	204.5	73.5	19.0	9 467.8
2000–01	3 720.9	1 115.0	2 303.5	562.5	1 400.7	189.0	94.8	68.4	9 454.8
2001–02	4 061.8	918.3	2 059.8	576.2	1 424.5	220.2	85.7	83.4	9 430.0
2002–03	3 582.7	1 359.9	2 177.0	516.3	1 366.6	187.4	72.5	74.7	9 337.2
2003–04	3 485.3	1 480.6	2 203.9	508.5	1 376.2	145.2	81.0	67.1	9 347.9

Source: BTRE (2006d), Public Road Related Expenditure and Revenue in Australia.

Table 5.3 Total road length by state/territory

	NSW⁽¹⁾	VIC⁽²⁾	QLD⁽³⁾	SA	WA⁽⁴⁾	TAS⁽⁵⁾	NT⁽⁶⁾	ACT	Total
	<i>km</i>	<i>km</i>	<i>km</i>	<i>km</i>	<i>km</i>	<i>km</i>	<i>km</i>	<i>km</i>	<i>km</i>
1971	208 804	163 506	193 243	121 533	156 666	20 675	18 247	1 477	884 150
1972	207 970	159 449	193 544	101 187	160 329	20 698	19 143	1 579	863 899
1973		159 568	192 568	100 076	161 369	20 579	20 160	1 710	
1974									
1975	188 985	159 148	191 815	100 255	161 654	20 993	20 285	1 854	844 989
1976	188 985	159 560	188 894	100 441	161 979	21 328	20 151	1 930	843 268
1977	188 985	159 685	185 548	100 529	163 313	21 835		2 082	
1978	189 173	156 701	162 345	100 529		22 227	20 362	2 182	
1979			156 489		100 418	158 721	21 676	21 347	
1980				160 745	100 533				2 234
1981	192 140	158 075	160 981	102 122	139 806	22 489	21 347	2 170	799 129
1982		157 201	162 413	102 139	138 851	22 315	21 028		
1983	195 106	156 715	163 399	102 400	139 411	22 210	20 180	2 147	801 568
1984	195 521	157 311	164 181	102 886	140 330	22 198	20 080	2 219	804 726
1985									
1986	195 129	158 576	167 681	102 000	140 156	22 577	19 875	2 521	808 515
1987	195 005	159 376	168 434	96 127	141 065	22 715	20 060	2 615	805 397
1988	196 180		169 589	95 979	141 957	22 886	20 112	2 615	
1989	195 429	161 284	170 832	94 812	141 918	22 984	20 390	2 615	810 264
1990	195 429	161 284	170 832	94 907	142 929	23 388	20 390	2 615	811 774
1991									
1992			174 429		143 143	24 590	20 412		
1993	181 800	159 868		94 815			20 332	2 425	
1994									
1995			175 992						
1996	179 960	159 220	177 032	95 333	143 812	24 069	19 928	2 502	801 856
1997	180 949	158 068	177 017	95 768	145 260	23 143	20 264	2 591	803 060
1998	180 809	155 079		95 895	145 511	23 378	22 514	2 618	
1999	181 299	155 455		96 452	146 075	23 660	31 188	2 623	
2000	181 652	156 198	176 856	96 670	146 928	23 689	21 212	2 630	805 835
2001	181 837	155 600	178 295	96 762	147 789	23 956	21 385	2 670	808 294
2002	182 006	156 500	178 317	96 892	147 855	24 130	21 652	2 670	810 022
2003	182 074	156 000	178 290	96 584	148 305	24 253	22 046	2 684	810 236
2004	182 167	152 700	181 305	96 574	148 456	24 644	22 097	2 698	810 641
2005	182 945			96 969	151 261				
2006	183 120	nya	182 281	97 090	151 603	26 126	22 187	3 023	nya

Data are not readily available for missing years.

(1) (2) (3) (4) (5) (6) See end notes.

nya: not yet available.

Source: BITRE survey and ABS (2005), Year Book Australia (ABS cat. no. 1301.0).

Table 5.4 Total road length by road type

	<i>Bitumen or concrete</i>	<i>Gravel, crushed stone or other improved surface</i>	<i>Formed only</i>	<i>Cleared only</i>	<i>Total</i>	<i>Percentage of total surface with bitumen or concrete</i>
	<i>km</i>	<i>km</i>	<i>km</i>	<i>km</i>	<i>km</i>	<i>per cent</i>
1971	192 685	212 294	204 932	274 235	884 150	21.79
1972	208 197	209 934	205 162	240 603	863 899	24.10
1973						
1974						
1975	224 020	210 198	206 848	203 923	844 989	26.51
1976	227 864	209 872	207 672	197 860	843 268	27.02
1977						
1978						
1979						
1980						
1981	253 303	203 418	250 681	91 728	799 129	31.70
1982						
1983	262 897	203 556	245 078	90 037	801 568	32.80
1984	266 686	200 862	243 778	93 401	804 726	33.14
1985						
1986	275 045	205 471	238 007	89 992	808 515	34.02
1987	279 501	207 059	230 076	88 761	805 397	34.70
1988						
1989	286 702	217 932	223 509	82 121	810 264	35.38
1990	288 862	223 419	219 297	80 196	811 774	35.58
1991						
1992						
1993						
1994						
1995						
1996	310 010	265 601	190 306	35 939	801 856	38.66
1997	316 794	307 711	137 421	41 134	803 060	39.45
1998						
1999						
2000	324 723	312 516	130 197	38 400	805 835	40.30
2001	329 045	314 436	125 835	38 979	808 294	40.71
2002	331 199	313 509	126 076	39 238	810 022	40.89
2003	332 863	312 547	126 273	38 553	810 236	41.08
2004	336 962	312 837	118 680	42 145	810 641	41.57
2005						
2006	nya	nya	nya	nya	nya	nya

Data are not readily available for missing years.

nya: not yet available.

Source: BITRE survey and ABS (2005), Year Book Australia (ABS cat. no. 1301.0).

Table 5.5 Total vehicle kilometres travelled, by vehicle type

<i>Financial year</i>	<i>Passenger cars</i>	<i>Motor cycles</i>	<i>Buses</i>	<i>Light commercial vehicles</i>	<i>Rigid trucks</i>	<i>Articulated trucks</i>	<i>Total</i>
<i>billion vehicle kilometres travelled</i>							
1970–71	63.81	1.01	0.58	7.07	4.63	1.68	78.78
1971–72	66.13	1.10	0.59	7.48	4.59	1.74	81.62
1972–73	68.06	1.20	0.61	7.85	4.47	1.71	83.90
1973–74	72.60	1.30	0.62	9.19	4.83	1.84	90.38
1974–75	76.82	1.40	0.63	9.56	4.61	1.79	94.81
1975–76	79.04	1.64	0.63	10.26	4.73	1.90	98.20
1976–77	82.71	1.68	0.64	11.90	4.73	2.07	103.73
1977–78	85.85	1.73	0.65	12.27	4.35	2.04	106.89
1978–79	87.72	1.77	0.66	13.96	4.55	2.47	111.13
1979–80	88.77	1.90	0.69	13.54	5.00	2.56	112.46
1980–81	90.61	2.00	0.73	14.62	5.94	2.74	116.65
1981–82	96.10	2.18	0.77	14.99	6.68	2.89	123.61
1982–83	96.61	2.20	0.87	14.06	5.48	2.62	121.84
1983–84	101.14	2.25	0.97	17.71	6.28	3.26	131.60
1984–85	105.80	2.28	1.07	17.90	5.94	3.41	136.41
1985–86	109.40	2.10	1.15	19.04	6.00	3.48	141.18
1986–87	112.35	2.00	1.22	19.06	5.88	3.47	143.99
1987–88	116.78	1.92	1.29	21.16	6.50	3.80	151.45
1988–89	121.70	2.00	1.37	22.26	6.58	3.92	157.83
1989–90	124.16	1.70	1.41	22.57	6.79	4.15	160.79
1990–91	124.88	1.61	1.36	23.00	6.13	4.07	161.05
1991–92	126.95	1.59	1.34	23.36	6.02	4.13	163.39
1992–93	130.08	1.57	1.35	23.72	5.99	4.52	167.23
1993–94	132.62	1.55	1.41	23.86	6.23	4.62	170.29
1994–95	138.22	1.53	1.45	25.19	6.33	4.92	177.63
1995–96	142.03	1.58	1.50	25.59	6.43	4.95	182.08
1996–97	143.33	1.58	1.55	25.98	6.58	5.06	184.08
1997–98	145.99	1.58	1.60	27.61	6.73	5.45	188.97
1998–99	149.75	1.58	1.65	28.53	6.79	5.64	193.95
1999–00	152.76	1.60	1.75	29.13	6.85	5.71	197.80
2000–01	152.43	1.61	1.73	30.04	6.80	5.68	198.30
2001–02	155.77	1.63	1.75	31.30	6.97	5.88	203.29
2002–03	161.32	1.64	1.78	32.31	6.99	5.99	210.02
2003–04	166.67	1.66	1.80	33.26	7.17	6.22	216.77
2004–05	171.47	1.67	1.83	34.29	7.18	6.36	222.80

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 5.6 Total vehicle kilometres travelled, by state/territory

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>billion vehicle kilometres travelled</i>									
1989–90	50.71	43.52	29.10	12.69	16.82	3.78	1.35	2.82	160.79
1990–91	50.81	43.42	29.33	12.81	16.85	3.69	1.36	2.78	161.05
1991–92	51.20	43.82	30.25	12.85	17.19	3.77	1.42	2.89	163.39
1992–93	52.23	44.95	31.27	13.07	17.44	3.84	1.45	2.97	167.23
1993–94	53.10	45.84	32.02	13.23	17.71	3.88	1.48	3.03	170.29
1994–95	55.27	47.79	33.77	13.65	18.41	4.03	1.56	3.16	177.63
1995–96	56.77	48.92	34.63	13.89	18.80	4.19	1.61	3.28	182.08
1996–97	57.63	49.43	34.97	13.96	18.89	4.28	1.60	3.32	184.08
1997–98	58.96	50.94	35.88	14.65	19.28	4.31	1.64	3.31	188.97
1998–99	60.42	52.33	37.22	14.71	19.57	4.57	1.68	3.45	193.95
1999–00	61.94	53.23	37.48	15.16	20.18	4.66	1.69	3.46	197.80
2000–01	61.99	53.32	37.85	15.07	20.27	4.61	1.70	3.48	198.30
2001–02	63.49	54.68	38.92	15.38	20.84	4.67	1.75	3.56	203.29
2002–03	65.48	56.48	40.32	15.82	21.64	4.78	1.81	3.68	210.02
2003–04	67.50	58.29	41.72	16.27	22.42	4.89	1.87	3.81	216.77
2004–05	69.32	59.86	43.01	16.64	23.14	4.98	1.93	3.92	222.80

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 5.7 Total vehicle kilometres travelled, by capital city

<i>Financial year</i>	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Darwin</i>	<i>Canberra</i>	<i>Total</i>
<i>billion vehicle kilometres travelled</i>									
1989–90	30.17	27.07	11.51	7.92	10.30	1.45	0.64	2.82	91.88
1990–91	29.99	26.89	11.47	7.96	10.19	1.41	0.65	2.78	91.33
1991–92	30.21	27.14	11.76	8.03	10.44	1.45	0.68	2.89	92.60
1992–93	31.09	27.90	12.10	8.25	10.77	1.49	0.70	2.97	95.26
1993–94	31.68	28.45	12.34	8.39	11.00	1.52	0.71	3.03	97.11
1994–95	33.05	29.68	12.90	8.74	11.50	1.58	0.74	3.16	101.35
1995–96	34.23	30.69	13.39	9.03	11.96	1.64	0.77	3.28	104.98
1996–97	34.73	31.07	13.56	9.12	12.12	1.65	0.78	3.32	106.35
1997–98	35.15	31.90	13.82	9.51	12.27	1.63	0.80	3.31	108.38
1998–99	36.09	32.88	14.41	9.63	12.62	1.70	0.82	3.45	111.60
1999–00	36.90	33.34	14.47	9.82	12.89	1.74	0.84	3.46	113.44
2000–01	37.26	33.58	14.65	9.82	13.06	1.72	0.85	3.48	114.43
2001–02	38.35	34.53	15.12	10.05	13.47	1.75	0.88	3.56	117.70
2002–03	39.74	35.73	15.73	10.35	14.00	1.79	0.91	3.68	121.94
2003–04	41.12	36.92	16.34	10.66	14.52	1.83	0.94	3.81	126.15
2004–05	42.43	38.03	16.92	10.94	15.02	1.87	0.97	3.92	130.10

Source: BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities.

Table 5.8 Total road freight, by vehicle type

<i>Financial year</i>	<i>Light commercial vehicles</i>	<i>Rigid trucks</i>	<i>Articulated trucks</i>	<i>Total</i>
<i>billion tonne-kilometres</i>				
1970–71	0.9	10.3	14.2	25.5
1971–72	1.0	10.5	15.6	27.1
1972–73	1.2	10.7	17.0	28.8
1973–74	1.3	10.8	18.3	30.5
1974–75	1.4	11.0	19.7	32.1
1975–76	1.5	11.2	21.1	33.8
1976–77	1.7	12.2	23.9	37.9
1977–78	1.9	13.3	26.8	42.0
1978–79	2.1	14.3	29.6	46.1
1979–80	2.2	15.1	32.5	49.8
1980–81	2.2	15.8	35.4	53.4
1981–82	2.3	16.5	38.3	57.1
1982–83	2.4	16.7	41.9	61.0
1983–84	2.5	17.0	45.4	64.9
1984–85	2.7	17.2	48.9	68.8
1985–86	2.9	17.7	51.3	71.8
1986–87	3.1	18.1	53.6	74.8
1987–88	3.3	18.5	56.0	77.8
1988–89	3.6	19.3	56.9	79.7
1989–90	3.8	20.0	57.8	81.6
1990–91	4.1	20.8	58.7	83.5
1991–92	4.3	21.1	64.4	89.8
1992–93	4.6	21.4	70.1	96.0
1993–94	4.8	21.6	75.9	102.3
1994–95	5.0	21.9	81.6	108.5
1995–96	5.2	22.5	85.9	113.5
1996–97	5.3	23.1	90.2	118.5
1997–98	5.4	23.7	94.4	123.5
1998–99	5.6	24.6	103.4	133.6
1999–00	6.0	25.9	107.7	139.6
2000–01	6.1	26.7	109.7	142.5
2001–02	6.5	27.6	114.1	148.1
2002–03	6.8	28.5	118.0	153.3
2003–04	7.1	29.7	122.6	159.3
2004–05	7.5	31.0	130.4	168.9
2005–06	nya	nya	nya	nya

nya: not yet available.

Source: BTRE (2006b), Freight Measurement and Modelling in Australia (Report 112) and BITRE estimates.

Table 5.9 Private vehicle ownership and operating cost indexes^(a)

June reference month	New motor vehicle price	Private motoring	Motor vehicles	Automotive fuel	Motor vehicle repair and servicing	Motor vehicle parts and accessories	Other motoring charges	Urban transport fares
	index	index	index	index	index	index	index	index
1973		19.7	20.7	16.8				21.3
1974		22.1	22.5	19.7				22.1
1975		27.1	26.4	23.5				25.1
1976		31.3	32.3	25.4				29.1
1977		34.3	35.8	26.5				28.4
1978		36.9	39.0	29.2				30.8
1979		41.3	40.3	39.9				32.4
1980		46.7	42.7	53.4				37.7
1981		51.0	45.3	61.9	50.6	62.1	54.0	43.8
1982		55.2	49.8	61.3	57.9	63.4	65.1	50.3
1983	52.8	60.8	54.8	68.3	63.0	67.8	68.9	55.9
1984	55.0	66.2	57.3	79.3	66.9	74.0	74.3	63.3
1985	57.7	71.9	62.4	88.7	70.7	77.9	79.9	66.8
1986	66.2	75.0	70.7	79.7	78.1	81.1	83.8	71.6
1987	75.9	85.7	83.4	89.6	86.5	86.4	92.4	78.6
1988	82.4	90.3	91.7	87.6	91.7	94.3	95.3	85.0
1989	86.6	94.9	97.2	92.1	96.0	98.3	98.6	92.9
1990	101.3	102.4	100.8	104.3	103.5	102.0	101.2	101.3
1991	104.6	105.0	101.8	106.0	108.5	102.2	108.2	116.0
1992	108.1	108.1	104.6	110.6	109.8	101.8	116.8	122.6
1993	113.9	111.1	111.2	112.0	111.0	101.6	127.5	129.7
1994	118.1	114.2	114.3	113.5	112.7	103.9	130.7	133.8
1995	121.7	117.7	119.9	115.7	114.0	106.3	134.1	137.8
1996	120.7	122.8	121.7	121.3	118.4	105.2	139.5	143.1
1997	119.1	122.2	112.9	121.9	119.3	106.6	145.4	152.0
1998	120.9	120.9	109.1	118.0	119.4	106.0	150.2	154.3
1999	118.6	120.7	105.1	116.5	123.0	107.2	158.0	157.4
2000	122.9	130.0	104.6	141.9	119.7	106.2	164.7	164.9
2001	125.6	136.8	105.6	157.9	128.2	107.9	171.0	183.0
2002	130.7	136.4	106.6	149.9	131.9	111.2	177.3	188.7
2003	132.5	136.4	105.1	148.0	136.2	113.1	183.6	192.4
2004	129.5	140.8	102.0	165.3	139.9	113.4	194.8	202.1
2005	127.4	145.6	99.2	182.6	145.7	115.8	200.8	205.4
2006	127.9	157.1	98.3	227.6	148.8	120.0	205.1	212.1
2007	128.5	157.1	99.7	218.1	152.8	124.2	214.9	220.0

Data are not readily available for missing years.

(a) Base of each index: 1989–90 = 100.0.

Source: ABS (2007d), Consumer Price Index, Australia (ABS cat. no. 6401.0) and ABS (2007g), Producer Price Indexes, Australia (ABS cat. no. 6427.0).

Table 5.10 Selected road construction and maintenance price and cost indexes, for Australia and for states and territories

<i>Financial year</i>	NSW	VIC	QLD	SA	WA	Australia (BITRE)	Australia (ABS)
	<i>index</i>	<i>index</i>	<i>index</i>	<i>index</i>	<i>index</i>	<i>index</i>	<i>index</i>
1984–85	69.8		65.6	65.4		68.1	
1985–86	74.3		69.2	68.9		73.3	
1986–87	77.7		73.4	74.2		76.4	
1987–88	81.1		78.0	79.3		80.9	
1988–89	86.8		83.9	84.1		86.1	
1989–90	92.4		89.6	90.1		89.5	
1990–91	99.7		93.9	93.5		96.2	
1991–92	102.2		96.8	96.3		97.0	
1992–93	100.2		98.6	98.0		98.8	
1993–94	100.0		100.0	100.0		100.0	
1994–95	101.9		101.8	102.9		102.3	
1995–96						102.9	
1996–97						103.6	
1997–98						103.9	98.7
1998–99	100.0	100.0	100.0	100.0	100.0	104.9	100.0
1999–00	103.0	104.1	104.0	103.6	104.7	109.1	103.7
2000–01	106.0	109.5	107.7	109.8	109.5	115.1	107.9
2001–02	107.7	113.2	108.0	111.8	111.6	117.7	109.7
2002–03	114.7	119.9	114.6	116.7	115.5	124.0	116.0
2003–04	119.6	124.9	120.7	119.5	118.0	129.7	120.8
2004–05	124.9	126.8	127.8	124.8	123.6	138.0	125.8
2005–06	130.9	132.4	137.4	132.4	133.9	147.7	133.2
2006–07	137.0	138.3	146.0	138.1	141.6		139.9

Base of BITRE index 1993–94 = 100; base of ABS index 1998–99 = 100.

Data are not readily available for missing years.

Source: For BITRE index and indexes up to and including 1994–95: BTE (2000), Public Road Related Expenditure and Revenue in Australia; for indexes from 1997–98: ABS (2007g), Producer Price Indexes, Australia (ABS cat. no. 6427.0).

Table 5.11 Stock of registered motor vehicles, by vehicle type

	<i>Passenger cars</i> '000	<i>Motor cycles</i> '000	<i>LCVs</i> '000	<i>Rigid trucks</i> '000	<i>Articulated trucks</i> '000	<i>Other trucks</i> '000	<i>Buses</i> '000	<i>All vehicles</i> '000
1971	3 990.9	152.6	532.7	365.8	32.0	10.0	22.8	5 106.8
1972								
1973								
1974								
1975								
1976	5 102.2	293.4	758.2	372.2	39.0	25.1	31.4	6 621.5
1977								
1978								
1979	5 669.6	288.3	879.2	419.9	43.7	36.3	37.8	7 374.7
1980								
1981								
1982	6 233.4	366.9	1 003.0	479.0	47.2	42.0	46.2	8 217.7
1983								
1984								
1985	6 734.2	361.6	1 140.5	543.7	50.2	49.4	80.1	8 959.7
1986								
1987								
1988	7 158.8	304.0	1 183.5	576.3	48.9	53.4	93.2	9 418.0
1989								
1990								
1991	7 860.7	284.1	1 479.2	333.2	51.7	47.0	42.3	10 098.2
1992								
1993	8 279.4	288.8	1 453.8	336.5	52.5	46.6	46.6	10 504.2
1994								
1995	8 628.8	296.6	1 527.2	337.4	58.3	47.0	52.2	10 947.5
1996	8 989.1	303.9	1 601.6	341.0	58.4	48.3	58.8	11 401.1
1997	9 206.2	313.1	1 632.2	342.4	59.3	50.0	61.1	11 664.4
1998	9 526.7	328.8	1 686.4	347.2	62.3	51.3	64.1	12 066.9
1999	9 686.2	333.8	1 721.2	346.8	63.3	51.3	65.9	12 268.5
2000								
2001	9 835.9	350.9	1 769.6	338.4	62.6	51.8	67.6	12 476.8
2002	10 101.4	371.0	1 820.0	341.5	63.9	54.0	70.2	12 822.0
2003	10 365.9	377.3	1 879.8	348.7	64.3	56.9	70.1	13 163.0
2004	10 629.4	396.3	1 952.5	357.6	66.3	59.6	71.3	13 533.1
2005	10 896.4	421.9	2 030.3	368.5	69.7	60.7	72.6	13 920.1
2006	11 188.9	463.1	2 114.3	383.5	71.7	61.8	75.4	14 358.7

Data are not readily available for missing years.

Source: ABS (2006b), Motor Vehicle Census, Australia (ABS cat. no. 9309.0).

Table 5.12 Stock of registered motor vehicles, by state/territory

	NSW '000	VIC '000	QLD '000	SA '000	WA '000	TAS '000	NT '000	ACT '000	Total '000
1982	2 708.1	2 127.2	1 440.0	744.0	783.4	244.3	60.9	109.7	8 217.7
1983									
1984									
1985	2 900.5	2 376.3	1 479.4	848.7	887.6	268.7	71.1	127.6	8 959.7
1986									
1987									
1988	2 993.6	2 556.0	1 567.2	869.1	947.0	284.3	60.7	140.2	9 418.0
1989									
1990									
1991 ^(a)	3 106.9	2 756.4	1 694.1	922.7	1 072.0	300.4	84.3	161.5	10 098.2
1992									
1993	3 172.4	2 864.7	1 847.2	932.8	1 114.5	311.9	84.2	176.5	10 504.2
1994									
1995	3 332.5	2 869.9	2 012.9	962.8	1 175.5	319.9	90.4	183.8	10 947.5
1996	3 448.9	3 050.2	2 082.0	984.5	1 225.0	325.5	96.2	188.8	11 401.1
1997	3 530.1	3 119.0	2 132.2	992.2	1 269.6	325.0	99.1	197.2	11 664.4
1998	3 682.6	3 177.4	2 228.8	1 031.1	1 327.2	322.7	102.2	194.8	12 066.9
1999	3 679.3	3 266.5	2 315.6	1 032.5	1 344.8	329.6	103.2	197.0	12 268.5
2000									
2001	3 745.5	3 317.7	2 354.4	1 050.6	1 371.3	331.1	102.8	203.4	12 476.8
2002	3 847.1	3 413.7	2 445.5	1 063.1	1 405.7	335.1	103.8	208.0	12 822.0
2003	3 944.9	3 494.3	2 552.1	1 077.2	1 438.4	338.5	104.3	213.4	13 163.0
2004	4 063.6	3 565.2	2 656.0	1 095.9	1 480.2	350.4	106.0	215.7	13 533.1
2005	4 170.4	3 649.6	2 767.3	1 111.7	1 529.6	362.1	109.8	219.6	13 920.1
2006	4 268.6	3 740.7	2 897.9	1 138.0	1 600.6	374.8	114.0	224.1	14 358.7

(a) From 1991 onwards, data are not strictly comparable with previous surveys due to revisions to Australian Design Rules.

Source: ABS (2006b), Motor Vehicle Census, Australia (ABS cat. no. 9309.0).

Table 5.13 New motor vehicles sales, excluding motor cycles, by vehicle type

Financial year	Passenger cars	Sports utility vehicles	Other vehicles	Total vehicles excluding motor cycles
	'000	'000	'000	'000
1994–95	487.3	45.6	112.1	645.0
1995–96	487.7	46.1	105.5	639.4
1996–97	503.3	58.7	108.2	670.2
1997–98	570.1	87.7	119.1	776.9
1998–99	575.7	101.8	128.3	805.8
1999–00	509.4	97.6	135.6	742.6
2000–01	571.0	114.8	122.9	808.7
2001–02	537.6	129.1	137.9	804.6
2002–03	560.2	144.0	156.4	860.5
2003–04	594.4	160.9	184.8	940.1
2004–05	604.0	182.0	195.8	981.8
2005–06	599.4	173.3	198.7	971.4
2006–07	624.1	180.4	199.4	1 003.9

Source: ABS (2007i), Sales of New Motor Vehicles (ABS cat. no. 9314.0).

Table 5.14 New motor vehicles sales excluding motor cycles, by state/territory

Financial year	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Total
	'000	'000	'000	'000	'000	'000	'000	'000	'000
1994–95	237.6	150.8	116.9	41.7	64.1	13.8	7.3	12.7	645.0
1995–96	230.1	152.7	117.1	42.7	64.4	12.8	7.5	12.0	639.4
1996–97	239.7	164.3	121.2	43.0	68.6	13.9	7.6	12.0	670.2
1997–98	273.3	193.1	141.0	51.0	79.1	15.5	8.9	15.0	776.9
1998–99	287.3	207.7	145.9	50.7	76.9	14.5	8.6	14.2	805.8
1999–00	268.2	195.5	133.3	44.3	64.7	13.9	7.9	14.8	742.6
2000–01	284.8	224.4	140.3	49.6	72.8	14.6	7.5	14.6	808.7
2001–02	280.3	221.2	144.4	50.8	71.9	14.8	7.5	13.7	804.6
2002–03	290.2	234.8	164.7	56.6	76.7	15.4	7.7	14.5	860.5
2003–04	308.3	246.7	193.2	63.1	86.7	18.8	8.4	14.9	940.1
2004–05	308.8	256.3	212.7	64.1	95.2	20.6	9.3	14.7	981.8
2005–06	297.0	250.2	212.8	62.4	105.4	19.6	9.3	14.7	971.4
2006–07	305.9	252.5	223.4	60.8	117.2	18.8	9.7	15.6	1 003.9

Source: ABS (2007i), Sales of New Motor Vehicles (ABS cat. no. 9314.0).

Chapter 6

Rail



Map and tables

Map

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Chapter 6 Rail

This chapter presents statistics on intercapital rail distances and interstate rail freight. In addition, BITRE has undertaken modelling of freight and passenger rail travel, with data presented in chapters 3 and 4 of this publication.

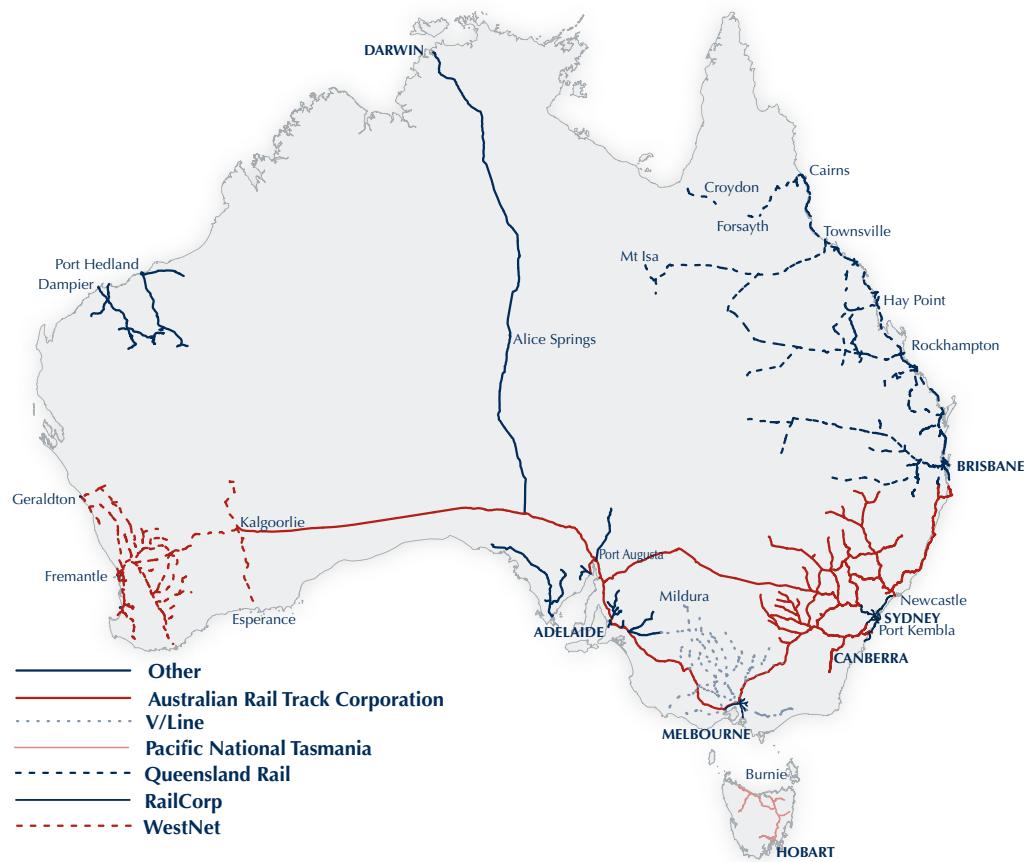
Recent events

- February 2006: Sale of Australian Railroad Group (ARG) assets announced: Queensland Rail purchased ARG's West Australian freight business; Babcock and Brown purchased ARG's WestNet infrastructure; and Genesee and Wyoming took full control of ARG's South Australian operations.
- March 2006: Australian Competition and Consumer Commission approved the Toll Group's takeover of Patrick Corporation Ltd.
- October 2006: SCT Logistics commenced freight service between Parkes and Perth.
- November 2006: The Sandgate Rail Flyover opened, improving the efficiency of the Hunter Valley coal chain.
- January 2007: A new rail bridge was opened at Wagga Wagga with a capacity to carry 22 trains per day, each travelling at 80 kmph.
- January 2007: The Tasmanian government acquired the Tasmanian rail network infrastructure from Pacific National.
- April 2007: New wireless digital technology for the national rail network was introduced, based on 3G 850 wireless mobile phone platform. This will replace nine separate systems and old technologies (2-way radios and CDMA devices).
- May 2007: The Victorian Government assumed responsibility for intrastate track previously leased by Pacific National.

Future plans

- Late 2007: Completion of a program to enlarge rail clearances to allow double stacking of containers on the railway between Parkes and Crystal Brook.
- 2007–09: Extensive upgrade to the North–South rail corridor (NSW/QLD border to Melbourne), including the introduction of passing lanes, concrete sleepers, raised clearances (to enable carrying of maxicube containers on conventional wagons) and improved signalling.

Map 6.1 Major rail links, by network manager



Source: BITRE estimates.

Table 6.1 Intercapital rail distances

	Sydney km	Melbourne km	Brisbane km	Adelaide km	Perth km	Darwin km	Canberra km
Sydney		959	972	1 713	4 251	4 279	285
Melbourne			1 931	829	3 799	3 808	784
Brisbane				2 685	5 223	5 251	1 257
Adelaide					2 970	2 979	1 998
Perth						4 191	4 536
Darwin							4 564

Source: BITRE estimates.

Table 6.2 Interstate rail freight, by state/territory of origin

<i>Calendar year</i>	NSW	VIC	QLD	SA	WA	NT	ACT	Total
	'000 tonnes							
1972	1 398.1	1 289.6	355.3	905.4	109.5	41.0	2.0	4 100.9
1973	1 403.8	1 326.0	357.6	918.8	154.3	39.0	2.0	4 201.5
1974	1 414.1	1 361.4	359.8	929.6	199.2	37.0	2.0	4 303.0
1975	1 429.0	1 395.7	362.1	939.4	244.1	35.0	2.0	4 407.2
1976	1 448.4	1 429.0	364.3	947.6	289.0	33.0	2.0	4 513.2
1977	1 468.5	1 433.4	380.0	991.7	276.3	36.6	2.0	4 588.6
1978	1 489.2	1 437.8	395.7	1 034.3	263.7	40.3	2.0	4 663.0
1979	1 510.3	1 442.4	411.4	1 075.4	251.1	43.9	2.0	4 736.5
1980	1 532.0	1 434.1	427.1	1 114.9	238.5	47.5	2.0	4 796.1
1981	1 553.7	1 480.8	399.3	1 101.3	294.4	47.0	2.0	4 878.5
1982	1 340.2	1 444.0	428.9	984.8	339.0	43.1	2.0	4 581.9
1983	1 128.9	1 406.5	458.4	872.0	383.6	38.8	2.0	4 290.3
1984	1 280.1	1 528.2	433.6	1 011.0	357.4	46.7	2.0	4 659.1
1985	1 255.7	1 585.7	489.6	948.7	362.0	44.0	2.0	4 687.7
1986	1 347.7	1 479.3	630.1	837.3	419.0	40.0	2.0	4 755.4
1987	1 546.8	1 500.4	678.8	995.3	430.4	48.3	2.0	5 201.9
1988	1 687.3	1 709.7	652.6	1 146.4	426.5	56.0	2.0	5 680.4
1989	1 921.4	2 007.6	715.1	1 260.7	480.1	59.5	2.0	6 446.3
1990	1 848.0	1 923.9	771.2	1 263.7	454.2	61.5	2.0	6 324.6
1991	1 635.1	1 925.5	736.0	1 135.0	460.5	65.0	2.0	5 959.0
1992	1 576.6	1 854.9	789.5	1 176.4	501.6	68.5	2.0	5 969.4
1993	1 706.4	1 885.5	793.4	1 317.7	564.8	73.8	2.0	6 343.5
1994	1 778.8	1 931.4	797.2	1 410.4	622.5	78.3	2.0	6 620.7
1995	1 899.2	2 022.3	801.1	1 503.0	680.3	82.9	2.0	6 990.7
1996	1 912.8	1 908.8	775.1	1 501.2	602.2	87.5	2.0	6 789.5
1997	1 879.1	2 009.0	799.2	1 404.7	631.0	74.0	2.0	6 798.8
1998	1 871.7	2 241.4	970.6	1 441.4	709.4	95.5	2.0	7 331.9
1999	1 810.7	2 360.7	818.6	1 317.6	870.7	86.5	2.0	7 266.8
2000	1 876.3	2 451.4	963.2	1 440.1	1 054.0	96.5	2.0	7 883.4
2001	1 943.4	2 541.9	1 011.4	1 562.4	1 237.6	106.5	2.0	8 405.2
2002	1 942.9	2 635.5	1 078.4	1 683.0	1 487.3	116.0	2.0	8 945.0
2003	1 942.5	2 729.1	1 149.6	1 803.7	1 595.6	125.5	2.0	9 347.9
2004	1 942.2	2 822.6	1 141.8	1 924.1	1 703.9	135.0	2.0	9 671.6
2005	1 944.2	2 916.2	1 206.1	2 044.8	1 812.2	135.0	2.0	10 060.4

Source: (BTRE 2007a), Australian rail freight performance indicators, 2005–06.

Chapter 7

Aviation



Maps and tables

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Chapter 7 Aviation

This chapter presents a range of information on Australian air transportation, including airline activity, airport performance and a summary of the Australian air fleet. See also air statistics in Chapter 4 Passenger transport.

Recent events

- November 2005: Ozjet entered the Australian domestic market.
- December 2005: Jetstar commenced services to New Zealand.
- December 2005: Tiger Airways commenced Singapore – Darwin services.
- March 2006: Ozjet ceased regular public transport operations but continues to operate passenger charter services.
- June 2006: Qantas ceased using the Australian Airlines brand.
- November 2006: Qantas launched its Jetstar International brand with long-haul international operations to Asia.
- March 2007: Tiger Airways commenced Singapore – Perth services.
- March 2007: Etihad Airways commenced services into Sydney.
- March 2007: Austrian Airlines ceased services to or from Australia.
- Early 2007: Airline Partners Australia made an unsuccessful bid for the Qantas group.

Future plans

- Late 2007: Tiger Airways to commence domestic operations.
- 2008: Virgin Blue to commence operations to the US West Coast using Boeing 777 aircraft.
- 2008: The Qantas group expects the delivery of its first Airbus 380 and also has a large number of Boeing 787 aircraft on order.

Map 7.1 Top 40 Australian airports



Source: Department of Infrastructure, Transport, Regional Development and Local Government.

Table 7.1 Intercapital air distances (great circle distances)

	Sydney km	Melbourne km	Brisbane km	Adelaide km	Perth km	Hobart km	Darwin km	Canberra km
Sydney		706	753	1 167	3 284	1 039	3 155	236
Melbourne			1 381	643	2 706	618	3 131	470
Brisbane				1 622	3 615	1 791	2 852	956
Adelaide					2 120	1 172	2 619	972
Perth						3 022	2 651	3 091
Hobart							3 742	850
Darwin								3 141

Source: BTRE (2007d), Aviation statistics—website release.

Table 7.2 International airline activity

<i>Financial year</i>	<i>Flights</i>	<i>Revenue passengers⁽¹⁾</i>	<i>Available seats</i>	<i>Load factor⁽²⁾</i>	<i>Freight</i>
	<i>no.</i>	<i>no.</i>	<i>no.</i>	<i>%</i>	<i>tonnes</i>
1970–71	17 067	1 199 148			33 433
1971–72	18 573	1 433 739			36 277
1972–73	19 735	1 769 816			44 654
1973–74	20 474	2 160 876			58 073
1974–75	27 013	2 392 102			65 757
1975–76	23 267	2 801 883			71 077
1976–77	21 938	2 894 965			78 458
1977–78	24 082	3 036 960			89 230
1978–79	20 764	3 506 753			111 839
1979–80	20 478	4 019 316			121 984
1980–81	20 487	4 108 265			127 840
1981–82	22 346	4 186 171			157 708
1982–83	21 486	4 249 249			166 703
1983–84	21 082	4 451 708			193 928
1984–85	22 385	4 988 998			222 868
1985–86	25 308	5 424 377			235 785
1986–87	29 698	6 194 981			268 395
1987–88	33 848	7 211 743			296 067
1988–89	38 854	7 930 588	11 435 873	69	324 646
1989–90	42 353	8 252 769	12 257 200	67	353 898
1990–91	45 300	8 424 511	12 991 767	65	357 507
1991–92	48 419	9 042 889	13 773 493	66	379 843
1992–93	52 295	9 759 065	15 023 875	65	432 810
1993–94	54 781	10 621 976	15 709 444	68	476 336
1994–95	60 658	11 565 753	17 443 065	67	543 502
1995–96	68 387	12 679 451	19 610 366	66	564 914
1996–97	74 347	13 718 480	20 792 015	67	614 945
1997–98	77 811	14 080 113	21 604 059	67	645 638
1998–99	80 476	14 564 061	21 621 816	69	645 587
1999–00	86 751	15 583 694	22 895 592	69	687 247
2000–01	93 828	17 126 504	24 565 665	71	665 685
2001–02	87 557	16 486 343	22 892 570	74	634 341
2002–03	89 374	16 108 417	23 062 891	72	635 135
2003–04	100 336	18 131 286	25 885 687	71	627 002
2004–05	116 087	20 309 733	29 691 278	70	702 418
2005–06	117 790	21 096 951	30 041 002	71	726 027

Data are not readily available for missing years.

(1) (2) See end notes.

Source: BTRE (2007e), Aviation statistics—website release.

Table 7.3 Domestic airline activity

Financial year	Revenue passengers ⁽¹⁾	Revenue passenger kilometres ⁽³⁾	Available seats	Available seat kilometres	Flights	Domestic load factor ⁽⁴⁾
	'000	'000	'000	'000		%
1977–78	11 958 560	8 313 930		12 465 976	374 866	66.7
1978–79	12 587 854	8 787 099		12 795 744	397 242	68.7
1979–80	13 540 872	9 692 782		13 526 185	415 879	71.7
1980–81	13 563 340	9 979 054		13 627 596	416 282	73.2
1981–82	13 695 462	10 406 883		14 933 230	416 291	69.7
1982–83	12 644 727	9 586 535		14 247 860	411 027	67.3
1983–84	13 037 551	9 940 350		13 966 231	406 679	71.2
1984–85	13 768 268	10 604 648	21 123	14 733 094	411 621	72.0
1985–86	14 798 619	11 588 920	22 642	16 109 845	426 450	71.9
1986–87	15 267 094	12 372 645	23 352	17 316 196	427 149	71.5
1987–88	16 471 140	13 623 398	24 130	18 321 841	435 622	74.4
1988–89	16 844 631	14 168 630	24 430	18 821 360	452 433	75.3
1989–90	12 272 726	10 490 243	18 836	14 846 965	364 595	70.7
1990–91	16 935 005	15 139 951	26 123	21 748 111	444 183	69.6
1991–92	20 997 030	19 806 981	29 384	25 703 400	490 740	77.1
1992–93	21 475 685	19 849 262	30 943	26 293 801	522 879	75.5
1993–94	24 788 627	23 862 333	35 549	32 153 754	543 428	74.2
1994–95	26 997 493	26 394 411	39 610	36 685 149	572 035	71.9
1995–96	28 611 325	28 372 962	41 964	39 670 986	589 501	71.5
1996–97	29 040 584	29 344 131	43 024	41 423 354	592 477	70.8
1997–98	29 358 221	29 780 624	42 291	41 077 354	589 262	72.5
1998–99	29 733 510	30 390 004	42 322	41 276 389	596 302	73.6
1999–00	31 365 384	32 203 645	43 442	42 669 709	595 629	75.5
2000–01	34 105 561	35 014 922	47 541	46 709 057	625 903	75.0
2001–02	30 510 909	32 300 227	41 596	42 265 977	493 750	76.4
2002–03	32 104 317	35 103 726	43 207	45 534 719	484 895	77.1
2003–04	36 410 853	40 402 092	47 683	51 741 384	501 771	78.1
2004–05	40 435 504	45 047 723	53 859	58 303 803	544 317	77.3
2005–06	42 531 425	47 782 489	56 532	61 808 822	535 388	77.3

Data are not readily available for missing years.

(1) (3) (4) See end notes.

Source: BTRE (2007f), Aviation statistics—website release.

Table 7.4a Activity at major airports—revenue passengers (thousand)

<i>Financial year</i>	Sydney	Melbourne	Brisbane	Perth	Adelaide	Cairns	Gold Coast	Canberra	Hobart	Darwin	Townsville
1985–86	9 497	6 476	3 457	1 939	2 082	578	795	1 008	506	407	1 030
1986–87	10 187	6 776	3 728	2 098	2 083	742	943	1 043	494	420	1 010
1987–88	11 510	7 448	4 325	2 226	2 239	934	1 136	1 117	539	469	1 007
1988–89	12 100	7 743	4 834	2 338	2 290	1 054	1 281	1 089	544	496	916
1989–90	10 108	6 511	3 934	1 999	1 825	840	695	722	455	398	475
1990–91	12 361	8 346	5 246	2 508	2 461	1 288	1 124	1 124	590	496	542
1991–92	15 070	10 196	6 646	3 026	3 006	1 776	1 530	1 361	684	563	520
1992–93	15 486	10 255	6 906	2 997	3 033	1 949	1 606	1 382	706	610	596
1993–94	16 650	10 883	7 496	3 429	3 251	2 223	1 779	1 514	743	706	564
1994–95	18 334	11 991	8 509	3 832	3 500	2 419	1 936	1 679	815	824	640
1995–96	19 878	12 972	9 236	4 145	3 743	2 595	2 044	1 750	850	932	662
1996–97	20 638	13 419	9 683	4 484	3 768	2 658	1 987	1 735	841	984	676
1997–98	21 013	13 791	9 737	4 624	3 949	2 598	1 910	1 825	854	1 011	696
1998–99	21 590	14 131	9 834	4 677	4 046	2 656	1 918	1 822	860	1 028	724
1999–00	23 099	15 146	10 535	4 891	4 186	2 718	2 015	1 971	909	1 057	757
2000–01	25 814	16 881	12 467	5 162	4 443	2 891	1 948	2 108	974	1 078	811
2001–02	23 155	15 967	11 774	4 766	4 175	2 642	1 759	1 842	958	963	753
2002–03	23 456	16 382	11 841	5 189	4 351	2 900	2 203	1 916	1 010	985	830
2003–04	26 096	18 631	13 780	5 889	4 893	3 222	2 530	2 303	1 226	1 073	975
2004–05	27 960	20 274	15 358	6 525	5 363	3 551	3 164	2 479	1 523	1 211	1 109
2005–06	29 004	21 044	16 016	7 005	5 767	3 731	3 515	2 550	1 606	1 219	1 219

Source: BTRE (2007c), Avline.

Table 7.4b Activity at major airports—aircraft movements⁽⁵⁾

<i>Financial year</i>	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Perth</i>	<i>Adelaide</i>	<i>Cairns</i>	<i>Gold Coast</i>	<i>Canberra</i>	<i>Hobart</i>	<i>Darwin</i>	<i>Townsville</i>
1985–86	137 898	86 391	51 460	45 124	52 360	11 358	12 926	20 615	12 200	10 781	17 471
1986–87	144 160	88 271	55 946	36 222	50 587	14 568	16 715	21 568	11 728	12 294	17 644
1987–88	152 972	92 487	65 359	32 184	47 688	17 551	19 653	21 642	11 556	12 125	16 482
1988–89	163 946	95 555	70 241	31 799	49 656	19 694	22 224	20 726	10 095	10 794	17 425
1989–90	139 038	79 854	57 931	28 193	41 827	14 805	16 540	15 092	8 445	5 284	10 732
1990–91	165 921	102 204	77 181	35 522	50 315	25 480	22 609	22 432	10 140	7 199	13 732
1991–92	182 968	110 530	94 527	39 472	55 797	32 547	26 299	25 988	10 681	13 162	14 299
1992–93	202 555	119 862	99 854	39 590	58 533	35 854	26 358	29 054	10 929	15 323	14 386
1993–94	206 660	118 507	105 662	44 900	59 633	38 776	27 228	31 275	11 325	17 954	15 137
1994–95	221 208	127 155	116 880	50 002	63 253	41 903	26 828	35 625	12 381	20 663	15 928
1995–96	235 398	132 411	125 827	54 088	66 866	43 119	26 446	37 057	11 230	23 781	17 103
1996–97	243 592	136 339	125 108	57 286	68 970	44 009	24 203	38 173	9 468	24 303	18 035
1997–98	248 791	138 252	125 581	55 893	72 544	42 152	22 581	38 446	8 965	23 729	17 373
1998–99	249 175	141 560	129 230	53 609	73 258	41 594	22 260	38 077	9 697	25 138	17 943
1999–2000	255 600	150 657	133 352	55 806	71 543	41 415	21 320	41 025	10 776	22 374	17 994
2000–01	283 408	174 663	151 552	56 176	73 666	41 859	20 417	51 867	15 205	22 126	19 013
2001–02	227 644	147 150	125 469	45 051	66 533	35 161	16 153	39 716	12 266	17 253	12 687
2002–03	225 872	146 751	116 552	47 854	66 231	38 594	21 225	35 986	11 444	17 243	15 208
2003–04	241 787	157 524	123 901	51 283	67 051	41 965	20 837	39 418	12 729	16 508	17 402
2004–05	257 630	176 038	139 984	56 445	70 761	45 474	27 728	38 512	15 889	16 501	20 101
2005–06	255 401	170 619	138 844	57 288	69 706	46 110	27 471	36 999	13 764	15 856	21 432

(5) See end notes.

Source: BTRE (2007c), Avline.

Table 7.5 Domestic on-time performance⁽⁶⁾⁽⁷⁾

<i>Calendar year</i>	<i>Sectors scheduled</i>	<i>Cancellations</i>	<i>Sectors flown</i>	<i>On-time departures</i>	<i>On-time arrivals</i>
		%		%	%
2004	415 235	0.8	412 118	88.2	87.7
2005	445 100	0.9	440 890	86.9	85.8
2006	461 798	0.9	457 809	87.3	86.1

(6) (7) See end notes.

Source: BTRE (2007g), Aviation statistics—website release.

Table 7.6 BITRE airfare index

<i>Financial year</i>	<i>Business index</i>	<i>Economy index</i>	<i>Restricted economy index</i>	<i>Best discount index</i>
1993–94	76.21	86.92		124.22
1994–95	78.40	86.26		119.08
1995–96	78.57	85.68		113.06
1996–97	84.70	89.94		122.55
1997–98	90.12	93.04		134.88
1998–99	92.49	94.47		133.04
1999–00	91.14	93.31		129.66
2000–01	95.73	98.46		108.18
2001–02	96.69	100.40		114.27
2002–03	98.18	98.49	104.19	106.98
2003–04	101.77	99.21	99.15	101.13
2004–05	105.61	103.17	103.21	85.08
2005–06	99.56	105.65	93.49	89.21

Data are not readily available for missing years.

Base of index: July 2003 = 100.00.

Source: BTRE (2007h), Aviation statistics—website release.

Table 7.7a Real airport charges (per return passenger)—international⁽⁸⁾⁽⁹⁾

	<i>Sydney</i> \$	<i>Melbourne</i> \$	<i>Brisbane</i> \$	<i>Perth</i> \$	<i>Adelaide</i> \$
Jul-02	51.80	35.01	36.35	41.95	52.33
Jul-03	48.86	36.09	36.61	41.34	51.06
Jul-04	47.48	35.67	39.48	39.54	55.58
Jul-05	48.56	36.65	39.67	46.16	53.98
Jul-06	51.64	38.59	40.66	48.01	73.95

(8) (9) See end notes.

Source: BITRE estimates based on price schedules supplied by airport operators, Airservices Australia (2007), price schedule website release and ABS (2007d), Consumer Price Index (ABS cat. no. 6401.0).

Table 7.7b Real airport charges (per return passenger)—domestic⁽⁸⁾⁽¹⁰⁾

	<i>Sydney</i> \$	<i>Melbourne</i> \$	<i>Brisbane</i> \$	<i>Perth</i> \$	<i>Adelaide</i> \$
Jul-02	10.36	11.49	12.10	17.38	19.57
Jul-03	13.76	11.32	11.75	19.26	18.66
Jul-04	13.60	11.20	11.96	19.08	18.42
Jul-05	13.64	11.81	12.67	20.21	19.60
Jul-06	13.42	11.90	12.01	18.31	33.13

(8) (10) See end notes.

Source: BITRE estimates based on price schedules supplied by airport operators, Airservices Australia (2007), price schedule website release and ABS (2007d), Consumer Price Index (ABS cat. no. 6401.0).

Table 7.7c Real airport charges (per return passenger)—regional⁽⁸⁾⁽¹¹⁾

	<i>Sydney</i> \$	<i>Melbourne</i> \$	<i>Brisbane</i> \$	<i>Perth</i> \$	<i>Adelaide</i> \$
Jul-02	10.11	11.45	11.94	16.16	13.01
Jul-03	13.70	11.28	11.59	19.17	12.73
Jul-04	13.54	11.15	11.79	18.99	12.52
Jul-05	13.45	11.55	12.31	19.88	13.37
Jul-06	13.33	11.79	11.76	18.07	14.62

(8) (11) See end notes.

Source: BITRE estimates based on price schedules supplied by airport operators, Airservices Australia (2007), price schedule website release and ABS (2007d), Consumer Price Index (ABS cat. no. 6401.0).

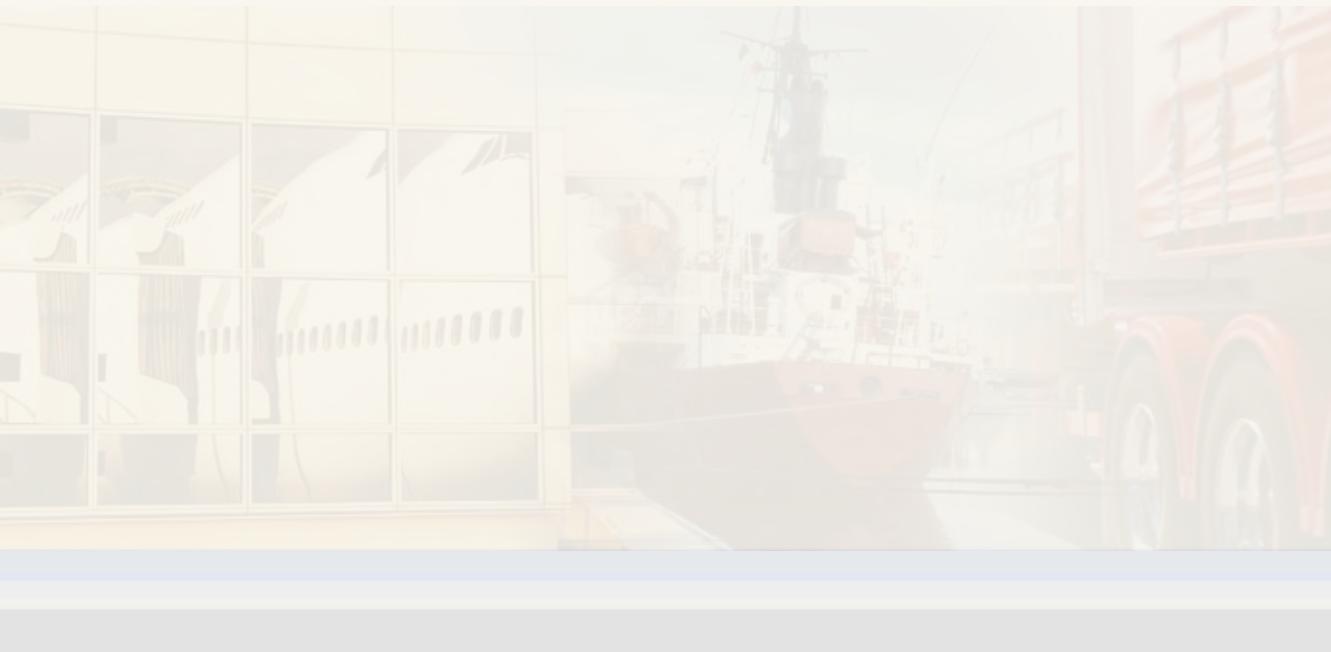
Table 7.8 Number of Australian registered aircraft by aircraft type

Date	Aeroplane						
	Piston	Turbofan	Turbojet	Turboprop	Helicopter	Balloon	Glider
14 December 1998	8 244	257	31	519	779	296	1 056
20 December 1999	8 347	268	34	534	870	308	1 063
17 December 2000	8 394	293	34	549	942	323	1 060
17 December 2001	8 440	310	37	553	980	332	1 060
16 December 2002	8 440	303	42	549	1 034	337	1 082
13 December 2003	8 684	308	51	576	1 195	351	1 106
20 December 2004	8 688	308	51	576	1 196	350	1 106
4 December 2005	8 798	323	52	611	1 284	350	1 115
7 November 2006	8 691	337	52	628	1 303	318	1 047

Sources: CASA (2007), Civil Aircraft Register.

Chapter 8

Shipping



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Chapter 8 Shipping

Chapter 8 presents information on commercial marine transport in Australia including: the number of ships operating in Australian waters and the number of port calls they make; cargo loaded and discharged at Australian ports; and an overview of the Australian commercial marine fleet. Robust datasets for passenger or recreational marine travel are not currently available.

Recent events

- Early 2006: Ownership of the two major container stevedores changed. The Toll Group took over Patrick Corporation Ltd and DP World acquired P&O Ports.
- Late 2006: Work was completed on a project to deepen Adelaide's shipping channel at Outer Harbour to 14.2 metres.

Future plans

- 2015: Widening and deepening of the Panama Canal is to be completed by 2015. This is likely to result in a sharp increase in the 5–12 000 teu (twenty foot equivalent unit) container ship size class, enabling the use of larger vessels on many of the trades connecting the Americas to other areas of the world. It is also likely to result in the current maximum 70 000 dwt (deadweight tonne) vessels used in many bulk trades increasing to the new Panama maximum of 170 000 dwt.

Map 8.1 Selected Australian sea ports



Source: Department of Infrastructure, Transport, Regional Development and Local Government.

Table 8.1 Intercapital sea distances

	Sydney km	Melbourne km	Brisbane km	Adelaide km	Perth km	Hobart km	Darwin km
Sydney		1 114	977	1 833	3 991	1 195	4 595
Melbourne			2 042	988	3 111	878	5 661
Brisbane				2 761	4 920	2 120	3 845
Adelaide					2 509	1 436	na
Perth						3 367	3 426
Hobart							5 739

na: not applicable.

Source: BITRE estimates, Australian Chamber of Shipping (1993), The Ports of Australia.

Table 8.2a Port calls, by state/territory—number of ships involved in coastal or international voyages that made port calls

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>Total</i>
1992–93	1 104	676	1 251	416	1 219	233	221	2 591
1993–94	1 069	719	1 185	418	1 181	232	190	2 584
1994–95	1 085	688	1 296	361	1 216	213	228	2 618
1995–96	1 003	697	1 178	373	1 203	195	193	2 558
1996–97	1 236	803	1 354	422	1 404	237	248	2 936
1997–98	1 457	886	1 622	486	1 620	308	318	3 276
1998–99	1 426	919	1 641	507	1 613	305	339	3 235
1999–00	1 345	905	1 766	481	1 664	309	317	3 265
2000–01	1 321	859	1 743	527	1 595	319	315	3 250
2001–02	1 297	878	1 684	586	1 445	317	298	3 240
2002–03	1 343	853	1 782	538	1 577	349	318	3 248
2003–04	1 425	877	1 976	538	1 654	324	310	3 507
2004–05	1 416	909	2 041	524	1 806	313	357	3 661
2005–06	1 446	885	2 055	540	1 801	272	350	3 668

Source: Lloyd's Marine Information Unit (2007), Lloyd's Ship Movements.

Table 8.2b Port calls, by state/territory—number of port calls made by ships involved in coastal or international voyages

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>Total</i>
1992–93	3 696	3 371	4 214	839	3 360	1 800	564	17 856
1993–94	3 489	3 074	3 473	817	3 102	1 566	527	16 057
1994–95	3 324	2 987	3 934	810	3 187	1 493	617	16 369
1995–96	2 924	2 817	3 485	751	2 892	1 294	562	14 763
1996–97	3 725	3 327	4 418	901	3 583	1 441	834	18 324
1997–98	4 566	3 708	5 018	996	4 372	1 504	997	21 241
1998–99	4 577	3 565	5 132	1 135	4 480	1 340	943	21 269
1999–00	4 338	3 876	5 565	1 074	4 454	1 642	984	22 058
2000–01	4 327	3 814	5 436	1 207	4 438	1 670	890	21 879
2001–02	4 433	3 737	5 542	1 292	3 685	1 843	865	21 488
2002–03	4 253	4 140	6 179	1 268	3 958	2 167	868	22 910
2003–04	4 545	4 229	5 815	1 306	4 765	1 998	929	23 634
2004–05	4 757	4 426	5 930	1 253	5 931	2 185	1 022	25 535
2005–06	4 733	4 328	6 451	1 456	5 579	2 083	929	25 615

Source: Lloyd's Marine Information Unit (2007), Lloyd's Ship Movements.

Table 8.3a Port calls, by major ports—number of ships involved in coastal or international voyages that made port calls

<i>Financial year</i>	<i>Melbourne</i>	<i>Sydney</i>	<i>Brisbane</i>	<i>Fremantle</i>	<i>Newcastle</i>	<i>Gladstone</i>	<i>Dampier</i>	<i>Hay Point</i>
1992–93	444	464	479	555	496	331	357	329
1993–94	461	493	481	541	488	235	326	302
1994–95	508	527	551	544	515	250	365	306
1995–96	499	495	498	555	426	284	339	269
1996–97	542	545	605	617	583	302	392	310
1997–98	597	636	675	717	709	384	521	396
1998–99	650	654	744	749	645	399	469	407
1999–00	587	638	760	755	598	421	516	464
2000–01	582	607	732	704	588	461	496	486
2001–02	594	578	683	688	616	469	244	473
2002–03	589	610	698	724	660	533	292	526
2003–04	614	627	707	739	680	640	443	645
2004–05	664	615	748	764	686	652	537	708
2005–06	627	649	804	739	668	685	528	635

Source: Lloyd's Marine Information Unit (2007), Lloyd's Ship Movements.

Table 8.3b Port calls, by major ports—number of port calls made by ships involved in coastal or international voyages

<i>Financial year</i>	<i>Melbourne</i>	<i>Sydney</i>	<i>Brisbane</i>	<i>Fremantle</i>	<i>Newcastle</i>	<i>Gladstone</i>	<i>Dampier</i>	<i>Hay Point</i>
1992–93	2 573	2 059	1 528	1 224	943	702	716	552
1993–94	2 312	2 008	1 276	1 213	862	498	631	496
1994–95	2 337	1 945	1 373	1 219	865	511	668	465
1995–96	2 223	1 781	1 261	1 149	696	534	595	399
1996–97	2 563	2 105	1 687	1 364	1 041	640	740	500
1997–98	2 774	2 449	1 844	1 668	1 418	737	957	696
1998–99	2 648	2 508	2 081	1 790	1 353	651	899	720
1999–00	2 909	2 468	2 241	1 690	1 231	702	977	821
2000–01	2 864	2 362	2 120	1 661	1 244	855	1 002	839
2001–02	2 944	2 282	2 057	1 639	1 453	1 014	356	789
2002–03	3 185	2 269	2 166	1 596	1 362	1 151	462	885
2003–04	3 234	2 496	2 084	1 613	1 405	1 279	1 267	997
2004–05	3 436	2 480	2 240	1 582	1 577	1 311	1 830	1 104
2005–06	3 429	2 613	2 508	1 622	1 453	1 432	1 424	973

Source: Lloyd's Marine Information Unit (2007), Lloyd's Ship Movements.

Table 8.4 International sea freight to and from Australia

Financial year	Bulk		Non-bulk		Total	
	Goods moved (billion tkm)	Goods moved (million tonnes)	Goods moved (billion tkm)	Goods moved (million tonnes)	Goods moved (billion tkm)	Goods moved (million tonnes)
1995–96	3 561.8	398.5	218.1	21.4	3 779.9	420.0
1996–97	3 891.0	429.6	239.3	24.2	4 130.3	453.8
1997–98	4 113.4	451.4	281.2	27.6	4 394.6	479.0
1998–99	4 206.9	458.5	293.6	29.6	4 500.6	488.1
1999–00	4 398.5	487.2	310.9	31.5	4 709.4	518.7
2000–01	4 669.5	520.0	296.8	29.9	4 966.3	550.0
2001–02	4 681.3	526.6	322.0	32.2	5 003.3	558.7
2002–03	4 818.0	557.3	341.4	34.3	5 159.4	591.6
2003–04	5 141.2	585.4	369.3	37.1	5 510.6	622.5
2004–05	5 394.3	631.1	476.8	49.4	5 871.1	680.6
2005–06	5 457.7	649.4	434.3	46.5	5 892.0	696.0

Source: ABS (2007e), International cargo statistics.

Table 8.5a Cargo loaded and discharged by Australian ports, by state/territory—cargo loaded (including exports)

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>Total</i>
<i>million tonnes</i>								
1995–96	76.58	18.52	106.09	13.08	190.12	9.03	6.08	419.50
1996–97	85.71	20.48	111.07	14.92	205.26	7.85	6.47	451.76
1997–98	96.32	20.62	118.98	13.82	213.69	8.64	6.35	478.43
1998–99	93.03	20.23	126.07	14.91	207.59	10.32	6.42	478.58
1999–00	90.63	22.46	141.16	14.18	225.54	11.50	6.24	511.71
2000–01	95.71	25.28	156.02	15.37	235.71	11.17	5.99	545.26
2001–02	94.62	23.70	159.48	17.05	238.15	13.48	5.41	551.88
2002–03	93.24	20.73	166.66	14.66	265.82	13.79	5.76	580.67
2003–04	98.08	21.64	172.79	15.22	282.24	13.78	6.29	610.05
2004–05	101.86	20.98	186.20	15.01	318.17	13.32	7.21	662.75
2005–06	106.12	22.65	185.84	15.55	328.34	12.02	7.64	678.16

Source: ABS (2007e), International cargo statistics and BTRE (2007i), Domestic sea freight database.

Table 8.5b Cargo loaded and discharged by Australian ports, by state/territory—cargo discharged (including imports)

<i>Financial year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>Total</i>
<i>million tonnes</i>								
1995–96	17.70	16.78	25.03	8.33	20.86	4.69	1.70	95.09
1996–97	17.93	17.07	25.96	10.02	22.07	4.32	2.33	99.71
1997–98	20.88	19.22	25.73	10.95	22.13	4.35	2.29	105.55
1998–99	19.36	20.47	27.33	9.04	21.04	4.95	2.24	104.43
1999–00	19.42	20.91	30.18	9.55	19.60	5.05	2.75	107.45
2000–01	20.68	20.99	29.56	9.59	18.34	5.17	2.16	106.50
2001–02	19.78	20.19	29.92	10.80	20.81	7.08	2.04	110.62
2002–03	19.96	22.19	32.35	10.89	22.54	6.29	1.50	115.72
2003–04	21.91	22.72	33.18	8.70	24.22	6.18	2.37	119.27
2004–05	21.72	23.89	35.98	8.90	24.13	6.41	2.29	123.32
2005–06	21.32	23.48	38.79	9.20	24.05	6.15	3.57	126.55

Source: ABS (2007e), International cargo statistics and BTRE (2007i), Domestic sea freight database.

Table 8.6a Cargo loaded and discharged, by major Australian ports – cargo loaded (including exports)

Financial year	Dampier	Port Hedland	Newcastle	Hay Point	Port Walcott	Gladstone	Weipa	Port Kembla
<i>million tonnes</i>								
1995–96	70.2	63.9	53.0	45.8	25.1	27.3	9.9	17.0
1996–97	78.0	68.3	60.4	46.3	25.0	28.3	10.7	18.7
1997–98	87.5	69.5	70.0	52.0	22.2	30.2	10.9	17.7
1998–99	87.2	66.9	71.3	53.9	17.9	32.5	10.6	15.4
1999–00	92.7	65.0	68.6	64.1	26.4	35.0	13.3	14.9
2000–01	90.4	72.5	70.6	70.3	28.7	41.3	13.1	17.6
2001–02	96.4	72.5	72.0	70.3	27.0	43.2	12.9	15.3
2002–03	101.2	81.6	74.0	76.3	39.6	44.1	13.2	13.8
2003–04	101.6	89.4	79.6	78.0	43.9	48.0	13.4	12.7
2004–05	104.0	107.9	81.1	84.8	56.4	49.7	15.4	14.6
2005–06	111.9	110.2	83.1	80.3	55.2	52.0	17.8	16.2

Source: ABS (2007e), International cargo statistics and BTRE (2007i), Domestic sea freight database.

Table 8.6b Cargo loaded and discharged, by major Australian ports – cargo discharged (including imports)

Financial year	Sydney	Melbourne	Gladstone	Brisbane	Fremantle	Port Kembla	Geelong	Adelaide
<i>million tonnes</i>								
1995–96	12.2	10.4	9.3	9.4	8.4	9.5	3.8	4.3
1996–97	15.7	10.6	9.9	9.6	9.9	9.1	4.7	5.2
1997–98	16.0	10.8	9.4	11.4	9.2	11.5	5.1	6.3
1998–99	15.6	12.6	10.1	11.1	9.2	8.7	5.9	4.4
1999–00	17.3	12.4	10.9	12.3	9.1	9.4	5.8	4.9
2000–01	17.9	11.6	11.0	11.4	9.0	9.6	6.0	4.1
2001–02	17.6	12.4	11.0	11.7	10.1	9.5	6.3	5.9
2002–03	18.4	14.2	10.9	13.4	11.4	9.7	6.1	5.9
2003–04	19.7	15.4	11.5	13.1	11.6	9.7	6.9	4.9
2004–05	19.6	16.2	13.3	13.9	12.0	9.9	7.3	5.1
2005–06	20.1	16.2	15.3	14.5	11.1	9.1	7.0	6.4

Source: ABS (2007e), International cargo statistics and BTRE (2007i), Domestic sea freight database.

Table 8.7a Cargo loaded and discharged, by capital city ports—cargo loaded (including exports)

<i>Financial year</i>	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Darwin</i>
	<i>million tonnes</i>						
1995–96	4.4	7.7	9.4	2.9	10.9	0.7	0.9
1996–97	4.7	8.8	10.3	3.7	11.9	0.3	1.3
1997–98	5.1	9.8	9.7	4.0	13.3	0.6	0.9
1998–99	4.3	9.5	9.7	3.5	12.9	0.7	0.7
1999–00	5.1	10.5	10.7	3.9	12.9	0.9	0.6
2000–01	5.8	11.1	11.4	4.5	12.5	0.6	0.4
2001–02	5.7	11.9	11.6	5.6	12.1	1.6	0.3
2002–03	4.7	10.8	11.0	4.9	12.9	1.3	0.4
2003–04	5.0	11.4	10.8	4.7	14.0	1.3	0.4
2004–05	5.1	11.8	11.5	4.3	14.2	1.0	0.7
2005–06	5.7	12.4	11.9	5.0	14.1	0.7	1.2

Source: ABS (2007e), International cargo statistics and BTRE (2007i), Domestic sea freight database.

Table 8.7b Cargo loaded and discharged, by capital city ports—cargo discharged (including imports)

<i>Financial year</i>	<i>Sydney</i>	<i>Melbourne</i>	<i>Brisbane</i>	<i>Adelaide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Darwin</i>
	<i>million tonnes</i>						
1995–96	12.2	10.4	9.4	4.3	8.4	1.1	0.8
1996–97	15.7	10.6	9.6	5.2	9.9	0.2	0.8
1997–98	16.0	10.8	11.4	6.3	9.2	1.1	0.8
1998–99	15.6	12.6	11.1	4.4	9.2	0.8	0.9
1999–00	17.3	12.4	12.3	4.9	9.1	0.9	1.0
2000–01	17.9	11.6	11.4	4.1	9.0	0.5	1.0
2001–02	17.6	12.4	11.7	5.9	10.1	1.1	0.8
2002–03	18.4	14.2	13.4	5.9	11.4	1.0	0.7
2003–04	19.7	15.4	13.1	4.9	11.6	1.0	0.9
2004–05	19.6	16.2	13.9	5.1	12.0	1.1	1.3
2005–06	20.1	16.2	14.5	6.4	11.1	1.1	2.0

Source: ABS (2007e), International cargo statistics and BTRE (2007i), Domestic sea freight database.

Table 8.8 Container cargo exchanged, selected Australian ports

<i>Financial year</i>	<i>Melbourne</i>	<i>Sydney</i>	<i>Brisbane</i>	<i>Fremantle</i>	<i>Adelaide</i>	<i>Five ports</i>
<i>twenty foot equivalent units (teu) exchanged</i>						
1993–94	801 344	587 670	228 055	169 174	64 619	1 850 862
1994–95	880 151	666 586	232 693	189 272	66 525	2 035 227
1995–96	923 142	684 714	249 439	202 680	69 355	2 129 330
1996–97	984 394	730 446	272 632	209 564	88 497	2 285 533
1997–98	1 040 810	798 209	317 568	250 802	107 912	2 515 301
1998–99	1 121 161	878 580	357 703	275 697	120 586	2 753 727
1999–00	1 287 795	1 010 509	414 449	297 363	115 506	3 125 622
2000–01	1 316 665	988 967	453 257	354 144	133 236	3 246 269
2001–02	1 420 781	1 009 453	481 623	381 809	145 226	3 438 892
2002–03	1 593 798	1 160 513	570 204	431 342	148 333	3 904 190
2003–04	1 717 718	1 270 256	639 272	457 305	169 108	4 253 659
2004–05	1 910 441	1 375 610	726 147	467 313	170 585	4 650 096
2005–06	1 929 925	1 445 465	766 278	455 428	189 391	4 786 487

Source: BTRE (2007k), Waterline.

Table 8.9a Summary of the Australian trading fleet — number of vessels

Financial year	Vessel capacity		Flag			Total Australian trading fleet
	Major trading fleet (greater than 2000 dwt)	Other (minor) trading ships (greater than 150 gross registered tonnage and less than or equal to 2000 dwt)	Total Australian trading fleet	Total Australian registered	Total Overseas registered	
1998–99	55	22	77	70	7	77
1999–00	54	23	77	70	7	77
2000–01	51	30	81	69	12	81
2001–02	54	23	77	63	14	77
2002–03	55	19	74	62	12	74
2003–04	52	30	82	72	10	82
2004–05	77	2	79	40	39	79
2005–06	78	13	91	48	43	91

Source: BTRE (2007b), *Australian Sea Freight*.**Table 8.9b Summary of the Australian trading fleet — deadweight (tonnes)**

Financial year	Vessel capacity		Flag			Total Australian trading fleet
	Major trading fleet (greater than 2000 dwt)	Other (minor) trading ships (greater than 150 gross registered tonnage and less than or equal to 2000 dwt)	Total Australian trading fleet	Total Australian registered	Total Overseas registered	
1998–99	2 492 250	13 119	2 505 369	2 247 312	258 057	2 505 369
1999–00	2 269 550	13 786	2 383 336	2 008 948	274 388	2 383 336
2000–01	2 308 309	15 674	2 323 983	1 949 064	374 919	2 323 983
2001–02	2 013 711	14 926	2 028 637	1 788 280	240 357	2 028 637
2002–03	2 130 037	12 800	2 135 982	1 696 036	439 946	2 135 982
2003–04	2 038 382	14 413	2 052 795	1 625 293	427 502	2 052 795
2004–05	2 800 678	2 156	2 802 834	1 550 766	1 252 068	2 802 834
2005–06	3 042 452	12 097	3 054 549	1 564 148	1 490 401	3 054 549

Source: BTRE (2007b), *Australian Sea Freight*.

Table 8.9c Summary of the Australian trading fleet – gross tonnage (tonnes)

Financial year	Vessel capacity		Flag			Total Australian trading fleet
	Major trading fleet (greater than 2000 dwt)	Other (minor) trading ships (greater than 150 gross registered tonnage and less than or equal to 2000 dwt)	Total Australian trading fleet	Total Australian registered	Total Overseas registered	
1998–99	1 853 331	11 645	1 864 976	1 711 673	153 303	1 864 976
1999–00	1 713 205	16 565	1 729 770	1 560 149	169 621	1 729 770
2000–01	1 740 552	23 746	1 764 298	1 536 714	227 584	1 764 298
2001–02	1 571 377	16 366	1 587 743	1 443 298	144 445	1 587 743
2002–03	1 626 319	9 586	1 628 203	1 380 832	247 371	1 628 203
2003–04	1 621 856	21 853	1 643 709	1 401 964	241 745	1 643 709
2004–05	2 111 189	2 209	2 113 398	1 336 445	776 953	2 113 398
2005–06	2 415 700	12 485	2 428 185	1 348 739	1 079 446	2 428 185

Source: BTRE (2007b), *Australian Sea Freight*.

**Table 8.10a Ships in the major trading fleet—overseas trades, 2005–06
—tankers**

Name	Products	Ports called at	
		Australian	Overseas
Botany Tradition	Chemicals	Bunbury, Gladstone, Brisbane	Argentina, Brazil, Malaysia, Singapore, New Zealand
Petro Navigator	Chemicals	Cairns	Papua New Guinea, Solomon Islands
Northwest Sanderling	LNG	Dampier	Japan
Northwest Sandpiper	LNG	Dampier	Japan, Singapore
Northwest Snipe	LNG	Dampier	Japan
Northwest Stormpetrel	LNG	Dampier	Japan, Singapore
Boral Gas	LPG	Hastings, Brisbane, Devonport	New Zealand, Papua New Guinea, Tonga, Vanuatu, Western Samoa
Lycaste Peace	LPG	Dampier	Egypt, Japan, Malta, Algeria
Pacific Gas	LPG	Cairns	New Zealand, Papua New Guinea, Tonga, Solomon Islands, Vanuatu, Western Samoa, Chile
Nivosa	Crude oil	Sydney, Geelong	Singapore, Malaysia, Vietnam, Saudi Arabia, Mozambique
Pacific Venture	Crude oil	Melbourne	Japan, Peoples' Republic of China, Singapore, Sudan, Thailand, Vietnam
Samar Spirit	Crude oil	Botany Bay, Hastings, Brisbane	Papua New Guinea, Philippines

Source: BTRE (2007b), *Australian Sea Freight*.**Table 8.10b Ships in the major trading fleet—overseas trades, 2005–06
—bulk carriers**

Name	Products	Ports called at	
		Australian	Overseas
Alltrans	Alumina	Gladstone, Launceston, Newcastle	New Zealand
Iron Kembla	Iron ore, coal	Port Kembla, Hay Point, Port Hedland	Republic of Korea, Singapore
Pacific Triangle	Iron ore, coal	Hay Point, Newcastle, Gladstone, Port Hedland	Japan, Singapore, Peoples' Republic of China, Republic of Korea
Saraji Trader	Coal, dry bulk	Hay Point	Japan, Egypt, Brazil, Gibraltar, Denmark, Philippines, Spain, United Kingdom

Source: BTRE (2007b), *Australian Sea Freight*.

**Table 8.10c Ships in the major trading fleet—overseas trades, 2005–06
—container carriers**

<i>Name</i>	<i>Products</i>	<i>Ports called at</i>	
		<i>Australian</i>	<i>Overseas</i>
ANL Explorer	General	Botany Bay, Melbourne, Sydney	China, Republic of Korea, Taiwan, Vietnam
ANL Esprit	General	Adelaide, Fremantle, Botany Bay	Hong Kong, Japan, Malaysia, Peoples' Republic of China, Republic of Korea

Source: BTRE (2007b), *Australian Sea Freight*.

**Table 8.10d Ships in the major trading fleet—overseas trades, 2005–06
—livestock carriers**

<i>Name</i>	<i>Products</i>	<i>Ports called at</i>	
		<i>Australian</i>	<i>Overseas</i>
Norvantes	Livestock	Cairns, Darwin, Mourilyan	Indonesia, Malaysia, Brunei
Molunat	Livestock	Darwin, Karumba	Indonesia, Papua New Guinea, Philippines, Brunei

Source: BTRE (2007b), *Australian Sea Freight*.

**Table 8.10e Ships in the major trading fleet—overseas trades, 2005–06
—general cargo ships**

<i>Name</i>	<i>Products</i>	<i>Ports called at</i>	
		<i>Australian</i>	<i>Overseas</i>
Cape Conway	General	Brisbane, Hastings, Hobart	Japan, Hong Kong, Taiwan, Republic of Korea, Peoples' Republic of China
Norfolk Guardian	General	Brisbane, Yamba, Sydney	New Zealand, Norfolk Island
NT Express	General	Darwin, Karumba	Indonesia, Papua New Guinea, Philippines, Brunei
Cape Darnley	General	Adelaide, Botany Bay, Melbourne, Newcastle	Papua New Guinea, Philippines

Source: BTRE (2007b), *Australian Sea Freight*.

**Table 8.11a Ships in the major trading fleet-coastal trades, 2005–06
—tankers**

<i>Name</i>	<i>Products</i>	<i>Ports called at</i>	
		<i>Australian</i>	<i>Overseas</i>
Barrington	Petroleum products	Botany Bay, Cairns, Gladstone, Mackay, Brisbane, Townsville	
Helix	Petroleum products	Geelong, Devonport, Hobart, Sydney, Launceston	
Seabridge	Crude oil	Botany Bay, Brisbane, Dampier, Hastings, Sydney	Japan, Republic of Korea, Singapore, Brunei, Taiwan, Thailand, Vietnam
Palmerston	Petroleum products	Mackay, Gladstone, Townsville, Brisbane	Singapore
Scottish Bard	Petroleum products	Adelaide, Brisbane, Fremantle, Melbourne	Fiji, American Samoa, Hong Kong, Solomon Islands
Seakap	Bitumen & bituminous materials, chemicals	Sydney, Gladstone, Launceston, Newcastle, Port Kembla, Portland, Wollongong, Whyalla	Taiwan, Singapore

Source: BTRE (2007b), *Australian Sea Freight*.

**Table 8.11b Ships in the major trading fleet—coastal trades, 2005–06
—bulk carriers**

<i>Name</i>	<i>Products</i>	<i>Ports called at</i>	
		<i>Australian</i>	<i>Overseas</i>
Aburri	Metal concentrates	Bing Bong	
Accolade II	Limestone	Adelaide, Brisbane, Klein Point	
Cementco	Cement, lead concentrates	Gladstone, Brisbane	
Endeavour River	Bauxite, alumina	Gladstone, Weipa, Thursday Island	Singapore
Enterprise	Bulk carrier	Hobart, Geelong, Melbourne, Portland, Launceston, Port Pirie, Brisbane	
Fitzroy River	Bauxite, alumina	Gladstone, Thursday Island, Weipa	Singapore
Goliath	Cement	Devonport, Geelong, Melbourne, Sydney, Newcastle	
Ikuna	Coal, dry bulk	Adelaide, Brisbane, Bunbury, Fremantle, Launceston	New Zealand
Iron Sturt	Cement, metal concentrates, alumina, zinc	Burnie, Hobart, Geelong, Port Pirie, Portland, Adelaide, Melbourne	
Iron Yandi	Iron ore, coal	Gladstone, Hay Point, Port Hedland, Port Kembla, Newcastle	Republic of Korea, Taiwan
Kowulka	Gypsum, salt, sugar, alumina, chemicals	Sydney, Thevenard, Melbourne, Brisbane, Bundaberg	
Lindesay Clark	Alumina, dolomite, fertilizers, steel products	Geelong, Fremantle, Bunbury, Ardrossan, Whyalla	Singapore
Ormiston	Gypsum, salt, sugar	Melbourne, Thevenard, Ardrossan, Bundaberg, Mackay, Whyalla	
Pioneer	Sugar	Mackay, Sydney	Singapore
Portland	Alumina, steel products	Portland, Fremantle, Bunbury, Geelong	
River Boyne	Bauxite	Gladstone, Weipa, Thursday Island	
River Embley	Bauxite	Gladstone, Weipa, Thursday Island	
Wunma	Dry bulk	Karumba	

Source: BTRE (2007b), *Australian Sea Freight*.

**Table 8.11c Ships in the major trading fleet—coastal trades, 2005–06
—container carriers**

Name	Products	Ports called at	
		Australian	Overseas
ANL Australia	General	Botany Bay, Brisbane, Melbourne, Sydney	Japan, Peoples' Republic of China, Republic of Korea, Taiwan
ANL Bass Trader	General	Melbourne, Launceston, Burnie, Hobart	
ANL Emblem	General	Botany Bay, Brisbane, Melbourne, Fremantle	Singapore

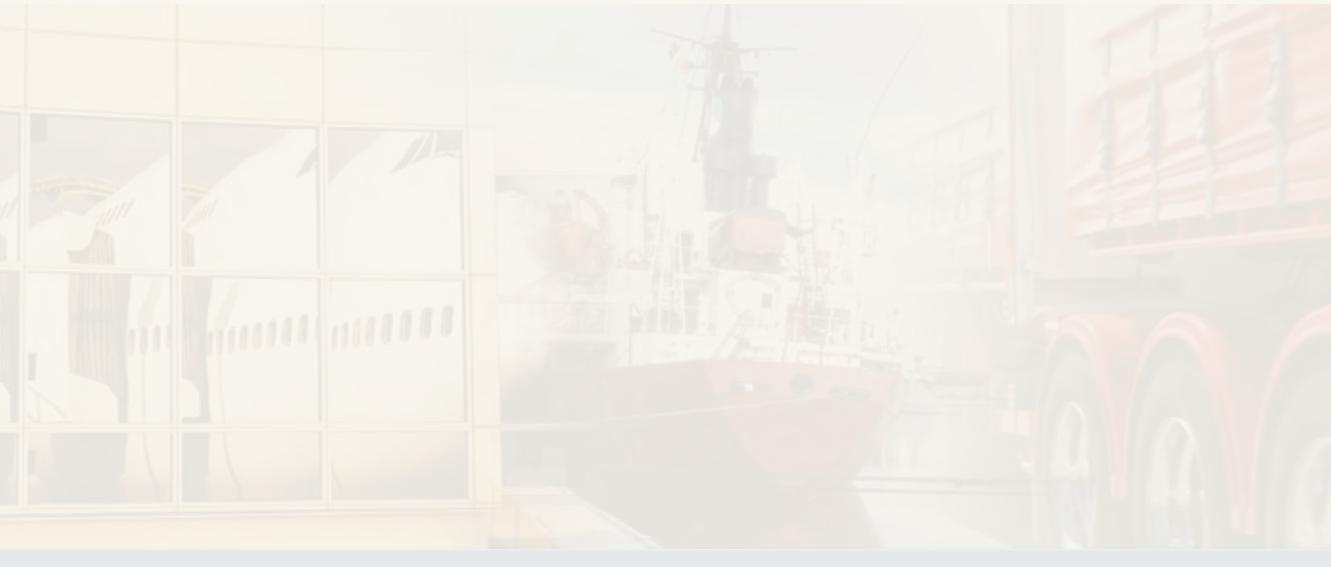
Source: BTRE (2007b), *Australian Sea Freight*.**Table 8.11d Ships in the major trading fleet—coastal trades, 2005–06
—general cargo ships**

Name	Products	Ports called at	
		Australian	Overseas
Claudia I	Blue metal	Sydney, Newcastle	
Iron Monarch	Steel products	Hastings, Port Kembla, Newcastle	New Zealand
Aurora Australis	General cargo	Hobart, Fremantle, Macquarie Island, Antarctica	
Newcastle Bay	General cargo	Cairns, Weipa, Cape Flattery	
Searoad Mersey	General cargo	Devonport, Melbourne, Geelong	
Searoad Tamar	General cargo	Devonport, Launceston, Melbourne	
Spirit of Tasmania I	General cargo, passengers	Devonport, Melbourne, Sydney, Hastings	
Spirit of Tasmania II	General cargo, passengers	Devonport, Melbourne, Sydney, Hastings	
Spirit of Tasmania III	General cargo, passengers	Devonport, Melbourne, Sydney, Hastings	
Tasmanian Achiever	General cargo	Burnie, Melbourne, Launceston	
Trinity Bay	General cargo, passengers	Cairns	
Victorian Reliance	General cargo	Melbourne, Burnie, Launceston	

Source: BTRE (2007b), *Australian Sea Freight*.

Chapter 9

Safety



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Chapter 9 Safety

Chapter 9 presents information on transportation accidents and casualties. Data are classified by mode of transport, with accident and injury rates provided to assist comparison across modes.

Recent events

- May 2005: Transair aviation accident near the Lockhart River (15 fatalities).
- June 2006: The Australian Transport Council approves the national *Rail Safety Bill 2006*.
- October 2006: The Australian Transport Council adopts the *National Road Safety Action Plan 2007 and 2008*.
- June 2007: Kerang level crossing accident (11 passenger fatalities).

Future plans

- 2008: The Heavy Vehicle Driver Fatigue reform package will be implemented across state and territory jurisdictions.
- 2008: A large controlled trial of a new post-licence driver education programme is to be undertaken in New South Wales and Victoria.

Table 9.1a Number of fatalities and fatality accidents, by transport mode – accidents

<i>Calendar year</i>	<i>Road</i>	<i>Rail</i>	<i>Marine</i>	<i>Aviation</i>
1971				14
1972				21
1973				15
1974				17
1975				14
1976				19
1977				19
1978				25
1979				19
1980				23
1981				18
1982				26
1983				25
1984				18
1985				18
1986				18
1987				17
1988				29
1989	2 406			25
1990	2 050			30
1991	1 874			21
1992	1 736			25
1993	1 737			23
1994	1 702			25
1995	1 822			23
1996	1 768			23
1997	1 601			16
1998	1 573			23
1999	1 553			21
2000	1 628			17
2001	1 584			22
2002	1 525			10
2003	1 445		35	15
2004	1 444		41	10
2005	1 472		36	14
2006	1 453		38	18

Data are not readily available for missing years.

Source: ATSB (2004, 2006, 2007b, 2007c, 2007d), National Maritime Safety Committee (2007), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.1b Number of fatalities and fatality accidents, by transport mode –fatalities

Calendar year	Road	Rail	Marine	Aviation
1971	3 590			35
1972	3 422			50
1973	3 679			26
1974	3 572			39
1975	3 694			39
1976	3 583			53
1977	3 578			43
1978	3 705			56
1979	3 508	49		33
1980	3 272	56		57
1981	3 321	72		48
1982	3 252	72		51
1983	2 755	66		54
1984	2 822	76		34
1985	2 941	66		43
1986	2 888	66		42
1987	2 772	54		31
1988	2 887	64		61
1989	2 801	67		47
1990	2 331	76		64
1991	2 113	42		45
1992	1 974	61		49
1993	1 953	52		53
1994	1 928	43		51
1995	2 017	46		39
1996	1 970	30		43
1997	1 767	43		26
1998	1 755	43		46
1999	1 764	43		40
2000	1 817	38		37
2001	1 737	56		41
2002	1 715	59		24
2003	1 621	48	39	35
2004	1 583	47	47	21
2005	1 627	38	40	35
2006	1 598	40	46	33

Data are not readily available for missing years.

Source: ATSB (2004, 2006, 2007b, 2007c, 2007d), National Maritime Safety Committee (2007), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.2a Fatality rate and injury rate, by transport mode—fatality rate

<i>Calendar year</i>	<i>Road</i>	<i>Rail</i>	<i>Marine</i>	<i>Aviation</i>
<i>deaths per 100 000 population</i>				
1971	27.47			0.27
1972	25.72			0.38
1973	27.24			0.19
1974	26.03			0.28
1975	26.59			0.28
1976	25.53			0.38
1977	25.21			0.30
1978	25.80			0.39
1979	24.17	0.34		0.23
1980	22.27	0.38		0.39
1981	22.25	0.48		0.32
1982	21.42	0.47		0.34
1983	17.90	0.43		0.35
1984	18.11	0.49		0.22
1985	18.63	0.42		0.27
1986	18.03	0.41		0.26
1987	17.04	0.33		0.19
1988	17.46	0.39		0.37
1989	16.66	0.40		0.28
1990	13.66	0.45		0.38
1991	12.23	0.24		0.26
1992	11.28	0.35		0.28
1993	11.05	0.29		0.30
1994	10.80	0.24		0.29
1995	11.16	0.25		0.22
1996	10.76	0.16		0.23
1997	9.54	0.23		0.14
1998	9.38	0.23		0.25
1999	9.32	0.23		0.21
2000	9.49	0.20		0.19
2001	8.95	0.29		0.21
2002	8.73	0.30		0.12
2003	8.15	0.24	0.20	0.18
2004	7.86	0.23	0.23	0.10
2005	7.98	0.19	0.20	0.17
2006	7.72	0.19	0.22	0.16

Data are not readily available for missing years.

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2004, 2006, 2007b, 2007c, 2007d), National Maritime Safety Committee (2007), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.2b Fatality rate and injury rate, by transport mode—*injury rate*

<i>Calendar year</i>	<i>Road</i>	<i>Rail</i>	<i>Marine</i>	<i>Aviation</i>
<i>serious injuries per 100 000 population</i>				
1971				0.33
1972				0.38
1973				0.33
1974				0.74
1975				0.41
1976				0.30
1977				0.27
1978				0.61
1979				0.45
1980				0.39
1981				0.54
1982				0.45
1983				0.42
1984				0.49
1985				0.43
1986				0.47
1987				1.18
1988				0.46
1989	254.97			0.90
1990	215.48			0.46
1991	188.51			0.40
1992	176.76			0.36
1993	176.43			0.53
1994	186.85			0.34
1995	190.13			0.35
1996	184.09			0.56
1997	175.98			0.39
1998	nya			0.28
1999	nya			0.45
2000	nya			0.42
2001	nya	0.43		0.27
2002	nya	0.49		0.19
2003	nya	0.25	0.41	0.30
2004	nya	0.41	0.63	0.31
2005	nya	0.34	0.69	0.25
2006	nya	0.61	0.69	0.23

Data are not readily available for missing years.

nya: not yet available.

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2004, 2006, 2007b, 2007c, 2007d), National Maritime Safety Committee (2007), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.3a Fatality rate and injury rate, by transport mode—fatality rate

<i>Calendar year</i>	<i>Road</i>	<i>Rail</i>	<i>Aviation</i>
	<i>deaths per billion passenger km travelled</i>		
1971	29.59		6.63
1972	27.09		8.77
1973	28.19		4.15
1974	25.65		5.24
1975	25.07		4.85
1976	23.64		6.73
1977	22.57		5.65
1978	22.59		6.61
1979	20.99	5.89	3.68
1980	19.37	6.41	5.76
1981	19.31	7.78	4.70
1982	17.94	7.71	4.78
1983	15.06	7.13	5.46
1984	14.69	8.32	3.30
1985	14.53	7.22	3.89
1986	13.85	7.04	3.51
1987	12.98	5.67	2.43
1988	13.04	6.42	4.34
1989	12.16	6.58	3.23
1990	9.96	7.82	5.86
1991	9.05	4.26	2.90
1992	8.36	6.19	2.42
1993	8.12	5.38	2.62
1994	7.90	4.41	2.10
1995	7.95	4.56	1.45
1996	7.57	2.95	1.49
1997	6.74	4.15	0.87
1998	6.57	4.33	1.52
1999	6.44	4.21	1.29
2000	6.52	3.55	1.13
2001	6.24	4.97	1.21
2002	5.94	5.20	0.74
2003	5.54	4.31	0.98
2004	5.20	4.14	0.51

Data are not readily available for missing years.

Source: ATSB (2004, 2006, 2007b, 2007c, 2007d), BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities, Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.3b Fatality rate and injury rate, by transport mode—*injury rate*

<i>Calendar year</i>	<i>Road</i>	<i>Rail</i>	<i>Aviation</i>
	<i>serious injuries per billion passenger km travelled</i>		
1971			8.15
1972			8.95
1973			7.19
1974			13.56
1975			7.08
1976			5.34
1977			5.13
1978			10.27
1979			7.36
1980			5.86
1981			7.84
1982			6.46
1983			6.57
1984			7.48
1985			6.15
1986			6.26
1987			15.04
1988			5.41
1989	186.07		10.46
1990	157.06		7.14
1991	139.56		4.50
1992	131.03		3.11
1993	129.55		4.64
1994	136.60		2.51
1995	135.49		2.38
1996	129.56		3.53
1997	124.26		2.44
1998	nya		1.75
1999	nya		2.75
2000	nya		2.45
2001	nya	7.37	1.56
2002	nya	8.54	1.17
2003	nya	4.49	1.65
2004	nya	7.23	1.51

Data are not readily available for missing years.

nya: not yet available.

Source: ATSB (2004, 2006, 2007b, 2007c, 2007d), BTRE (2007j), Estimating urban traffic and congestion cost trends for Australian cities, Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.4a Number of road accidents and casualties, by accident severity – accidents

<i>Calendar year</i>	<i>Fatal</i>	<i>Serious injuries</i>
1989	2 406	22 158
1990	2 050	20 014
1991	1 874	17 844
1992	1 736	17 108
1993	1 737	17 164
1994	1 702	17 560
1995	1 822	17 803
1996	1 768	17 505
1997	1 601	17 150
1998	1 573	nya
1999	1 553	nya
2000	1 628	nya
2001	1 584	nya
2002	1 525	nya
2003	1 445	nya
2004	1 444	nya
2005	1 472	nya
2006	1 453	nya

nya: not yet available.

Source: ATSB (2004, 2006, 2007b, 2007c, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.4b Number of road accidents and casualties, by accident severity – casualties

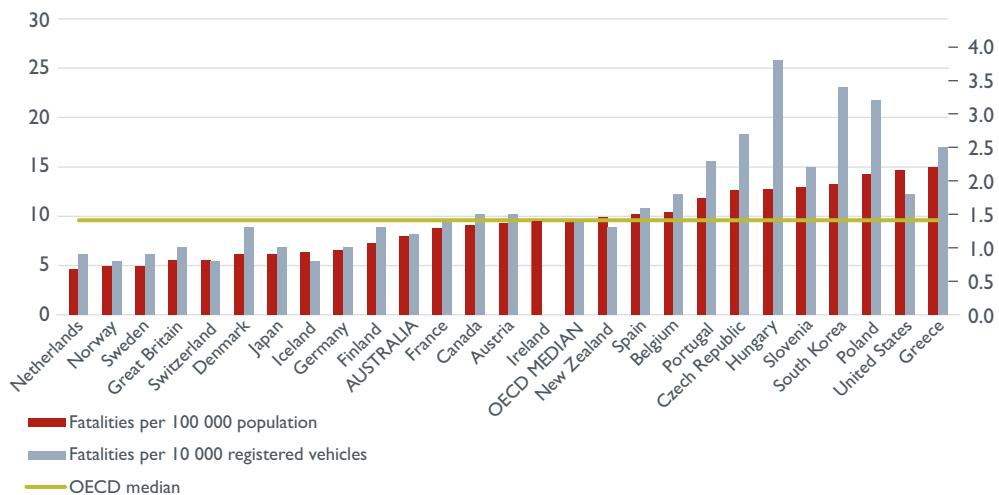
<i>Calendar year</i>	<i>Fatal</i>	<i>Serious injuries</i>
1971	3 590	
1972	3 422	
1973	3 679	
1974	3 572	
1975	3 694	
1976	3 583	
1977	3 578	
1978	3 705	
1979	3 508	
1980	3 272	
1981	3 321	
1982	3 252	
1983	2 755	
1984	2 822	
1985	2 941	
1986	2 888	
1987	2 772	
1988	2 887	
1989	2 801	42 872
1990	2 331	36 772
1991	2 113	32 583
1992	1 974	30 924
1993	1 953	31 170
1994	1 928	33 356
1995	2 017	34 354
1996	1 970	33 703
1997	1 767	32 583
1998	1 755	nya
1999	1 764	nya
2000	1 817	nya
2001	1 737	nya
2002	1 715	nya
2003	1 621	nya
2004	1 583	nya
2005	1 627	nya
2006	1 598	nya

Data are not readily available for missing years.

nya: not yet available.

Source: ATSB (2004, 2006, 2007b, 2007c, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Road fatality rates for Australia and selected OECD nations—2005



The 2005 OECD median includes 2004 data for Italy, Luxembourg and Slovakia, and excludes Turkey.

Source: ATSB (2007a), International Road Safety Comparisons: the 2005 report.

In 2005, Australia's road fatality rate (7.98 per 100 000 population) was eleventh lowest of 26 OECD nations for which information was available. Australia recorded 1.2 road deaths per 10 000 registered vehicles, ninth lowest of 25 OECD nations.

Table 9.5a Road accident rate and casualty rate, by accident severity –accident rate

Calendar year	Fatal	Serious injuries
	accidents per 100 000 population	
1989	14.31	131.78
1990	12.01	117.28
1991	10.84	103.24
1992	9.92	97.79
1993	9.83	97.15
1994	9.53	98.37
1995	10.08	98.53
1996	9.66	95.62
1997	8.65	92.63
1998	8.41	nya
1999	8.21	nya
2000	8.50	nya
2001	8.16	nya
2002	7.76	nya
2003	7.26	nya
2004	7.17	nya
2005	7.22	nya
2006	7.02	nya

nya: not yet available.

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2006, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

**Table 9.5b Road accident rate and casualty rate, by accident severity
—casualty rate**

<i>Calendar year</i>	<i>Fatal</i>	<i>Serious injuries</i>
	<i>casualties per 100 000 population</i>	
1971	27.47	
1972	25.72	
1973	27.24	
1974	26.03	
1975	26.59	
1976	25.53	
1977	25.21	
1978	25.80	
1979	24.17	
1980	22.27	
1981	22.25	
1982	21.42	
1983	17.90	
1984	18.11	
1985	18.63	
1986	18.03	
1987	17.04	
1988	17.46	
1989	16.66	254.97
1990	13.66	215.48
1991	12.23	188.51
1992	11.28	176.76
1993	11.05	176.43
1994	10.80	186.85
1995	11.16	190.13
1996	10.76	184.09
1997	9.54	175.98
1998	9.38	nya
1999	9.32	nya
2000	9.49	nya
2001	8.95	nya
2002	8.73	nya
2003	8.15	nya
2004	7.86	nya
2005	7.98	nya
2006	7.72	nya

Data are not readily available for missing years.

nya: not yet available.

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2006, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.6a Number of fatal road accidents and fatalities, by state/territory – accidents

<i>Calendar year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
1989	783	681	376	201	214	68	57	26	2 406
1990	702	492	347	187	181	63	54	24	2 050
1991	585	435	359	166	187	66	60	16	1 874
1992	576	365	363	142	171	59	42	18	1 736
1993	518	381	357	191	191	47	41	11	1 737
1994	552	345	364	143	195	52	36	15	1 702
1995	563	371	408	163	194	53	56	14	1 822
1996	538	382	338	162	220	53	58	17	1 768
1997	525	346	321	123	184	29	56	17	1 601
1998	491	348	257	152	199	47	59	20	1 573
1999	506	345	273	132	189	47	44	17	1 553
2000	543	373	275	151	184	38	48	16	1 628
2001	486	404	296	137	151	52	43	15	1 584
2002	501	361	283	138	159	35	40	8	1 525
2003	483	294	284	136	155	39	44	10	1 445
2004	458	312	289	128	162	52	34	9	1 444
2005	459	314	296	127	151	49	51	25	1 472
2006	451	309	313	104	183	42	39	12	1 453

Source: ATSB (2006, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.6b Number of fatal road accidents and fatalities, by state/territory –fatalities

<i>Calendar year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
1971	1 249	923	594	292	332	130	50	20	3 590
1972	1 092	915	572	312	340	106	53	32	3 422
1973	1 230	935	638	329	358	105	55	29	3 679
1974	1 275	806	589	382	334	111	44	31	3 572
1975	1 288	910	635	339	304	122	64	32	3 694
1976	1 264	938	569	307	308	108	51	38	3 583
1977	1 268	954	572	306	290	112	47	29	3 578
1978	1 384	869	612	291	345	106	68	30	3 705
1979	1 288	846	616	309	279	93	53	24	3 508
1980	1 303	657	557	269	293	100	63	30	3 272
1981	1 291	766	594	222	238	111	70	29	3 321
1982	1 253	709	602	270	236	96	60	26	3 252
1983	966	664	510	266	203	70	48	28	2 755
1984	1 037	657	505	232	221	83	50	37	2 822
1985	1 067	683	502	268	243	78	67	33	2 941
1986	1 029	668	481	288	228	91	71	32	2 888
1987	959	705	442	256	213	77	84	36	2 772
1988	1 037	701	539	223	230	75	51	31	2 887
1989	960	776	428	222	242	80	61	32	2 801
1990	797	548	399	226	196	71	68	26	2 331
1991	663	503	395	184	207	77	67	17	2 113
1992	649	396	416	165	200	74	54	20	1 974
1993	581	435	396	218	209	58	44	12	1 953
1994	646	377	418	159	211	59	41	17	1 928
1995	620	418	456	181	209	57	61	15	2 017
1996	581	417	385	181	247	64	72	23	1 970
1997	576	377	360	148	197	32	60	17	1 767
1998	556	390	279	168	223	48	69	22	1 755
1999	577	383	314	151	218	53	49	19	1 764
2000	603	407	317	166	212	43	51	18	1 817
2001	524	444	324	153	165	61	50	16	1 737
2002	561	397	322	154	179	37	55	10	1 715
2003	539	330	310	157	180	41	53	11	1 621
2004	510	343	311	139	178	58	35	9	1 583
2005	508	346	330	148	163	51	55	26	1 627
2006	498	337	335	117	202	54	42	13	1 598

Source: ATSB (2006, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.7a Fatal road accident rate and fatality rate, by state/territory – accident rate

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
<i>fatal accidents per 100 000 population</i>									
1989	13.56	15.76	13.30	14.16	13.56	14.94	35.36	9.41	14.31
1990	12.03	11.24	11.97	13.06	11.22	13.63	32.98	8.50	12.01
1991	9.92	9.84	12.12	11.48	11.43	14.14	36.26	5.53	10.84
1992	9.66	8.19	11.98	9.75	10.31	12.56	24.99	6.11	9.92
1993	8.63	8.52	11.48	13.08	11.38	9.96	24.01	3.68	9.83
1994	9.11	7.69	11.42	9.75	11.45	11.00	20.76	4.98	9.53
1995	9.19	8.21	12.50	11.09	11.19	11.19	31.54	4.59	10.08
1996	8.67	8.38	10.12	10.99	12.46	11.17	31.90	5.51	9.66
1997	8.36	7.53	9.46	8.30	10.25	6.12	29.96	5.50	8.65
1998	7.75	7.50	7.45	10.20	10.92	9.96	31.07	6.45	8.41
1999	7.89	7.36	7.80	8.81	10.22	9.97	22.83	5.44	8.21
2000	8.37	7.87	7.72	10.03	9.82	8.06	24.54	5.08	8.50
2001	7.39	8.41	8.16	9.06	7.94	11.02	21.74	4.70	8.16
2002	7.56	7.42	7.62	9.07	8.26	7.40	20.06	2.48	7.76
2003	7.24	5.97	7.45	8.88	7.94	8.16	21.99	3.07	7.26
2004	6.83	6.26	7.41	8.31	8.17	10.77	16.82	2.75	7.17
2005	6.79	6.22	7.41	8.18	7.49	10.07	24.70	7.57	7.22
2006	6.62	6.03	7.65	6.63	8.89	8.57	18.51	3.59	7.02

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2006, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.7b Fatal road accident rate and fatality rate, by state/territory – fatality rate

<i>Calendar year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>fatalities per 100 000 population</i>									
1971	26.43	25.63	32.08	24.33	31.50	32.66	58.32	13.23	27.47
1972	22.77	24.99	30.13	25.69	31.42	26.48	57.56	20.03	25.72
1973	25.40	25.22	32.69	26.78	32.51	26.05	56.63	16.73	27.24
1974	26.05	21.46	29.33	30.77	29.62	27.33	42.75	16.65	26.03
1975	26.12	24.03	30.96	26.79	26.32	29.75	68.91	16.08	26.59
1976	25.49	24.62	27.19	24.10	26.14	26.19	51.92	18.29	25.53
1977	25.35	24.86	26.86	23.79	24.08	26.99	45.22	13.57	25.21
1978	27.39	22.49	28.18	22.45	28.10	25.38	61.83	13.76	25.80
1979	25.20	21.77	27.81	23.75	22.38	22.10	46.43	10.87	24.17
1980	25.20	16.78	24.58	20.56	23.09	23.61	53.28	13.38	22.27
1981	24.66	19.41	25.33	16.83	18.31	25.98	57.09	12.74	22.25
1982	23.63	17.76	24.83	20.28	17.63	22.33	46.04	11.16	21.42
1983	18.05	16.45	20.55	19.77	14.83	16.17	35.32	11.72	17.90
1984	19.19	16.12	20.01	17.06	15.89	18.96	35.17	15.10	18.11
1985	19.53	16.58	19.52	19.54	17.13	17.61	45.11	13.13	18.63
1986	18.60	16.05	18.33	20.83	15.63	20.38	45.98	12.36	18.03
1987	17.07	16.75	16.52	18.38	14.24	17.14	53.10	13.56	17.04
1988	18.17	16.45	19.67	15.87	14.98	16.62	32.07	11.39	17.46
1989	16.62	17.96	15.14	15.64	15.33	17.57	37.85	11.58	16.66
1990	13.66	12.52	13.76	15.78	12.15	15.36	41.53	9.21	13.66
1991	11.24	11.38	13.34	12.72	12.65	16.50	40.49	5.88	12.23
1992	10.88	8.89	13.73	11.33	12.06	15.75	32.13	6.79	11.28
1993	9.68	9.73	12.73	14.92	12.46	12.30	25.77	4.01	11.05
1994	10.66	8.40	13.12	10.84	12.39	12.48	23.65	5.64	10.80
1995	10.12	9.25	13.97	12.32	12.05	12.03	34.36	4.92	11.16
1996	9.36	9.14	11.53	12.28	13.99	13.49	39.59	7.46	10.76
1997	9.18	8.20	10.60	9.99	10.97	6.76	32.10	5.50	9.54
1998	8.77	8.41	8.09	11.28	12.23	10.17	36.34	7.10	9.38
1999	9.00	8.17	8.97	10.08	11.79	11.24	25.42	6.08	9.32
2000	9.30	8.58	8.90	11.03	11.31	9.12	26.08	5.71	9.49
2001	7.97	9.24	8.93	10.12	8.68	12.93	25.28	5.01	8.95
2002	8.46	8.16	8.67	10.12	9.30	7.83	27.58	3.10	8.73
2003	8.08	6.70	8.14	10.25	9.22	8.58	26.49	3.38	8.15
2004	7.60	6.88	7.97	9.02	8.98	12.01	17.31	2.75	7.86
2005	7.52	6.85	8.26	9.53	8.08	10.49	26.64	7.87	7.98
2006	7.31	6.57	8.19	7.46	9.81	11.02	19.94	3.89	7.72

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2006, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.8a Number of road accidents involving serious injuries, by state/territory—accidents involving serious injuries but no fatalities

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
1989	6 493	7 270	3 079	1 930	2 312	542	350	182	22 158
1990	6 092	5 759	3 123	1 926	2 073	477	387	177	20 014
1991	5 473	4 967	2 926	1 567	2 002	424	306	179	17 844
1992	5 135	4 768	3 199	1 227	1 952	377	295	155	17 108
1993	5 132	4 830	3 186	1 189	1 984	385	315	143	17 164
1994	5 024	4 858	3 598	1 184	2 027	404	304	161	17 560
1995	4 927	4 934	3 630	1 186	2 259	408	313	146	17 803
1996	4 887	4 834	3 551	1 309	2 041	348	334	201	17 505
1997	4 954	4 671	3 327	1 168	2 219	328	310	173	17 150
1998	nya	5 093	3 517	1 223	2 266	359	324	162	nya
1999	nya	4 957	3 565	1 239	1 881	363	325	133	nya
2000	nya	5 187	3 810	1 215	1 665	399	316	130	nya

nya: not yet available.

Source: ATSB (2006, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.8b Number of road accidents involving serious injuries, by state/territory—serious injuries ^(a)

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
1989	10 384	19 416	4 519	2 884	3 434	1 133	835	267	42 872
1990	9 435	14 902	4 534	2 829	2 948	1 236	633	255	36 772
1991	8 385	12 942	4 245	2 375	2 860	1 037	496	243	32 583
1992	7 801	12 318	4 583	1 802	2 797	975	443	205	30 924
1993	7 893	12 225	4 661	1 767	2 905	1 015	503	201	31 170
1994	7 520	12 570	5 313	1 754	4 484	1 022	463	230	33 356
1995	7 690	12 879	5 373	1 771	4 917	1 052	463	209	34 354
1996	7 448	12 820	5 319	2 070	4 476	791	548	231	33 703
1997	7 264	12 149	4 872	1 788	4 981	776	501	252	32 583
1998	nya	13 287	5 139	1 840	5 018	831	535	247	nya
1999	nya	12 741	5 231	2 567	4 155	865	539	159	nya
2000	nya	13 203	5 501	2 497	3 633	923	506	147	nya

nya: not yet available.

(a) Includes non-fatal serious injuries that were sustained in an accident that involved a fatality.

Source: ATSB (2006, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.9a Road accident rate and serious injury rate, by state/territory –accident rate

<i>Calendar year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>serious injury accidents per 100 000 population</i>									
1989	112.41	168.28	108.89	136.01	146.47	119.05	217.15	65.84	131.78
1990	104.42	131.53	107.72	134.49	128.51	103.20	236.37	62.72	117.28
1991	92.78	112.37	98.82	108.35	122.37	90.83	184.90	61.87	103.24
1992	86.12	107.03	105.58	84.24	117.73	80.24	175.51	52.60	97.79
1993	85.46	108.00	102.45	81.40	118.26	81.63	184.50	47.78	97.15
1994	82.90	108.25	112.89	80.76	119.02	85.42	175.34	53.40	98.37
1995	80.41	109.22	111.18	80.71	130.29	86.14	176.29	47.90	98.53
1996	78.76	106.01	106.36	88.79	115.62	73.35	183.67	65.21	95.62
1997	78.92	101.61	98.01	78.85	123.62	69.26	165.85	55.98	92.63
1998	nya	109.81	102.01	82.11	124.32	76.06	170.63	52.28	nya
1999	nya	105.77	101.82	82.72	101.69	77.00	168.63	42.58	nya
2000	nya	109.40	106.98	80.73	88.83	84.64	161.59	41.24	nya

nya: not yet available.

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2006, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.9b Road accident rate and serious injury rate, by state/territory –injury rate

<i>Calendar year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
<i>serious injuries per 100 000 population</i>									
1989	179.77	449.43	159.82	203.24	217.56	248.87	518.06	96.59	254.97
1990	161.72	340.34	156.38	197.55	182.76	267.42	386.62	90.36	215.48
1991	142.15	292.78	143.37	164.21	174.81	222.15	299.71	83.99	188.51
1992	130.83	276.50	151.26	123.72	168.69	207.52	263.56	69.57	176.76
1993	131.44	273.34	149.88	120.97	173.16	215.20	294.61	67.16	176.43
1994	124.09	280.11	166.70	119.63	263.30	216.10	267.05	76.29	186.85
1995	125.51	285.10	164.56	120.52	283.60	222.09	260.77	68.57	190.13
1996	120.04	281.13	159.31	140.41	253.56	166.72	301.36	74.94	184.09
1997	115.72	264.27	143.52	120.70	277.49	163.85	268.04	81.54	175.98
1998	nya	286.49	149.05	123.53	275.31	176.07	281.76	79.71	nya
1999	nya	271.87	149.40	171.38	224.63	183.48	279.66	50.91	nya
2000	nya	278.47	154.46	165.91	193.82	195.80	258.74	46.63	nya

nya: not yet available.

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2006, 2007d), Office of Road Safety (1984), Road traffic accident data and rates.

Table 9.10 Number of rail casualties, by severity

<i>Calendar year</i>	<i>Fatal</i>	<i>Serious injuries</i>
1979	49	
1980	56	
1981	72	
1982	72	
1983	66	
1984	76	
1985	66	
1986	66	
1987	54	
1988	64	
1989	67	
1990	76	
1991	42	
1992	61	
1993	52	
1994	43	
1995	46	
1996	30	
1997	43	
1998	43	
1999	43	
2000	38	
2001	56	83
2002	59	97
2003	48	50
2004	47	82
2005	38	69
2006	40	127

Data are not readily available for missing years.

Source: ATSB (2004), Railway Accident Fatalities: Australia Compared With Other OECD Countries, ATSB (2007c), National rail occurrence database.

Table 9.11 Number of rail fatalities, by state/territory

<i>Calendar year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
2001	34	10	5	5	2	0	0	0	56
2002	32	15	3	6	2	0	1	0	59
2003	27	10	4	5	2	0	0	0	48
2004	24	12	2	7	1	0	1	0	47
2005	11	15	7	5	0	0	0	0	38
2006	10	14	9	4	2	1	0	0	40

Source: ATSB (2004), Railway Accident Fatalities: Australia Compared With Other OECD Countries, ATSB (2007c), National rail occurrence database.

Table 9.12 Rail fatality rate per 100 000 population, by state/territory

<i>Calendar year</i>	<i>NSW</i>	<i>VIC</i>	<i>QLD</i>	<i>SA</i>	<i>WA</i>	<i>TAS</i>	<i>NT</i>	<i>ACT</i>	<i>Total</i>
2001	0.52	0.21	0.14	0.33	0.11	0.00	0.00	0.00	0.29
2002	0.48	0.31	0.08	0.39	0.10	0.00	0.50	0.00	0.30
2003	0.40	0.20	0.10	0.33	0.10	0.00	0.00	0.00	0.24
2004	0.36	0.24	0.05	0.45	0.05	0.00	0.49	0.00	0.23
2005	0.16	0.30	0.18	0.32	0.00	0.00	0.00	0.00	0.19
2006	0.15	0.27	0.22	0.26	0.10	0.20	0.00	0.00	0.19

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2004), Railway Accident Fatalities: Australia Compared With Other OECD Countries, ATSB (2007c), National rail occurrence database.

Table 9.13a Number of aviation accidents and casualties, by accident severity – accidents

<i>Calendar year</i>	<i>Fatal accidents</i>	<i>Non-fatal accidents</i>
1971	14	207
1972	21	159
1973	15	206
1974	17	218
1975	14	181
1976	19	224
1977	19	202
1978	25	224
1979	19	224
1980	23	230
1981	18	216
1982	26	193
1983	25	239
1984	18	197
1985	18	193
1986	18	192
1987	17	210
1988	29	225
1989	25	228
1990	30	248
1991	21	244
1992	25	215
1993	23	239
1994	25	187
1995	23	199
1996	23	185
1997	16	214
1998	23	189
1999	21	155
2000	17	178
2001	22	159
2002	10	130
2003	15	119
2004	10	134
2005	14	102
2006	18	73

Source: ATSB (2007b), National aviation occurrence database.

Table 9.13b Number of aviation accidents and casualties, by accident severity – casualties

<i>Calendar year</i>	<i>Fatalities</i>	<i>Non-fatal injuries</i>
1971	35	43
1972	50	51
1973	26	45
1974	39	101
1975	39	57
1976	53	42
1977	43	39
1978	56	87
1979	33	66
1980	57	58
1981	48	80
1982	51	69
1983	54	65
1984	34	77
1985	43	68
1986	42	75
1987	31	192
1988	61	76
1989	47	152
1990	64	78
1991	45	70
1992	49	63
1993	53	94
1994	51	61
1995	39	64
1996	43	102
1997	26	73
1998	46	53
1999	40	85
2000	37	80
2001	41	53
2002	24	38
2003	35	59
2004	21	62
2005	35	52
2006	33	48

Source: ATSB (2007b), National aviation occurrence database.

**Table 9.14a Aviation accident rate and casualty rate, by accident severity
—accident rate**

Calendar year	Fatal accidents	Non-fatal accidents
	aviation accident rate per 100 000 population	
1971	0.11	1.58
1972	0.16	1.20
1973	0.11	1.53
1974	0.12	1.59
1975	0.10	1.30
1976	0.14	1.60
1977	0.13	1.42
1978	0.17	1.56
1979	0.13	1.54
1980	0.16	1.57
1981	0.12	1.45
1982	0.17	1.27
1983	0.16	1.55
1984	0.12	1.26
1985	0.11	1.22
1986	0.11	1.20
1987	0.10	1.29
1988	0.18	1.36
1989	0.15	1.36
1990	0.18	1.45
1991	0.12	1.41
1992	0.14	1.23
1993	0.13	1.35
1994	0.14	1.05
1995	0.13	1.10
1996	0.13	1.01
1997	0.09	1.16
1998	0.12	1.01
1999	0.11	0.82
2000	0.09	0.93
2001	0.11	0.82
2002	0.05	0.66
2003	0.08	0.60
2004	0.05	0.67
2005	0.07	0.50
2006	0.09	0.35

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2007b), National aviation occurrence database.

Table 9.14b Aviation accident rate and casualty rate, by accident severity – casualty rate

<i>Calendar year</i>	<i>Fatalities</i>	<i>Non-fatal injuries</i>
	<i>aviation casualty rate per 100 000 population</i>	
1971	0.27	0.33
1972	0.38	0.38
1973	0.19	0.33
1974	0.28	0.74
1975	0.28	0.41
1976	0.38	0.30
1977	0.30	0.27
1978	0.39	0.61
1979	0.23	0.45
1980	0.39	0.39
1981	0.32	0.54
1982	0.34	0.45
1983	0.35	0.42
1984	0.22	0.49
1985	0.27	0.43
1986	0.26	0.47
1987	0.19	1.18
1988	0.37	0.46
1989	0.28	0.90
1990	0.38	0.46
1991	0.26	0.40
1992	0.28	0.36
1993	0.30	0.53
1994	0.29	0.34
1995	0.22	0.35
1996	0.23	0.56
1997	0.14	0.39
1998	0.25	0.28
1999	0.21	0.45
2000	0.19	0.42
2001	0.21	0.27
2002	0.12	0.19
2003	0.18	0.30
2004	0.10	0.31
2005	0.17	0.25
2006	0.16	0.23

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2007b), National aviation occurrence database.

Table 9.15a Number of aviation accidents and casualties, by state/territory – accidents

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other ^(a)	Total
1971	73	23	34	21	46	6	14	2	2	221
1972	40	41	35	15	24	9	15	1	0	180
1973	70	49	32	19	25	10	13	3	0	221
1974	56	47	44	27	33	10	14	1	3	235
1975	55	45	43	14	24	5	6	0	3	195
1976	67	52	41	32	30	6	12	0	3	243
1977	60	42	37	21	34	7	15	2	3	221
1978	58	50	62	18	38	2	18	2	1	249
1979	78	41	55	17	29	4	17	2	0	243
1980	69	38	59	20	41	4	17	2	3	253
1981	57	29	73	16	41	4	13	0	1	234
1982	62	27	63	18	33	3	10	2	1	219
1983	83	32	76	19	27	10	11	4	2	264
1984	69	28	53	14	31	7	13	0	0	215
1985	69	20	57	13	32	8	10	1	1	211
1986	58	41	46	16	27	4	15	1	2	210
1987	68	30	70	13	21	5	19	0	1	227
1988	71	19	83	16	32	6	21	4	2	254
1989	74	30	80	15	24	6	22	2	0	253
1990	96	30	70	12	40	6	22	0	2	278
1991	67	38	73	15	45	5	19	1	2	265
1992	62	35	57	17	45	8	14	0	2	240
1993	71	35	71	18	36	10	18	1	2	262
1994	54	31	55	10	31	3	24	1	3	212
1995	52	23	77	15	37	4	9	2	3	222
1996	50	21	66	12	39	9	8	0	3	208
1997	64	25	64	16	31	3	23	2	2	230
1998	57	23	66	12	32	6	12	3	1	212
1999	43	28	46	16	23	4	11	3	2	176
2000	55	26	56	6	29	2	15	1	5	195
2001	39	20	51	12	35	3	17	1	3	181
2002	42	15	36	9	22	6	9	1	0	140
2003	38	20	34	7	17	5	10	3	0	134
2004	31	23	46	9	15	4	12	0	4	144
2005	40	13	31	9	15	0	6	0	2	116
2006	22	12	22	3	15	6	9	1	1	91

(a) Other refers to accidents that occur in Australian waters beyond 200 nm off the Australian coastline up to mid 2006. From 2006, 'other' refers to accidents that occur in Australian waters beyond 12 nm off the coastline.

Source: ATSB (2007b), National aviation occurrence database.

Table 9.15b Number of aviation accidents and casualties, by state/territory – casualties

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other ^(a)	Total
1971	34	14	3	4	19	0	4	0	0	78
1972	28	12	10	16	10	8	17	0	0	101
1973	26	11	7	6	10	9	2	0	0	71
1974	33	27	24	11	30	6	5	1	3	140
1975	24	11	26	9	14	4	5	0	3	96
1976	40	7	14	13	9	1	7	0	4	95
1977	21	4	19	9	13	3	12	0	1	82
1978	26	37	33	10	26	0	9	1	1	143
1979	37	17	17	2	8	3	12	3	0	99
1980	45	20	16	4	18	1	5	1	5	115
1981	28	24	31	11	18	2	10	0	4	128
1982	40	16	35	2	17	3	7	0	0	120
1983	21	13	39	7	19	6	2	6	6	119
1984	35	20	22	14	13	3	4	0	0	111
1985	36	10	26	12	16	3	8	0	0	111
1986	24	21	27	8	24	0	10	0	3	117
1987	26	79	39	3	9	0	7	0	60	223
1988	44	10	41	7	19	2	14	0	0	137
1989	33	21	46	4	15	3	77	0	0	199
1990	50	7	54	12	11	1	6	0	1	142
1991	25	16	35	5	9	4	5	4	12	115
1992	31	23	19	8	18	9	1	0	3	112
1993	32	30	36	7	14	10	9	2	7	147
1994	44	16	24	6	8	2	12	0	0	112
1995	25	21	34	3	12	4	4	0	0	103
1996	18	5	62	0	21	8	0	0	31	145
1997	21	7	23	7	23	4	9	1	4	99
1998	30	7	25	4	17	7	8	1	0	99
1999	20	12	33	9	9	0	2	2	38	125
2000	23	19	35	9	16	6	7	0	2	117
2001	14	8	38	4	18	1	2	4	5	94
2002	12	9	18	0	2	11	10	0	0	62
2003	34	6	20	4	21	6	2	1	0	94
2004	15	23	23	3	5	4	5	0	5	83
2005	27	10	24	3	11	0	3	0	9	87
2006	22	9	20	0	22	3	5	0	0	81

(a) Other refers to accidents that occur in Australian waters beyond 200 nm off the Australian coastline up to mid 2006. From 2006, 'other' refers to accidents that occur in Australian waters beyond 12 nm off the coastline.

Source: ATSB (2007b), National aviation occurrence database.

Table 9.16a Aviation accident rate and casualty rate, by state/territory – accident rate

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other ^(a)	Total
<i>accidents per 100 000 population</i>										
1971	1.54	0.64	1.84	1.75	4.37	1.51	16.33	1.32	0.02	1.69
1972	0.83	1.12	1.84	1.23	2.22	2.25	16.29	0.63	0.00	1.35
1973	1.45	1.32	1.64	1.55	2.27	2.48	13.38	1.73	0.00	1.64
1974	1.14	1.25	2.19	2.17	2.93	2.46	13.60	0.54	0.02	1.71
1975	1.12	1.19	2.10	1.11	2.08	1.22	6.46	0.00	0.02	1.40
1976	1.35	1.36	1.96	2.51	2.55	1.46	12.22	0.00	0.02	1.73
1977	1.20	1.09	1.74	1.63	2.82	1.69	14.43	0.94	0.02	1.56
1978	1.15	1.29	2.85	1.39	3.09	0.48	16.37	0.92	0.01	1.73
1979	1.53	1.05	2.48	1.31	2.33	0.95	14.89	0.91	0.00	1.67
1980	1.33	0.97	2.60	1.53	3.23	0.94	14.38	0.89	0.02	1.72
1981	1.09	0.73	3.11	1.21	3.15	0.94	10.60	0.00	0.01	1.57
1982	1.17	0.68	2.60	1.35	2.46	0.70	7.67	0.86	0.01	1.44
1983	1.55	0.79	3.06	1.41	1.97	2.31	8.09	1.67	0.01	1.72
1984	1.28	0.69	2.10	1.03	2.23	1.60	9.15	0.00	0.00	1.38
1985	1.26	0.49	2.22	0.95	2.26	1.81	6.73	0.40	0.01	1.34
1986	1.05	0.99	1.75	1.16	1.85	0.90	9.71	0.39	0.01	1.31
1987	1.21	0.71	2.62	0.93	1.40	1.11	12.01	0.00	0.01	1.40
1988	1.24	0.45	3.03	1.14	2.08	1.33	13.21	1.47	0.01	1.54
1989	1.28	0.69	2.83	1.06	1.52	1.32	13.65	0.72	0.00	1.50
1990	1.65	0.69	2.41	0.84	2.48	1.30	13.44	0.00	0.01	1.63
1991	1.14	0.86	2.47	1.04	2.75	1.07	11.48	0.35	0.01	1.53
1992	1.04	0.79	1.88	1.17	2.71	1.70	8.33	0.00	0.01	1.37
1993	1.18	0.78	2.28	1.23	2.15	2.12	10.54	0.33	0.01	1.48
1994	0.89	0.69	1.73	0.68	1.82	0.63	13.84	0.33	0.02	1.19
1995	0.85	0.51	2.36	1.02	2.13	0.84	5.07	0.66	0.02	1.23
1996	0.81	0.46	1.98	0.81	2.21	1.90	4.40	0.00	0.02	1.14
1997	1.02	0.54	1.89	1.08	1.73	0.63	12.31	0.65	0.01	1.24
1998	0.90	0.50	1.91	0.81	1.76	1.27	6.32	0.97	0.01	1.13
1999	0.67	0.60	1.31	1.07	1.24	0.85	5.71	0.96	0.01	0.93
2000	0.85	0.55	1.57	0.40	1.55	0.42	7.67	0.32	0.03	1.02
2001	0.59	0.42	1.41	0.79	1.84	0.64	8.60	0.31	0.02	0.93
2002	0.63	0.31	0.97	0.59	1.14	1.27	4.51	0.31	0.00	0.71
2003	0.57	0.41	0.89	0.46	0.87	1.05	5.00	0.92	0.00	0.67
2004	0.46	0.46	1.18	0.58	0.76	0.83	5.94	0.00	0.02	0.72
2005	0.59	0.26	0.78	0.58	0.74	0.00	2.91	0.00	0.01	0.57
2006	0.32	0.23	0.54	0.19	0.73	1.22	4.27	0.30	0.00	0.44

(a) Other refers to accidents that occur in Australian waters beyond 200 nm off the Australian coastline up to mid 2006. From 2006, 'other' refers to accidents that occur in Australian waters beyond 12 nm off the coastline.

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2007b), National aviation occurrence database.

Table 9.16b Aviation accident rate and casualty rate, by state/territory – casualty rate

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other ^(a)	Total
casualties per 100 000 population										
1971	0.72	0.39	0.16	0.33	1.80	0.00	4.67	0.00	0.00	0.60
1972	0.58	0.33	0.53	1.32	0.92	2.00	18.46	0.00	0.00	0.76
1973	0.54	0.30	0.36	0.49	0.91	2.23	2.06	0.00	0.00	0.53
1974	0.67	0.72	1.20	0.89	2.66	1.48	4.86	0.54	0.02	1.02
1975	0.49	0.29	1.27	0.71	1.21	0.98	5.38	0.00	0.02	0.69
1976	0.81	0.18	0.67	1.02	0.76	0.24	7.13	0.00	0.03	0.68
1977	0.42	0.10	0.89	0.70	1.08	0.72	11.55	0.00	0.01	0.58
1978	0.51	0.96	1.52	0.77	2.12	0.00	8.18	0.46	0.01	1.00
1979	0.72	0.44	0.77	0.15	0.64	0.71	10.51	1.36	0.00	0.68
1980	0.87	0.51	0.71	0.31	1.42	0.24	4.23	0.45	0.03	0.78
1981	0.53	0.61	1.32	0.83	1.38	0.47	8.16	0.00	0.03	0.86
1982	0.75	0.40	1.44	0.15	1.27	0.70	5.37	0.00	0.00	0.79
1983	0.39	0.32	1.57	0.52	1.39	1.39	1.47	2.51	0.04	0.77
1984	0.65	0.49	0.87	1.03	0.93	0.69	2.81	0.00	0.00	0.71
1985	0.66	0.24	1.01	0.88	1.13	0.68	5.39	0.00	0.00	0.70
1986	0.43	0.50	1.03	0.58	1.64	0.00	6.48	0.00	0.02	0.73
1987	0.46	1.88	1.46	0.22	0.60	0.00	4.42	0.00	0.37	1.37
1988	0.77	0.23	1.50	0.50	1.24	0.44	8.80	0.00	0.00	0.83
1989	0.57	0.49	1.63	0.28	0.95	0.66	47.77	0.00	0.00	1.18
1990	0.86	0.16	1.86	0.84	0.68	0.22	3.66	0.00	0.01	0.83
1991	0.42	0.36	1.18	0.35	0.55	0.86	3.02	1.38	0.07	0.67
1992	0.52	0.52	0.63	0.55	1.09	1.92	0.59	0.00	0.02	0.64
1993	0.53	0.67	1.16	0.48	0.83	2.12	5.27	0.67	0.04	0.83
1994	0.73	0.36	0.75	0.41	0.47	0.42	6.92	0.00	0.00	0.63
1995	0.41	0.46	1.04	0.20	0.69	0.84	2.25	0.00	0.00	0.57
1996	0.29	0.11	1.86	0.00	1.19	1.69	0.00	0.00	0.17	0.79
1997	0.33	0.15	0.68	0.47	1.28	0.84	4.82	0.32	0.02	0.53
1998	0.47	0.15	0.73	0.27	0.93	1.48	4.21	0.32	0.00	0.53
1999	0.31	0.26	0.94	0.60	0.49	0.00	1.04	0.64	0.20	0.66
2000	0.35	0.40	0.98	0.60	0.85	1.27	3.58	0.00	0.01	0.61
2001	0.21	0.17	1.05	0.26	0.95	0.21	1.01	1.25	0.03	0.48
2002	0.18	0.19	0.48	0.00	0.10	2.33	5.01	0.00	0.00	0.32
2003	0.51	0.12	0.52	0.26	1.08	1.26	1.00	0.31	0.00	0.47
2004	0.22	0.46	0.59	0.19	0.25	0.83	2.47	0.00	0.02	0.41
2005	0.40	0.20	0.60	0.19	0.55	0.00	1.45	0.00	0.04	0.43
2006	0.32	0.18	0.49	0.00	1.07	0.61	2.37	0.00	0.00	0.39

(a) Other refers to accidents that occur in Australian waters beyond 200 nm off the Australian coastline up to mid 2006. From 2006, 'other' refers to accidents that occur in Australian waters beyond 12 nm off the coastline.

Source: ABS (2007h), Regional population growth, Australia (ABS cat. no. 3218.0), ATSB (2007b), National aviation occurrence database.

Chapter 10

Energy and the environment



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Chapter 10

Energy and the environment

This chapter summarises transport activity consumption of energy and production of greenhouse gases. Estimates of transport activity consumption of alternative fuels have not been included in this issue as adequate datasets are not available for years prior to 2005–06. Estimates of greenhouse gas emissions from transport are modelled by BITRE. BITRE estimates were used in the compilation of the National Greenhouse Gas Inventory 2005 (AGO 2007).

Recent events

- August 2006: The Australian Government announced rebates for the purchase of new LPG vehicles for private use and the conversion of existing vehicles for LPG use. This measure should substantially increase the share of LPG in the vehicle fuel market.
- 2006: Fuel prices increased substantially, and appear to have caused a temporary decrease in sales of automotive gasoline (down slightly during the 2005–06 financial year).
- 2006: High petrol prices also seem to have influenced vehicle purchase patterns, with sales of new large passenger cars down by nearly 20 per cent in 2006 (FCAI 2007). Sales of new light passenger cars increased by about 20 per cent.
- 2006: The sale of ethanol blended fuels grew (BITRE forthcoming), aided by Government grants to assist the conversion of retail service stations.

Future plans

- July 2007: The Australian Government announced an intention to introduce a carbon trading scheme for Australia.
- 2007–08: Hybrid sales are likely to reach a level of 5000 vehicles sold per annum (one per cent of annual vehicle sales). Sales of hybrid electric motor vehicles roughly quadrupled over the last three years (FCAI 2007).

Table 10.1 Total transport petroleum sales, by fuel type

<i>Financial year</i>	<i>Automotive gasoline</i>	<i>Automotive LPG</i>	<i>Automotive diesel</i>	<i>Industrial & marine diesel</i>	<i>Aviation gasoline</i>	<i>Aviation turbine fuel</i>
<i>megalitres</i>						
1977–78	14 411.3					
1978–79	14 843.9					
1979–80	14 735.7					
1980–81	14 801.9					
1981–82	15 224.8		7 841.4			
1982–83	14 983.4		7 456.5			
1983–84	15 336.5		7 933.8			
1984–85	15 577.6		8 152.4			
1985–86	15 870.0		8 297.2			
1986–87	16 006.0		8 695.8			
1987–88	16 567.0		9 093.8		2 788.2	
1988–89	17 079.0		9 756.1		2 981.1	
1989–90	17 348.0		10 087.0		2 843.0	
1990–91	16 874.0		9 795.0		3 229.0	
1991–92	16 963.0		9 984.4		3 459.1	
1992–93	17 293.0		10 321.4		3 684.6	
1993–94	17 506.7		10 721.3		76.5	3 823.1
1994–95	17 751.5		11 174.7		104.5	4 301.8
1995–96	17 885.8		11 923.2		101.6	4 664.9
1996–97	17 889.0		12 315.8		102.3	4 847.8
1997–98	17 912.7		12 557.4		104.1	4 863.0
1998–99	18 202.1		12 823.2		105.9	4 793.8
1999–00	18 476.6	1 902.9	13 245.1	17.7	103.3	5 022.8
2000–01	18 167.6	2 221.4	12 952.4	22.1	101.4	5 318.5
2001–02	18 668.8	2 422.2	13 441.2	45.8	96.5	4 602.6
2002–03	18 872.5	2 416.3	13 888.0	18.1	90.2	4 249.7
2003–04	19 962.0	2 546.8	14 461.5	17.0	89.9	4 328.8
2004–05	19 875.7	2 338.8	15 185.0	14.7	90.7	4 729.9
2005–06	19 047.9	2 563.7	15 803.6	19.4	86.4	5 359.4
2006–07	19 250.7	2 335.5	17 027.6	15.2	89.5	5 837.0

Data are not readily available for missing years.

Source: DITR (2007), Australian Petroleum Statistics.

Table 10.2a Australian petroleum production, imports and exports—production

<i>Financial year</i>	<i>Automotive gasoline</i>	<i>LPG⁽¹⁾</i>	<i>Automotive diesel</i>	<i>Industrial & marine diesel</i>	<i>Aviation gasoline</i>	<i>Aviation turbine fuel</i>
				<i>megalitres</i>		
1999–00	18 652.4	1 674.4	12 736.8	59.6	158.1	5 538.7
2000–01	17 886.9	1 794.7	13 212.1	98.1	137.5	5 836.3
2001–02	17 999.6	1 718.2	13 064.1	105.4	146.8	5 389.7
2002–03	17 984.1	1 657.2	13 334.8	116.7	134.1	5 148.9
2003–04	17 375.3	1 061.8	12 544.1	84.1	113.8	4 964.3
2004–05	17 668.4	974.4	12 661.1	22.0	139.7	5 275.0
2005–06	16 527.6	1 124.7	10 153.7	30.8	119.5	5 215.5
2006–07	17 732.1	1 386.7	11 055.3	20.7	175.0	5 276.5

(1) See end notes.

Source: DITR (2007), Australian Petroleum Statistics.

Table 10.2b Australian petroleum production, imports and exports—imports⁽²⁾

<i>Financial year</i>	<i>Automotive gasoline</i>	<i>LPG⁽¹⁾</i>	<i>Automotive diesel</i>	<i>Industrial & marine diesel</i>	<i>Aviation gasoline</i>	<i>Aviation turbine fuel</i>
				<i>megalitres</i>		
1999–00	1 065.1	518.9	1 399.7		0.0	170.6
2000–01	1 188.7	633.4	1 129.0		0.0	387.4
2001–02	1 436.2	588.0	1 280.3		0.0	224.7
2002–03	1 686.1	299.0	1 645.6		55.8	440.8
2003–04	3 213.2	789.4	3 383.0		203.8	725.9
2004–05	3 166.0	540.0	3 965.1		47.0	986.9
2005–06	3 696.0	631.5	6 127.1		10.5	827.5
2006–07	2 815.5	749.3	5 931.5		0.8	1 089.4

Data are not separately available for missing years.

(1) (2) See end notes.

Source: DITR (2007), Australian Petroleum Statistics.

Table 10.2c Australian petroleum production, imports and exports—exports

Financial year	Automotive gasoline	LPG ^(I)	Automotive diesel	Industrial & marine diesel	Aviation gasoline	Aviation turbine fuel
megalitres						
1999–00	1 372.6	2 858.9	1 018.1	51.3	78.9	578.3
2000–01	1 286.0	2 784.6	1 150.1	119.5	28.5	755.5
2001–02	1 184.8	3 211.2	886.2	60.0	73.8	549.0
2002–03	1 052.6	3 195.2	1 044.1	0.0	52.5	651.7
2003–04	755.5	2 936.9	840.7	0.0	29.6	518.7
2004–05	770.6	2 846.6	293.9	0.0	35.7	227.0
2005–06	629.5	2 799.9	418.8	0.0	174.4	126.5
2006–07	763.5	2 850.9	283.6	0.0	97.0	121.7

(I) See end notes.

Source: DITR (2007), Australian Petroleum Statistics.

Table 10.3 Transport direct greenhouse gas (carbon dioxide equivalent) emissions, by transport mode

Financial year	Motor Vehicles	Rail (non-electric)	Maritime	Aviation	Total
gigagrams of CO ₂ equivalent					
1989–90	53 184	1 741	2 294	2 564	59 783
1990–91	52 905	1 732	2 152	3 140	59 929
1991–92	53 280	1 685	2 201	3 392	60 557
1992–93	54 578	1 658	2 196	3 552	61 984
1993–94	55 713	1 792	2 240	3 706	63 450
1994–95	58 156	1 743	2 471	4 273	66 643
1995–96	59 744	1 696	2 273	4 638	68 351
1996–97	60 424	1 729	2 265	4 837	69 255
1997–98	62 045	1 757	2 269	4 845	70 917
1998–99	63 812	1 808	2 131	4 780	72 531
1999–00	65 286	1 874	2 116	4 998	74 274
2000–01	65 591	1 840	2 021	5 135	74 587
2001–02	68 484	1 926	2 079	4 725	77 215
2002–03	69 742	1 977	2 056	5 039	78 813
2003–04	73 189	2 016	2 054	5 581	82 841

Source: BTRE (2006c), Greenhouse Gas Emissions from Australian Transport: Base Case Projections to 2020.

Table 10.4 Road transport direct greenhouse gas (carbon dioxide equivalent) emissions, by vehicle type

<i>Financial year</i>	<i>Cars</i>	<i>Light commercial vehicles</i>	<i>Articulated trucks</i>	<i>Rigid and other trucks</i>	<i>Buses</i>	<i>Motor cycles</i>	<i>Total road</i>
<i>gigagrams of CO₂ equivalent</i>							
1989–90	34 214	7 016	5 569	4 908	1 181	239	53 128
1990–91	34 399	7 076	5 493	4 541	1 120	220	52 848
1991–92	34 917	7 030	5 570	4 398	1 086	220	53 222
1992–93	35 783	7 119	5 986	4 332	1 075	225	54 520
1993–94	36 476	7 202	6 165	4 479	1 111	221	55 654
1994–95	37 904	7 622	6 636	4 582	1 133	219	58 097
1995–96	38 898	7 884	6 841	4 691	1 163	206	59 683
1996–97	39 089	8 001	7 082	4 793	1 193	206	60 363
1997–98	39 675	8 431	7 568	4 887	1 224	198	61 984
1998–99	40 522	8 852	7 868	5 062	1 255	190	63 749
1999–00	41 238	9 196	8 062	5 265	1 271	191	65 223
2000–01	41 087	9 388	8 160	5 398	1 299	195	65 527
2001–02	42 752	9 907	8 507	5 753	1 303	198	68 420
2002–03	43 285	10 277	8 677	5 905	1 326	208	69 676
2003–04	45 556	10 793	9 035	6 177	1 337	223	73 123

Source: BTRE (2006c), Greenhouse Gas Emissions from Australian Transport: Base Case Projections to 2020.

Table 10.5 Transport direct carbon dioxide emissions, by transport mode

<i>Financial year</i>	<i>Motor Vehicles</i>	<i>Rail (non-electric)</i>	<i>Maritime</i>	<i>Aviation</i>	<i>Total</i>
<i>gigagrams of CO₂</i>					
1989–90	51 992	1 722	2 227	2 537	58 478
1990–91	51 567	1 714	2 087	3 108	58 475
1991–92	51 801	1 667	2 135	3 357	58 960
1992–93	52 935	1 641	2 130	3 516	60 221
1993–94	53 903	1 773	2 173	3 668	61 517
1994–95	56 131	1 725	2 401	4 230	64 486
1995–96	57 544	1 678	2 204	4 592	66 017
1996–97	58 124	1 711	2 196	4 788	66 820
1997–98	59 623	1 739	2 200	4 796	68 358
1998–99	61 244	1 789	2 063	4 733	69 828
1999–00	62 589	1 854	2 048	4 948	71 439
2000–01	62 821	1 821	1 954	5 084	71 680
2001–02	65 527	1 906	2 010	4 678	74 122
2002–03	66 681	1 956	1 988	4 989	75 613
2003–04	69 901	1 995	1 985	5 526	79 407

Source: BTRE (2006c), Greenhouse Gas Emissions from Australian Transport: Base Case Projections to 2020.

Table 10.6 Transport direct methane emissions, by transport mode

<i>Financial year</i>	<i>Motor Vehicles</i>	<i>Rail (non-electric)</i>	<i>Maritime</i>	<i>Aviation</i>	<i>Total</i>
<i>gigagrams of methane</i>					
1989–90	22.60	0.15	2.09	0.28	25.13
1990–91	22.61	0.15	2.11	0.25	25.11
1991–92	22.90	0.14	2.14	0.24	25.42
1992–93	23.43	0.14	2.16	0.25	25.98
1993–94	23.78	0.15	2.18	0.25	26.37
1994–95	24.67	0.15	2.22	0.26	27.30
1995–96	25.16	0.14	2.25	0.26	27.82
1996–97	25.19	0.15	2.27	0.27	27.87
1997–98	25.41	0.15	2.29	0.27	28.12
1998–99	25.57	0.15	2.30	0.27	28.30
1999–00	25.48	0.16	2.33	0.27	28.25
2000–01	24.94	0.16	2.35	0.27	27.73
2001–02	25.30	0.16	2.38	0.25	28.10
2002–03	25.16	0.17	2.41	0.25	27.99
2003–04	25.86	0.17	2.44	0.26	28.73

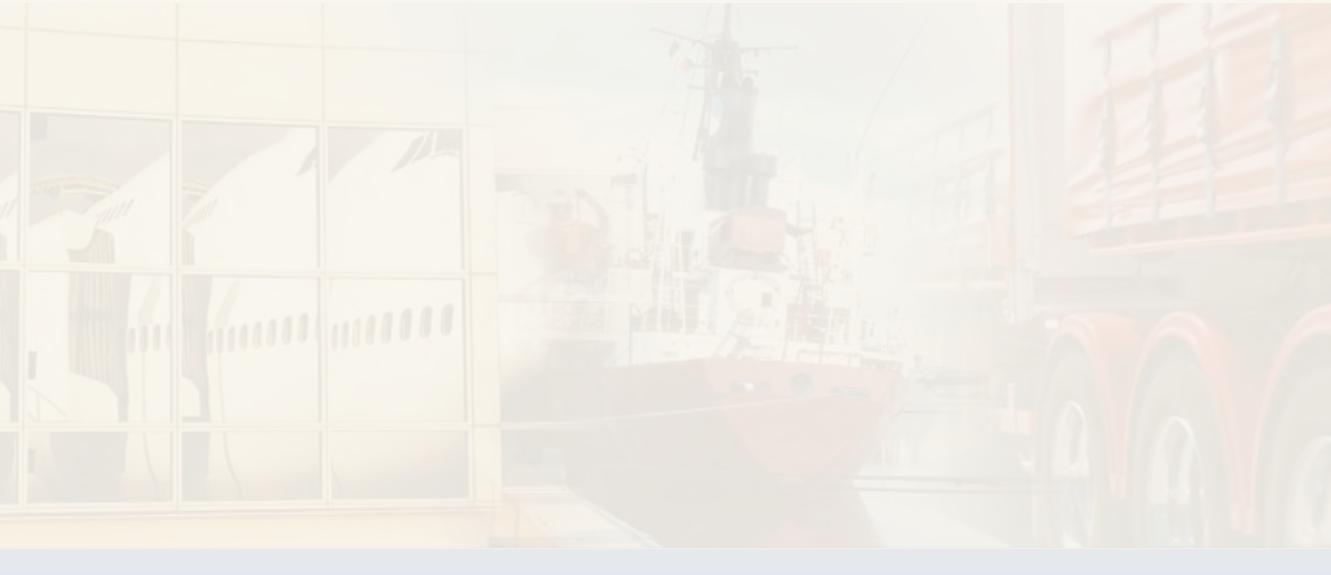
Source: BTRE (2006c), Greenhouse Gas Emissions from Australian Transport: Base Case Projections to 2020.

Table 10.7 Transport direct nitrous oxide emissions, by transport mode

<i>Financial year</i>	<i>Motor Vehicles</i>	<i>Rail (non-electric)</i>	<i>Maritime</i>	<i>Aviation</i>	<i>Total</i>
<i>gigagrams of nitrous oxide</i>					
1989–90	2.32	0.05	0.07	0.07	2.51
1990–91	2.79	0.05	0.07	0.09	2.99
1991–92	3.22	0.05	0.07	0.10	3.43
1992–93	3.71	0.05	0.07	0.10	3.93
1993–94	4.23	0.05	0.07	0.10	4.45
1994–95	4.86	0.05	0.08	0.12	5.11
1995–96	5.39	0.05	0.07	0.13	5.64
1996–97	5.71	0.05	0.07	0.14	5.97
1997–98	6.09	0.05	0.07	0.14	6.35
1998–99	6.55	0.05	0.06	0.14	6.80
1999–00	6.98	0.05	0.06	0.14	7.23
2000–01	7.24	0.05	0.06	0.15	7.50
2001–02	7.83	0.05	0.06	0.13	8.08
2002–03	8.17	0.06	0.06	0.14	8.43
2003–04	8.86	0.06	0.06	0.16	9.13

Source: BTRE (2006c), Greenhouse Gas Emissions from Australian Transport: Base Case Projections to 2020.

End notes



End notes

This publication presents annual statistics relating to Australian transport activity from a range of sources. Where possible, statistics are presented on a financial year basis (year ended 30 June).

Chapter 2 Transport and the economy

Industry statistics provided in this chapter are based on the *Australian and New Zealand Standard Industrial Classification (ANZSIC) (ABS 2006a)*.

Table 2.1

Transport and storage gross value added is a measure of the economic production of Australian businesses for which the provision of transportation and storage services is their major activity. Transportation services provided by businesses classified to other industries are not included in these estimates and conversely, non-transportation activities undertaken by businesses classified to the transport and storage industry are included in these estimates.

Gross value added is the value of output at basic prices minus the value of intermediate consumption at purchasers' prices. The term is used to describe gross product by industry and by sector.

- (1) Changes to current price production measures may be due to either price or volume changes. Chain volume measures are provided to allow analysis of variations in production volumes; however, component chain volume measures do not sum to a total in the way original current price components do. To minimise the impact, the ABS used the reference year (2005–06) as the base year.
- (2) Gross value added at basic values represents the amounts received by producers, including the value of any subsidies on products, but before any taxes on products. The difference between the sum over all industries of gross value added at basic prices, and GDP at market (or purchasers') prices, is the value of taxes less subsidies on products.
- (3) The transport services and storage industry includes water transport.

Table 2.2

Table 2.2 provides estimates for total employment by the transport and storage industries, including both full-time and part-time employment.

(4) There are two breaks in the time series for Australian transport and storage industries.

- Prior to 1985, employment data were compiled on an Australian Standard Industry Classification (ASIC) 1976 basis, which did not include the other transport, services to transport, storage and transport and storage (not further defined) categories.
- From April 1986, the definition of employed persons was changed to include persons who worked without pay between 1 and 14 hours per week in a family business or on a farm (i.e. contributing family workers).

Table 2.3

Average weekly earnings statistics provide an estimate of the average weekly income of wage and salary earners in the transport and storage industries. The estimates reflect not only the overall level of earnings of employees but also changes in the composition of the transport and storage industry workforce (e.g. changes to the proportions of full-time, part-time and casual employees and changes to the proportions of occupations over time).

ABS average weekly earnings statistics are compiled in respect of the last pay period ending on or before the third Friday of the middle month of the quarter. Estimates are compiled from a sample survey of employers and are subject to sampling variability. That is, they may differ from the estimates that would have been produced if the information had been obtained from all employers.

A measure of sampling error is calculated (standard error), which indicates the degree to which an estimate may vary from the value which would have been obtained from a census of all employers. There are about two chances in three that a sample estimate differs from the true value by less than one standard error and about nineteen chances in twenty that the difference will be less than two standard errors.

An example of the use of a relative standard error (standard error expressed as a percentage of the estimate) is as follows. If the estimate for average earnings is \$500 with a relative standard error of one per cent then there would be about two chances in three that a full enumeration would have given an estimate in the range \$495 to \$505 and about nineteen chances in twenty that it would be in the range \$490 to \$510.

Table 2.3 includes a number of estimates that are subject to high relative standard errors (greater than 25 per cent, with some greater than 50 per cent).

Table 2.4

The indexes provided in Table 2.4 relate to the prices received by businesses classified to the transport and storage industry for freight transport and storage services only. Indexes for passenger transport are not currently available from the ABS.

Index numbers for financial years are simple averages of the four relevant quarterly index numbers.

Table 2.5

Table 2.5 provides a number of measures of economic activity that may influence the transport industry. Goods credits and goods debits figures provide measures of the flow of exports and imports of physical goods over the full financial year. The consumer price index provides a measure of annual changes in the price of consumer goods for the June quarter of each financial year, while exchange rate and interest rate data were recorded in respect of the last day of the financial year (30 June).

- (5) The exchange rate data provided represent the \$US value of one Australian dollar.
- (6) The interest rate provided is the 90 day bank accepted bill rate at the close of trading at the end of the financial year (30 June).

Table 2.6

State and territory population estimates are classified by capital city and rest of state in respect of the last day of the financial year (30 June). Population estimates are based on census counts for census years, and are derived and updated by adding estimates of natural increase and net overseas migration. After each census, population estimates are revised to remove intercensal discrepancies. At the time of publication, Australian population statistics by State/Territory had been revised to incorporate the results of the 2006 Census.

- (7) ACT capital city data include Queanbeyan (NSW) for the period 1971 to 1990. The rest of state estimate for ACT is shown as na for this period.
- (8) Excludes Jervis Bay Territory from June 1994.
- (9) Data for 1990–91 to 1994–95 are based on 2001 Australian Standard Geographical Classification boundaries.
- (10) Data for 1995–96 onwards are based on 2006 Australian Standard Geographical Classification boundaries.
- (11) Rest of state estimates are calculated by subtracting the capital city population from the corresponding state/territory total population.

Chapter 3 Domestic freight transport

Tonne-kilometres (tkm) is a measure of freight task. It is measured as the number of tonnes moved by a vehicle multiplied by the distance travelled in kilometres. Individual trips are aggregated to provide estimates for total tkm by mode.

Road freight

The aggregate road freight estimates in this chapter are modelled by BITRE based on estimates compiled from the *Survey of Motor Vehicle Use (SMVU)* (ABS 2006e). The SMVU is not designed for time series usage, with the sample design and survey methodology changing several times since the survey commenced in 1963. In addition, the survey has only been conducted annually since 1998 (the survey was undertaken approximately triennially between 1971 and 1995).

BITRE modelling modifies SMVU estimates to enable time series analysis by adjusting estimates to a common reference period, interpolating data for years when the survey was not conducted and imposing consistency requirements between SMVU and related data from other sources. An analysis of data discrepancies was undertaken in a joint ABS/BITRE project and published in an ABS research paper, *Survey of Motor Vehicle Use—An investigation into coherence* (ABS 2006c). A detailed description of BITRE modelling techniques for freight data is provided in *Freight Measurement and Modelling* (BTRE 2006b).

Rail freight

From 2001 to 2003, the ABS published estimates of Australian rail freight in *Freight Movements, Australia* (ABS 2002) and *Rail Freight Movements, Australia, Summary* (ABS 2004). These data have been used in BITRE modelling to estimate the tonne kilometres moved by rail for 1970–71 through to 2001–02. Estimates of total tonnes moved by rail and tonne kilometres moved for 2002–03 to 2004–05 were based on the results of the 2005 Australian Rail Survey as published in the *Australian Rail Industry Report 2005*. The Australasian Railway Association Inc commissioned the Apelbaum Consulting Group to prepare the report. The Australian Rail Industry Report provides measures of bulk and non-bulk freight based on definitions that differ from BITRE models and, therefore, are not included in this publication.

Air freight

There are currently no robust measures available for the Australian domestic air freight task. Estimates are available in respect of Australia's international air freight tonnage (Table 7.2). BITRE is still investigating sources of domestic air freight statistics. International air freight statistics are compiled from surveys undertaken by the Aviation Statistics Unit of BITRE.

Sea freight

As an island nation, Australia's international freight task relies heavily on shipping in terms of tonnage moved, with all of Australia's international trade in bulk commodities transported by sea. Specific bulk shipping statistics are not readily available. However, BITRE estimates bulk sea freight under the assumption that all non-liner freight transport is for bulk commodities (non-liner cargo consists of all dry and liquid bulk cargo, but also comprises cargo not shipped on regular liner services such as charters, dedicated car carriers and passenger ships).

Tables 3.1–3.5

Measures of domestic freight moved by mode are provided in terms of tonnes moved and tonne kilometres, where data are available. State and territory estimates of road freight relate to the state or territory of vehicle registration, or in the case of sea freight, the state or territory of loading. Estimates of total freight do not include estimates for domestic air freight.

Chapter 4 Passenger transport

Passenger kilometres (pkm) is a measure of total passenger travel. It is the number of kilometres travelled by a vehicle multiplied by the number of occupants in the vehicle. Individual trips are aggregated to provide estimates for total pkm.

Table 4.1–4.2

BITRE modelling uses data from a range of sources to provide a consistent time series of Australian passenger travel (pkm). Modelled estimates of air passenger travel (Table 4.1) differ from survey results for domestic airline revenue passenger travel (Table 7.3) as Table 4.1 includes a modelled estimate for general aviation travel (non-airline air travel). Vehicles not classified to passenger cars, buses, rail or air are included in 'other transport mode' (Table 4.1).

Table 4.3

These estimates were made for *Estimating urban traffic and congestion cost trends for Australian cities* (BITRE 2007j). Data for cars, light commercial vehicles and motor cycles were drawn from successive Surveys of Motor Vehicle Use. Data on rail, light rail and buses up to 2000 were drawn from quarterly surveys of state authorities, stored on BITRE Transport Indicators database. From 2000 onwards, data were drawn from Apelbaum Consulting Group's Australian Transport Facts database, compiled as a consultancy to the Australasian Railway Association.

- (1) The other transport mode represents primarily non-business use of light commercial vehicles (with contributions from motorcycles, non-business use of trucks and ferries).

Chapter 5 Road

Vehicle kilometres travelled (vkt) is a measure of the total distance travelled by vehicles in a year.

Map 5.1

A map of the Auslink road network is provided. Auslink is Australia's national land transport plan, linking cities, regions and communities.

Table 5.1

Intercapital road distances are calculated from capital city GPO to capital city GPO using the shortest route as provided by whereis.com.au.

Table 5.2

BITRE regularly prepares estimates of road expenditure sourced from unpublished ABS Government finance statistics (GFS) and internal Department of Infrastructure, Transport and Regional Services data. There have been a number of methodological changes in the compilation of estimates over time, with the most significant being the ABS adoption of accrual based accounting for GFS in 1998–99. In addition, data are subject to revision as non-road related expenditures are identified. Estimates include private road related expenditure from 1998–99 onwards.

Data provided are estimates of expenditure on roads by each level of government from their own sources rather than the total expenditure on roads by that level of government. Commonwealth and state estimates of expenditure may include grants to other levels of government for expenditure on roads.

Estimates are presented at constant 2004–05 prices calculated using the BITRE Road Construction and Maintenance Price Index.

Table 5.3–5.4

Annual summaries of road length data classified by road surface were available from the *ABS Year Book* (ABS 2005) for a number of years up to the June 2004 reference point. The way roads were classified to surface type has changed across states and over time. Annual summaries of these changes are provided in each *ABS Year Book*. Tables 5.3 and 5.4 present the ABS data in time series format, with the addition of estimates for 2005 and 2006, compiled from a BITRE survey of state road authorities.

Road length data were not available for Queensland, Northern Territory and ACT for 2005 and 2006, but have been obtained for 2007. In these instances, 2007 data have been used as an estimate for 2006 data. At the time this publication went to print, 2005 and 2006 data for Victoria were not yet available. NSW figures from 1983 to 1988 were recorded as at 31 December of the previous year.

- (1) Excludes roads designated but not trafficable. Excludes Lord Howe Island, forestry controlled roads or crown roads.
- (2) Excludes roads coming under the responsibility of the Department of Conservation and Natural Resources.
- (3) Between 2004 and 2006, improved collection methodologies were introduced for the classification of Queensland road types. This introduced a break in the series.
- (4) Excludes approximately 25 300 km of forestry roads.
- (5) From June 1988, forestry roads were reclassified from 'Cleared only' to 'Gravel'.
- (6) Excludes roads managed by local government bodies. Approximately 1000 km of roads were transferred to NT Government jurisdiction as Aboriginal Strategic Roads from 1 July 1997. There have been some roads transferred to local government jurisdiction since 1992, 8200 km of roads on Aboriginal land, and 1400 km of park roads. Prior to 1992, estimates excluded 7838 km of roads on Aboriginal land and 387 km of park roads.

Table 5.5–5.8

Estimates for motor vehicle usage are modelled by BITRE, primarily from data compiled by the SMVU (ABS 2006g). In addition to the SMVU, modelling of passenger transport also incorporates fuel use statistics from the monthly *Australian Petroleum Statistics* (DITR 2007). *Freight Measurement and Modelling* (BITRE 2006b) provides an outline of modelling techniques used for freight estimation, while *Greenhouse Gas Emissions From Transport* (BITRE 2002 and 2006c) provide an outline of modelling techniques used for passenger estimation.

Table 5.9

The new motor vehicle price index reflects movements in the prices received by manufacturers for new motor vehicles. The other indexes in this table reflect changes in the prices consumers pay for a range of motor vehicle goods and services. The motor vehicles index reflects the prices consumers pay for new and used motor vehicles and vehicle hire and lease expenses (non-holiday).

Table 5.10

Table 5.10 includes a mix of data from ABS and BITRE sources. *ABS Producer Price Indexes* (ABS 2007g) for Australian road and bridge construction commence in September 1997 (base of index 1998–99 = 100), with state data only available from September 1998 for New South Wales, Victoria, Queensland, South Australia and Western Australia. The ABS does not publish road and bridge construction indexes for Tasmania, the Northern Territory or the Australian Capital Territory. The ABS Producer Price Index series is provided quarterly. Estimates provided in Table 5.10 are a mean of the four relevant quarters.

Where available, BITRE estimates (base of index 1993–94 = 100) compiled in 1996 (BTCE 1996b) and 2006 (BTRE 2006d) have been included in the table for previous years and as an alternative measure to the ABS index for Australian road and bridge construction.

Table 5.11–5.12

The ABS Motor Vehicle Census is a census of all vehicles registered for use on public roads, excluding vehicles registered as vintage or historical cars, military vehicles and consular vehicles (in New South Wales, vintage or historical cars cannot be separately identified and are included in census results). The census date is 31 March each year, although this has varied in previous years (care should be taken when comparing movements over years). From 1991 onwards, data are not strictly comparable with previous surveys due to revisions to Australian Design Rules, which had an impact on the way vehicles were classified in ABS statistics:

- The classification of rigid trucks is restricted to only vehicles with a gross weight of 3.5 tonnes or more. Vehicles that had previously been classified as rigid trucks with a gross weight of less than 3.5 tonnes are classified as light commercial vehicles under the new standards.
- The classification of buses is restricted to only vehicles with seating for 10 passengers (including the driver) or more. Vehicles that had previously been classified as buses with seating for less than 10 passengers are classified as passenger vehicles under the new standards.

Data from the Motor Vehicle Census are not available with a state disaggregation prior to 1982.

Table 5.13–5.14

Data for new motor vehicle sales is sourced from the Federal Chamber of Automotive Industries and presented in *Sales of New Motor Vehicles, Australia* (ABS 2007i). The scope of these statistics is different to motor vehicle registrations data (Tables 5.11–5.12) as it may include defence force vehicles, consular vehicles and vehicles that are intended for off-road use that are not registered for use on public roads. New motor vehicle sales statistics do not include sales of new motor cycles.

Chapter 6 Rail

Table 6.1

The Sydney to Darwin rail distance is measured via Lithgow; the Canberra to Darwin distance is measured via Sydney.

Chapter 7 Aviation

Table 7.1

Intercapital air distances are provided in terms of greater circle distances. These are distances that take into account the curvature of the earth.

Table 7.2–7.3

- (1) Revenue passengers are fare paying passengers.
- (2) Number of revenue passengers divided by number of available seats.
- (3) Revenue passenger kilometres are calculated by multiplying the number of revenue passengers travelling on each flight stage by the distance in kilometres between the airports. Modelled estimates of air passenger travel (Table 4.1) differ from survey results for domestic airline revenue passenger travel as Table 4.1 includes a modelled estimate for general aviation travel (non-airline air travel).
- (4) Revenue passenger kilometres divided by available seat kilometres.

Table 7.4

- (5) Regular Public Transport (RPT) operations only. RPT is aircraft transport available to the public and operated to fixed schedules and between specified fixed terminals.

Table 7.5

Airline on-time measures are provided in terms of on time departures (flights that depart within 15 minutes of the scheduled departure time), on time arrivals (flights that arrive within 15 minutes of the scheduled arrival time) and cancellations (flights cancelled or rescheduled within 7 days of the scheduled departure time).

- (6) Participating airlines are Jetstar, Macair, Qantas, QantasLink, Regional Express, Skywest and Virgin Blue.
- (7) Series commenced November 2003. Jetstar commenced reporting from May 2004 and Macair from July 2005.

Table 7.6

Airfare indexes provided are the annual average of monthly indexes compiled by the BITRE. Indexes have been adjusted for CPI movements using the Australian Bureau of Statistics *Consumer Price Index* (ABS 2007d).

Table 7.7

- (8) Presented in December quarter 2006 dollars. Calculated on a return passenger basis (one arrival and one departure) for price schedules as at 31 July each year.
- (9) Represented by airport charges for a Boeing 747-438. Sydney and Brisbane international airport charges have been adjusted to exclude transit and transfer passengers.
- (10) Represented by airport charges for a Boeing 737-800.
- (11) Represented by airport charges for a SAAB340B.

Chapter 8 Shipping

Deadweight tonnage (dwt) is the measure of weight that a vessel can carry, including cargo, bunkers, water and stores, expressed in tonnes.

Table 8.1

The main source of information on intercapital sea distances was *The Ports of Australia* (Australian Chamber of Shipping 1993). Where optional routes are available, the shorter distance was used.

Table 8.2–8.3

Tables 8.2 and 8.3 provide estimates of the number of ships that visit major ports or states and the number of visits a port or state receive during a financial year.

Table 8.4

Data for international sea freight is compiled by BITRE from ABS International Cargo Statistics that are provided to the ABS by Australian Customs. The classification of cargo to bulk or non-bulk categories is an approximation based on the ship type. Liners are assumed to be non-bulk carriers and non-liners are assumed to be bulk carriers.

Liners carry mostly containerised, roll-on roll-off, and general cargo. They operate on a fixed schedule between specified ports and accept cargo from all sources. Non-liner cargo includes all dry and liquid bulk cargo as well as cargo not carried on regular liner services.

The international sea freight task is provided in terms of tonne-kilometres. This is a measure of the task of moving one tonne of freight one kilometre between the Australian port of loading or discharge and the immediate overseas port of loading, discharge or transhipment.

Tables 8.5–8.7

Tables 8.5, 8.6 and 8.7 provide estimates of the tonnes of cargo loaded or discharged from ships at Australian ports. Domestic cargo is recorded in these estimates at both the port of loading and the port of discharge, while international cargo is recorded only at the Australian port of loading or discharge.

Table 8.9

Table 8.9 provides the number of ships operating out of Australian ports for at least part of the financial year. In any financial year, there may be ships managed by Australian registered companies that operate internationally without calling into Australian ports.

Tables 8.10–8.11

A list of the major Australian registered trading vessels (greater than 2000 dwt) engaged in Australian coastal and international trade is provided in Tables 8.10 and 8.11. Vessels are classified to coastal or international trade based on their primary activity. Some predominantly international trading vessels occasionally engage in coastal trade and some predominantly coastal trading vessels occasionally engage in international trade.

Chapter 9 Safety

Fatalities include injuries resulting in death within 30 days of the accident where death is attributable to injuries sustained during the accident.

Serious injuries are defined as injuries that require hospitalisation.

Table 9.1

Table 9.1 provides a cross-modal comparison of fatality accidents and fatalities. Road, rail and aviation statistics are compiled by the Australian Transport Safety Bureau (ATSB), while marine data are provided by the National Marine Safety Committee. Data are not currently available for the number of rail fatality accidents.

Cross-modal comparisons should be undertaken with caution as level crossing accidents between trains and road vehicles are included in the estimates of both modes from 2001 (level crossing deaths were not included in rail fatality statistics prior to 2001). In addition, suicides are excluded from aviation casualty estimates and road estimates but included in rail estimates from 2001.

Tables 9.2–9.3

Fatality rates and serious injury rates are presented for each mode using population data provided in Table 2.6 and passenger kilometre data provided in Table 4.1.

Tables 9.4–9.9

Road safety statistics are provided for the number and rate of accidents involving fatalities, accidents involving serious injuries, fatalities and serious injuries. Robust datasets of the number of serious injuries are not currently available for recent years. The ATSB are implementing processes to compile serious injury data using alternative sources.

Tables 9.10–9.12

Rail safety statistics are sourced from the state rail regulators and are based on operators/owners occurrence reports as reported in the ATSB National Rail Occurrence Data collection.

Tables 9.13–9.16

Aviation accident statistics include all occurrences associated with the operation of an aircraft which take place between the time any person boards the aircraft with the intention of flight until disembarking, in which a person is injured as a result of:

- being in the aircraft, or
- direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
- direct exposure to jet blast.

For aviation safety statistics, injuries include serious and minor injuries.

Casualties are excluded when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew.

Chapter 10 Energy and the environment

Tables 10.1–10.2

Australian petroleum sales data include reporting companies' own use of petroleum products, but excludes refinery fuel.

- (1) Includes all LPG production and trade.
- (2) All diesel imports are included in automotive diesel.

Tables 10.3–10.7

Emission estimates that are provided in terms of carbon dioxide equivalent emissions in Tables 10.3 and 10.4 include directly radiative gases only (carbon dioxide, methane and nitrous oxide). The estimates of carbon dioxide equivalent emissions do not include the indirect effects of gases such as carbon monoxide, nitrogen oxides and non-methane volatile organic compounds. Emission estimates are available in Tables 10.5 to 10.7 for carbon dioxide, methane and nitrous oxide without conversion to carbon dioxide equivalent.

Estimates for maritime and aviation emissions only include domestic transport (coastal shipping and domestic aviation).

A discussion of the modelling techniques used is available in *Greenhouse Gas Emissions From Australian Transport* (BTRE 2006c).

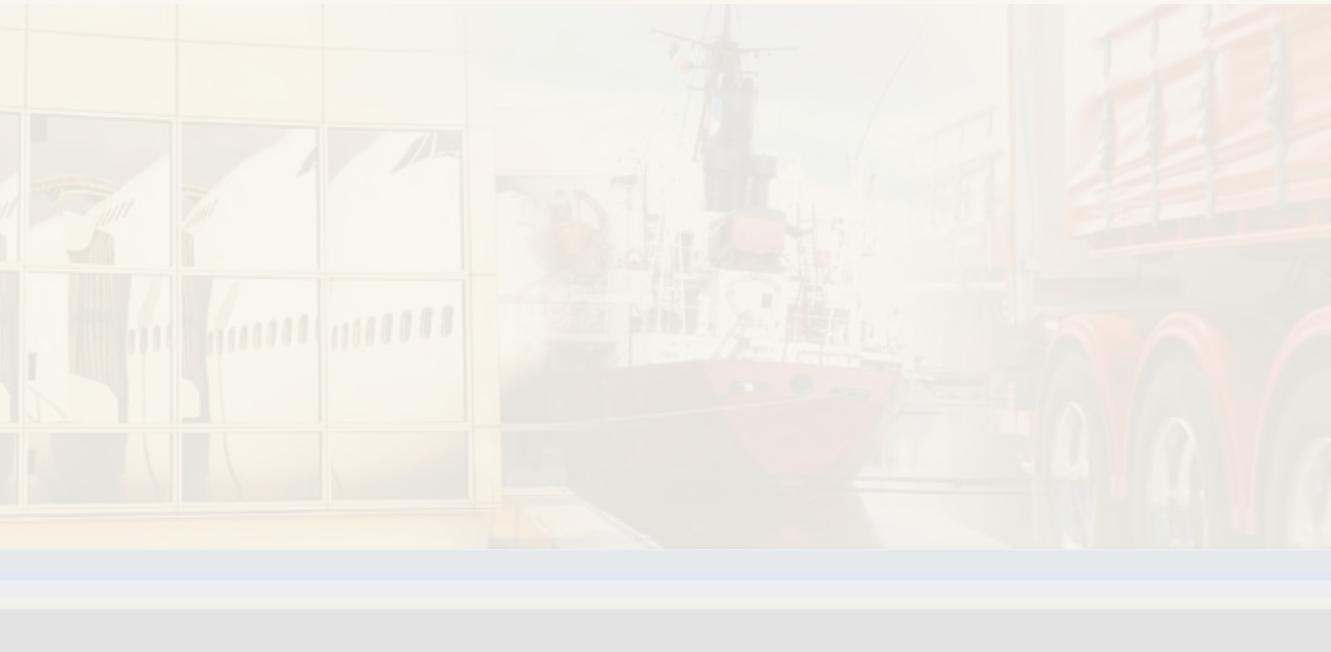
The Australian Transport Statistics booklet

The *Australian Transport Statistics* booklet is a small, pocket-size publication that presents a statistical picture of current Australian transport activity. The Yearbook complements it by presenting time series for a range of key transport activity measures, including many that are included in the booklet. The development of a transport statistics framework and a focus on longer time series required the use of different data sources to the booklet for a number of tables. In addition, some estimates have been updated since the booklet was published.

- *Different sources* (2.5, 3.1, 4.1, 5.2, 5.6, 5.8, 5.11, 7.2, 7.3, 9.1, 10.3). For example, in Table 3.1 estimates of Total domestic freight differ from the estimates presented in the booklet. The booklet presents estimates of road freight derived directly from the *Survey of Motor Vehicle Use* (ABS 2006e), while this publication presents estimates modelled by BITRE. See Chapter 3 of the End Notes for details.
- *Revisions of the same source* (8.2, 9.1, 9.4, 9.11, 9.14). For example, in Table 20 of the booklet, 2006 rail fatality statistics were only available for January to June. Table 9.1 includes rail fatality statistics for the whole 2006 calendar year.
- *Differences in the reference period* (Tables 2.2, 5.5, 5.8, 5.11, 5.14, 7.8). For example, in Table 2.2 estimates of employment for the transport and storage industry differ from those in the booklet. The booklet provides estimates as an annual average of quarterly data, however between 1971 and 1984 the ABS only compiled annual employment estimates for the transport and storage industry in August. This publication retains the annual August reference point to enable a longer time series.
- *Updates of the definitions used* (7.3, 8.5, 8.6, 8.7). Table 12 of the booklet excludes the domestic leg of international flights from the domestic summary of aviation statistics. Table 7.3 includes these flights in domestic airline activity.

The ongoing development of the transport statistics framework will provide a basis for uniform definitions and concepts across BITRE publications. Differences between this publication and the booklet should diminish as the framework develops.

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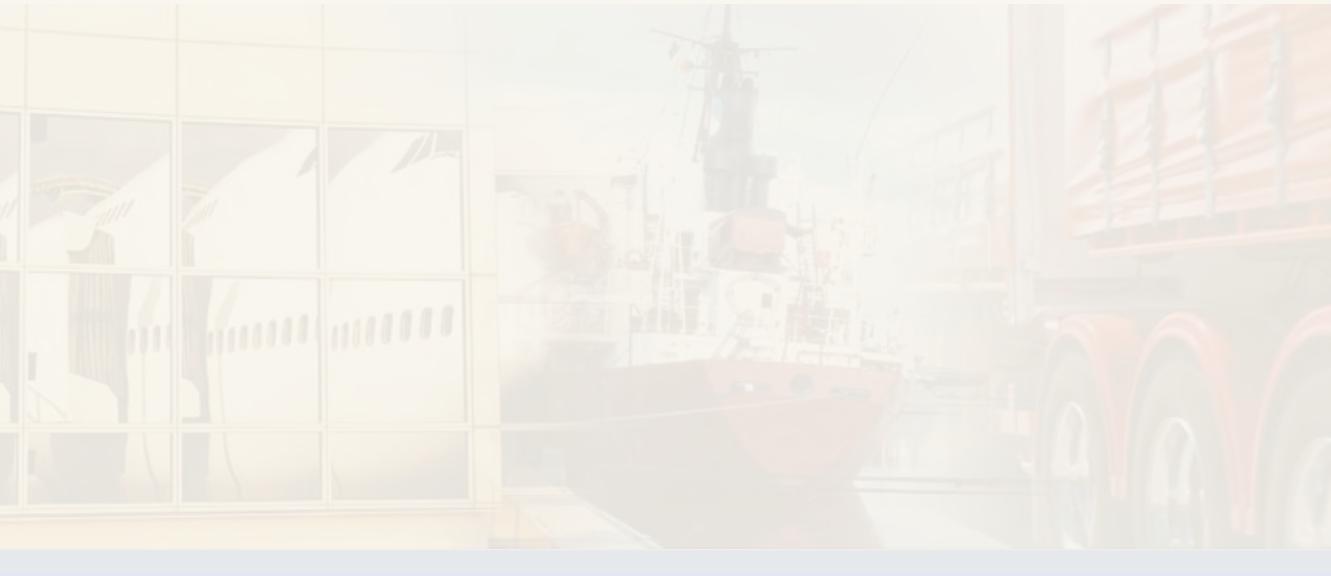
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Abbreviations



Abbreviations

ABS	Australian Bureau of Statistics
ABARE	Australian Bureau of Agricultural and Resource Economics
BITRE	Bureau of Infrastructure, Transport and Regional Economics
BTCE	Bureau of Transport and Communication Economics
BTE	Bureau of Transport Economics
BTRE	Bureau of Transport and Regional Economics
CASA	Civil Aviation Safety Authority
CPI	Consumer Price Index
DITR	Department of Industry, Tourism and Resources
DOTARS	Department of Transport and Regional Services
FCAI	Federal Chamber of Automotive Industries
LCV	Light commercial vehicle
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
Nm	nautical mile
RBA	Reserve Bank of Australia

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