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Bureau of Infrastructure, Transport and Regional Economics

Australian transport statistics

Yearbook 2009

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Foreword

The Department of Infrastructure, Transport, Regional Development and Local Government assists the Australian Government to promote, evaluate, plan and invest in infrastructure; fosters an efficient, sustainable, competitive, safe and secure transport system; and assists regions and local government to develop and manage their futures. These goals cannot be achieved without ready reference to a wide range of up-to-date statistics.

The main aim of this publication 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 publication are currently collected by BITRE or other Australian, state or territory government agencies.

This second issue of the *Australian transport statistics yearbook* includes a new chapter on transport infrastructure expenditure as well as a number of new statistical time series, mainly in the area of energy prices. It also identifies areas where further statistics may provide a more complete statistical picture of Australian transport.

For 2010, BITRE intends to expand this publication's scope to create a new *Australian infrastructure statistics yearbook*. This new Yearbook will provide time series statistics for measures of transport, water, energy and communications infrastructure and the use of this infrastructure.

The compilation of this issue 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.

Phil Potterton
Executive Director
Bureau of Infrastructure,
Transport and Regional Economics
June 2009

Contents

Chapter 1

Introduction

bitre

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 five main components:

- the relationship between the transport industry and the rest of the Australian economy
- transport infrastructure
- freight and passenger transport activity
- transport activity by mode of transport
- 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.

Transport infrastructure

Transport activity is dependent on access to infrastructure. Chapter 3 provides estimates of the construction of transport infrastructure as well as measures of the length of roads available for public use.

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 (e.g. 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
- 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 10 (Safety) and Chapter 11 (Energy and the Environment) complete the statistical framework with a summary of some key impacts of transport activity.

Chapter 10 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, fuel prices 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 a publication such as this highlights the 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.

Transport infrastructure

Measures of transport infrastructure currently focus on construction expenditure. While some further datasets are available for road maintenance and the length of public roads, comprehensive datasets for the stock of infrastructure for other modes are not currently available.

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 (including the ABS Survey of Motor Vehicle Usage, which has recently been reduced from an annual survey to a triennial survey). 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 motor vehicle transport that is not on public roads, non-motorised transport (walking and cycling) other than travel to work estimates or recreational boating.

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 5 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. New data sources for estimates of serious injuries resulting from road accidents have recently been identified; however, the time series available is relatively short. Accident and injury statistics classified by the role of the injured in the accident (driver, passenger, pedestrian, and so on) 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

Chapter 2 figures and tables

Figures

Tables

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.

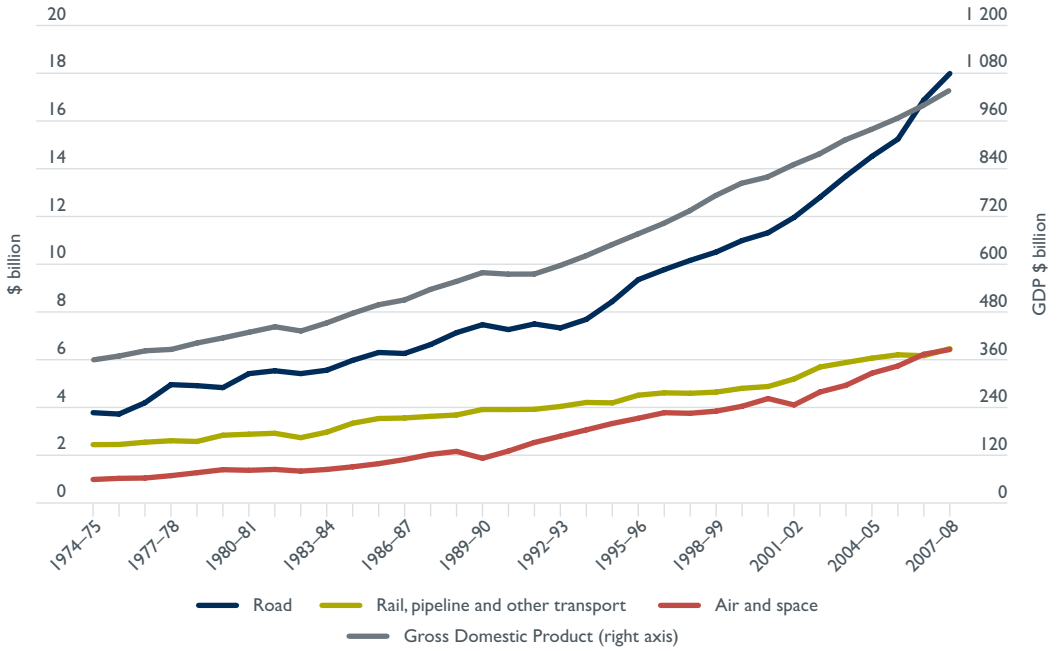
Recent events

- The Australian economy experienced solid growth in 2007–08, with gross domestic product (GDP) growing 3.7 per cent.
- Australia's trade in goods increased again, with Australian goods exports increasing 8.6 per cent between 2006–07 and 2007–08 and Australian goods imports increasing by 11.7 per cent.

Outlook

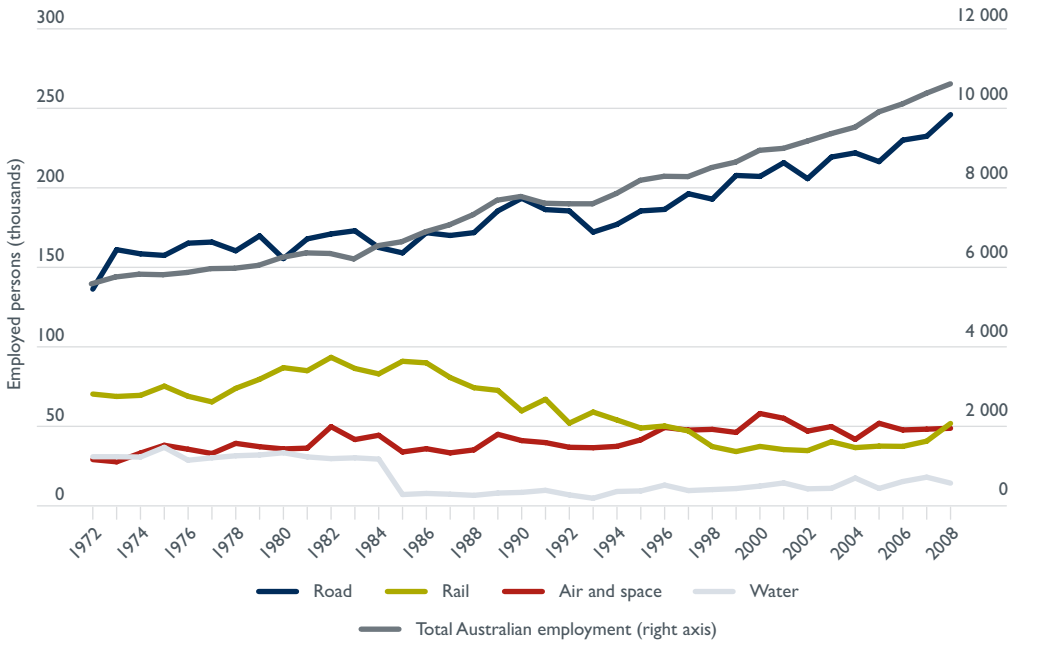
- The Australian economy is forecast to grow 1.0 per cent in 2008–09 (Treasury 2009).
- The inflation rate in Australia, as measured by the consumer price index (CPI), is forecast to increase by 2.0 per cent in 2008–09 (Treasury 2009).
- Employment in Australia is forecast to fall by 0.25 per cent in 2008–09 (Treasury 2009).
- Australia's volume of mineral and energy production is forecast to increase by 2.9 per cent in 2008–09, however the value of production is expected to increase significantly due to the sharp depreciation of the Australian dollar in the first half of the 2008-09 financial year (down aproximately 33 per cent) (ABARE 2008a).
- Australia's gross value of farm production is forecast to increase by 2.8 per cent in 2008–09 (ABARE 2008a).
- The world economy is forecast to increase by 0.5 per cent in 2009 (IMF 2009).

Figure 2.1 Transport industry gross value added and GDP—chain volume measures



Source: ABS (2008a), *Australian National Accounts: National Income, Expenditure and Product.*

Figure 2.2 Transport industry employment



Source: ABS (2008g), *Labour Force, Australia.*

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]						
	Transport			Transport services and storage[3]	Total	Gross Domestic Product	Transport and storage as per cent of GDP
	Road	Air and space	Rail, pipeline and other				
	($ millions)						(per cent)
1974–75	3 782	984	2 443	7 121	13 188	362 137	3.6
1975–76	3 724	1 031	2 449	6 869	13 119	371 931	3.5
1976–77	4 198	1 045	2 544	7 193	14 206	384 809	3.7
1977–78	4 956	1 144	2 606	7 511	16 000	388 258	4.1
1978–79	4 913	1 267	2 576	7 742	16 257	404 531	4.0
1979–80	4 831	1 394	2 837	8 349	16 741	417 214	4.0
1980–81	5 417	1 369	2 881	8 252	17 766	431 335	4.1
1981–82	5 537	1 405	2 918	8 086	18 036	445 014	4.1
1982–83	5 419	1 334	2 735	7 551	17 379	434 463	4.0
1983–84	5 560	1 404	2 966	8 459	18 255	454 783	4.0
1984–85	5 974	1 514	3 341	9 226	19 739	479 001	4.1
1985–86	6 303	1 646	3 538	9 470	20 949	500 292	4.2
1986–87	6 262	1 819	3 560	9 688	21 323	512 383	4.2
1987–88	6 635	2 035	3 628	9 965	22 263	538 814	4.1
1988–89	7 134	2 160	3 686	10 259	23 275	558 744	4.2
1989–90	7 467	1 871	3 915	10 522	23 861	580 741	4.1
1990–91	7 263	2 175	3 913	10 618	24 024	576 998	4.2
1991–92	7 498	2 534	3 923	10 562	24 552	577 269	4.3
1992–93	7 331	2 798	4 043	10 565	24 718	598 639	4.1
1993–94	7 690	3 062	4 210	11 141	26 065	623 194	4.2
1994–95	8 438	3 329	4 193	11 774	27 639	651 013	4.2
1995–96	9 353	3 548	4 514	12 421	29 743	677 809	4.4
1996–97	9 774	3 781	4 613	12 788	30 867	704 432	4.4
1997–98	10 161	3 756	4 595	13 072	31 471	735 995	4.3
1998–99	10 510	3 846	4 644	13 443	32 318	774 114	4.2
1999–00	10 992	4 050	4 803	13 792	33 521	804 949	4.2
2000–01	11 318	4 373	4 877	14 490	34 959	820 558	4.3
2001–02	11 960	4 106	5 195	15 098	36 238	851 465	4.3
2002–03	12 805	4 649	5 695	15 683	38 766	878 305	4.4
2003–04	13 692	4 929	5 883	15 829	40 288	913 666	4.4
2004–05	14 518	5 436	6 066	16 488	42 480	939 692	4.5
2005–06	15 239	5 738	6 206	16 449	43 632	967 454	4.5
2006–07	16 880	6 229	6 168	17 015	46 293	999 687	4.6
2007–08	17 988	6 427	6 465	18 191	49 071	1 037 027	4.7

1, 2 and 3. See End Notes.

Source: ABS (2008a), *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	Transport and storage as per cent of total employment
	Transport					Services to transport	Storage	Transport and storage –nfd	Total	
	Road	Rail	Water	Air and space	Other					
	(thousands of employees)									(per cent)
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
2008	246.1	51.8	14.3	48.8	[a]0.4	76.3	55.8	11.7	505.1	10 673.4	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 (2008g), *Labour Force, Australia, Detailed, Quarterly, August 2008* (ABS cat. no. 6291.0.55.003).

Table 2.3 Australian average weekly earnings, transport and storage industry

May reference month	*Transport and storage*								
	Transport								
	Road	*Rail*	*Water*	*Air and space*	*Other*	*Services to transport*	*Storage*	*Total*	*Australia*
					($ earned)				
1996	612.00	797.80	669.50	836.30	486.50	723.10	622.70	704.80	573.70
1998	642.60	842.20	1 061.30	1 019.50	[b]472.10	724.10	756.40	757.70	610.20
2000	643.30	940.90	1 094.20	1 088.90	np	733.00	901.10	776.80	652.80
2002	756.30	1 041.60	883.00	1 009.40	np	906.70	694.20	848.00	711.90
2004	786.50	1 165.20	[b]905.70	1 067.20	np	856.00	909.90	881.80	777.20
2006	920.80	1 470.30	1 098.00	1 218.50	np	911.80	944.40	1 008.70	852.30

np: Not available for publication but included in the totals
b. Use estimate with caution as it is subject to a relative standard error between 25 per cent and 50 per cent.
Source: ABS (2007a), *Employee Earnings and Hours, Australia* (ABS cat. no. 6306.0), unpublished data

Table 2.4 Australian producer price indexes, transport and storage industry

Financial year	*Transport*							
	Road	*Rail*	*Water*	*Air and space*	*Other*	*Services to transport*	*Storage*	*Total*
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
1999–00	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
2007–08	131.8	102.0	108.5	112.2	112.0	114.3	122.8	121.4

Data are not readily available for missing years.
Base of each index: 1998–99 = 100.0.
Source: ABS (2008h), *Producer Price Indexes, Australia, June 2008* (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)	*Goods debits (imports)*	*Consumer Price Index, annual percentage change*	*Exchange rate*[5]	*Interest rate*[6]
	($ millions)	*($ millions)*	*(per cent)*	*($US)*	*(per cent)*
1971–72	4 746	-3 814		1.1910	5.75
1972–73	6 086	-3 831	8.2	1.4167	6.40
1973–74	6 833	-5 795	14.6	1.4875	18.80
1974–75	8 620	-7 728	16.9	1.3258	8.80
1975–76	9 589	-7 999	12.0	1.2356	10.27
1976–77	11 572	-10 428	13.5	1.1155	10.95
1977–78	12 158	-11 242	8.0	1.1475	10.63
1978–79	14 234	-13 506	8.7	1.1211	10.26
1979–80	18 869	-16 066	10.8	1.1576	13.83
1980–81	19 018	-19 486	8.7	1.1480	15.58
1981–82	19 662	-22 699	10.8	1.0223	18.57
1982–83	21 226	-22 047	11.1	0.8745	14.24
1983–84	23 968	-23 797	4.0	0.8613	12.81
1984–85	30 102	-30 402	6.6	0.6655	15.75
1985–86	32 492	-36 053	8.5	0.6772	14.68
1986–87	36 487	-37 370	9.3	0.7203	13.68
1987–88	41 903	-40 640	7.1	0.7940	13.10
1988–89	44 187	-47 232	7.6	0.7553	18.37
1989–90	48 927	-51 326	7.7	0.7890	15.02
1990–91	52 568	-49 681	3.4	0.7681	10.39
1991–92	55 427	-51 469	1.2	0.7488	6.42
1992–93	60 634	-59 934	1.9	0.6722	5.22
1993–94	64 419	-64 863	1.7	0.7291	5.12
1994–95	67 101	-75 317	4.5	0.7086	7.55
1995–96	76 146	-77 729	3.1	0.7890	7.57
1996–97	80 934	-79 438	0.3	0.7455	5.35
1997–98	88 538	-92 084	0.7	0.6135	5.32
1998–99	85 783	-98 430	1.1	0.6596	4.93
1999–00	97 625	-110 810	3.2	0.5986	6.23
2000–01	120 231	-120 524	6.0	0.5075	4.97
2001–02	120 940	-121 943	2.8	0.5648	5.07
2002–03	115 803	-134 273	2.7	0.6674	4.67
2003–04	109 473	-133 018	2.5	0.6889	5.49
2004–05	127 867	-150 873	2.5	0.7637	5.66
2005–06	154 425	-169 716	4.0	0.7433	5.96
2006–07	169 514	-184 024	2.1	0.8487	6.42
2007–08	183 058	-205 046	4.5	0.9434	7.81

5 and 6. See End Notes.

Source: ABS (2008c), *Balance of Payments and International Investment Position* (ABS cat. no. 5302.0), ABS (2008d), *Consumer Price Index* (ABS cat. no. 6401.0) and RBA (2008), *Bulletin*.

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

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT* [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
1999–00	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
2006–07	4 336 374	3 806 092	1 857 594	1 158 259	1 554 769	207 484	117 395	339 573

7, 8, 9, 10. See End Notes.

Source: ABS (2008j), *Regional Population Growth, Australia* (ABS cat. no. 3218.0).

Table 2.6b Australian population, by state/territory—rest of state[11]

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT* [7, 8]
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	1 837 887	395 816	470 164	278 725	86 014	334
1996–97	2 348 303	1 287 600	1 870 356	397 451	478 718	277 629	88 021	342
1997–98	2 369 422	1 295 590	1 899 141	399 026	487 676	276 054	88 715	349
1998–99	2 391 416	1 306 688	1 929 217	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	360
2002–03	2 481 683	1 346 307	2 100 522	409 500	516 570	277 775	92 636	323
2003–04	2 493 150	1 355 848	2 152 358	413 186	521 535	280 639	93 511	322
2004–05	2 510 716	1 368 453	2 210 485	417 944	530 270	282 813	95 184	303
2005–06	2 532 803	1 383 937	2 271 146	422 085	539 535	284 356	96 306	285
2006–07	2 552 698	1 399 124	2 324 468	426 254	551 014	285 857	97 580	292

7, 8, 9, 10, 11. See End Notes.

Source: ABS (2008j), *Regional Population Growth, Australia* (ABS cat. no. 3218.0).

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

Financial year	*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
2006–07	6 889 072	5 205 216	4 182 062	1 584 513	2 105 783	493 341	214 975	339 865

7, 8. See End Notes.

Source: ABS (2008j), *Regional Population Growth, Australia* (ABS cat. no. 3218.0).

Chapter 3

Transport infrastructure

Chapter 3 figures and tables

Figures

Tables

Chapter 3 Transport infrastructure

Physical infrastructure in the form of roads and highways, rail track, and air and sea ports are vital enablers of transport activity. This chapter provides estimates of the current stock of road infrastructure available to the public, the value of transport infrastructure construction work done and indexes for the price of road construction and maintenance.

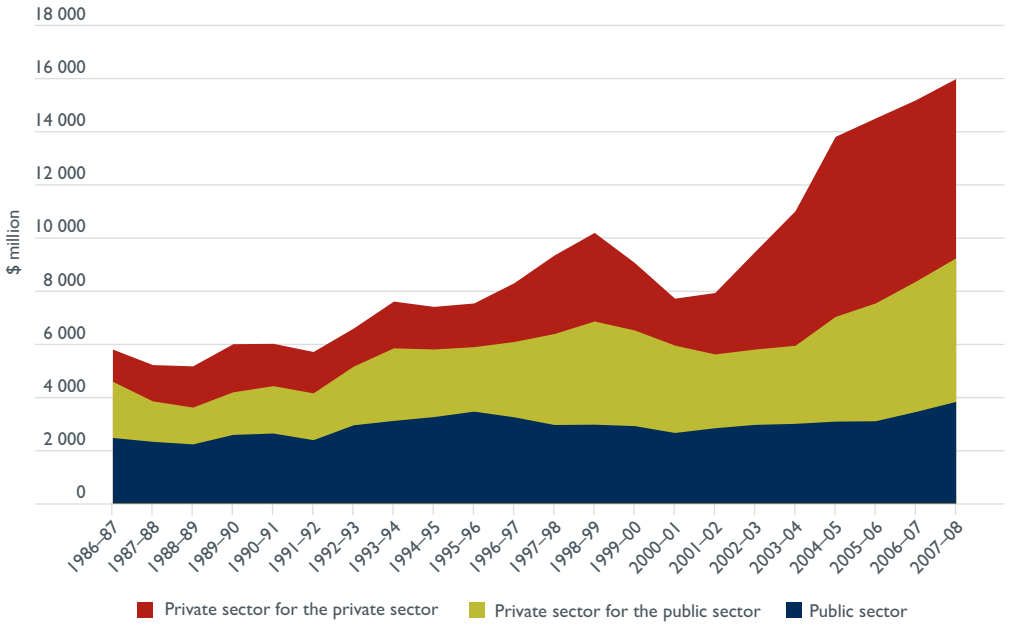
Recent events

- March 2008: Infrastructure Australia established as a statutory independent organisation to advise Commonwealth, state/territory and local governments on matters relating to infrastructure.
- November 2008: COAG endorsed the National Public Private Partnership Policy and Guidelines prepared by Infrastructure Australia. Comments are still being sought from PPP participants on the draft Commercial Principles for Economic Infrastructure.
- December 2008: Infrastructure Australia releases *A Report to the Council of Australian Governments* (COAG).

Future plans

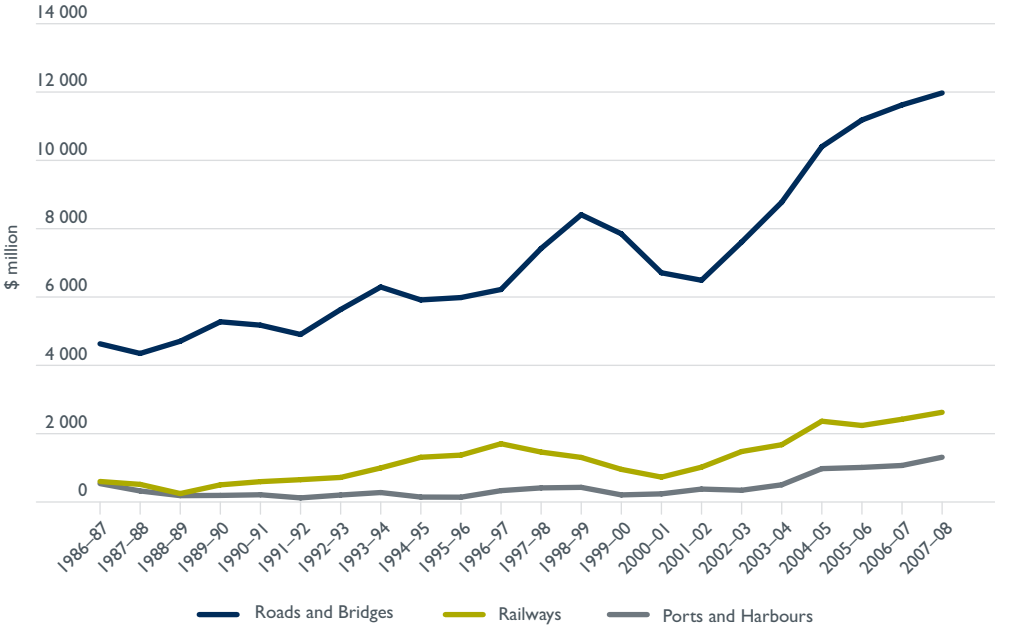
- March 2009: Infrastructure Australia to provide COAG with an Infrastructure Priority List to guide future public and private investment decisions.

Figure 3.1 Transport infrastructure construction work, by sector—adjusted by chain volume measures (2007–08 base)



Source: ABS (2008e), *Engineering Construction Activity, Australia.*

Figure 3.2 Transport infrastructure construction work, by mode—adjusted by chain volume measures (2007–08 base)



Source: ABS 2008e, *Engineering Construction Activity, Australia.*

Table 3.1a Value of major transport infrastructure engineering construction work done by the private sector for the private sector—adjusted by chain volume index

Financial year	*Roads and bridges*	*Railways*	*Ports and harbours*	*Total engineering construction*	*Transport percentage of total*
		($ millions)			*(per cent)*
1986–87	768.4	152.2	286.3	3 951.4	30.54
1987–88	1 079.4	68.9	213.4	4 427.7	30.76
1988–89	1 470.8	33.6	41.7	4 551.8	33.97
1989–90	1 690.6	23.1	90.7	4 697.5	38.41
1990–91	1 491.3	25.4	70.6	4 536.6	34.99
1991–92	1 463.2	46.5	41.8	4 415.1	35.14
1992–93	1 364.9	17.5	45.5	4 148.2	34.42
1993–94	1 604.1	53.6	95.6	5 171.6	33.90
1994–95	1 522.6	38.8	34.7	5 303.7	30.09
1995–96	1 524.0	81.6	32.6	6 839.8	23.95
1996–97	1 994.6	105.7	105.8	7 483.9	29.48
1997–98	2 454.2	223.1	268.1	9 575.0	30.76
1998–99	2 871.0	202.8	247.9	10 934.3	30.38
1999–00	2 241.3	190.2	98.4	9 653.4	26.21
2000–01	1 543.2	108.9	106.5	8 029.0	21.90
2001–02	1 863.1	318.0	121.6	10 510.1	21.91
2002–03	2 900.9	601.4	158.1	15 231.3	24.03
2003–04	4 428.2	301.1	315.4	17 609.1	28.65
2004–05	5 440.2	511.1	800.0	20 269.9	33.31
2005–06	5 582.2	482.3	870.7	26 651.8	26.02
2006–07	4 973.2	907.3	923.1	30 495.5	22.31
2007–08	4 478.6	1 357.1	887.6	33 568.3	20.03

Source: (ABS 2008e), *Engineering Construction Activity, Australia* (ABS cat. no. 8762.0) and unpublished data.

Table 3.1b Value of major transport infrastructure engineering construction work done by the private sector for the public sector—adjusted by chain volume index

Financial year	*Roads and bridges*	*Railways*	*Ports and harbours*	*Total engineering construction*	*Transport percentage of total*
		($ millions)			*(per cent)*
1986–87	1 681.1	229.9	197.5	4 121.5	51.16
1987–88	1 231.9	208.8	75.5	3 069.9	49.39
1988–89	1 208.1	63.7	108.8	2 743.3	50.33
1989–90	1 464.3	74.8	57.3	3 033.0	52.63
1990–91	1 566.6	122.9	87.2	3 674.5	48.35
1991–92	1 566.4	133.1	55.2	3 757.6	46.70
1992–93	1 920.1	148.4	132.4	3 944.5	55.80
1993–94	2 276.2	300.6	143.5	4 543.1	59.88
1994–95	2 041.9	413.7	80.1	3 950.4	64.19
1995–96	2 080.7	253.8	83.9	3 890.3	62.17
1996–97	2 115.3	511.5	196.7	4 406.1	64.08
1997–98	2 750.7	552.5	108.7	4 818.8	70.80
1998–99	3 301.5	446.1	120.4	5 059.6	76.45
1999–00	3 292.7	204.1	89.3	5 558.1	64.52
2000–01	3 065.8	127.7	83.5	5 113.6	64.08
2001–02	2 511.9	75.1	180.3	4 526.2	61.14
2002–03	2 425.9	263.3	135.5	4 626.9	61.05
2003–04	2 072.0	720.0	135.3	4 583.2	63.87
2004–05	2 758.8	1 011.5	154.5	5 979.5	65.64
2005–06	3 266.3	1 023.2	128.1	6 480.4	68.17
2006–07	4 051.9	712.5	119.2	6 816.4	71.65
2007–08	4 680.3	524.5	177.6	9 583.3	56.16

Source: (ABS 2008e), *Engineering Construction Activity, Australia* (ABS cat. no. 8762.0) and unpublished data.

Table 3.1c Value of major transport infrastructure engineering construction work done by the public sector—adjusted by chain volume index

Financial year	*Roads and bridges*	*Railways*	*Ports and harbours*	*Total engineering construction*	*Transport percentage of total*
		($ millions)			*(per cent)*
1986–87	2 180.3	218.0	54.6	7 898.5	31.06
1987–88	2 036.3	237.7	33.8	7 303.3	31.60
1988–89	2 026.7	149.4	35.6	7 341.4	30.13
1989–90	2 119.7	403.8	44.5	8 486.1	30.26
1990–91	2 117.9	447.4	53.7	8 318.1	31.49
1991–92	1 873.7	473.7	23.2	7 126.9	33.26
1992–93	2 348.9	552.9	25.9	7 664.2	38.20
1993–94	2 412.6	642.7	37.6	7 385.3	41.88
1994–95	2 349.9	856.8	29.5	8 246.3	39.24
1995–96	2 379.1	1 036.7	24.0	8 443.1	40.74
1996–97	2 110.4	1 087.7	29.6	7 910.3	40.80
1997–98	2 216.8	685.8	35.9	7 907.1	37.16
1998–99	2 236.1	655.3	60.1	8 615.3	34.26
1999–00	2 316.7	560.6	19.9	9 437.1	30.70
2000–01	2 100.2	491.7	47.9	8 598.7	30.70
2001–02	2 115.1	626.6	75.9	8 568.8	32.88
2002–03	2 281.6	612.4	49.7	8 513.1	34.58
2003–04	2 274.9	655.0	52.3	8 301.6	35.92
2004–05	2 202.6	841.6	22.0	8 694.3	35.27
2005–06	2 333.1	733.9	13.0	10 793.7	28.54
2006–07	2 598.1	802.4	26.6	10 226.5	33.51
2007–08	2 814.5	744.3	245.4	9 658.8	39.39

Source: (ABS 2008e), *Engineering Construction Activity, Australia* (ABS cat. no. 8762.0) and unpublished data.

Table 3.1d Total value of major transport infrastructure engineering construction work done—adjusted by chain volume index

Financial year	*Roads and bridges*	*Railways*	*Ports and harbours*	*Total engineering construction*	*Transport percentage of total*
		($ millions)			*(per cent)*
1986–87	4 629.9	600.0	538.4	16 032.6	35.98
1987–88	4 347.6	515.4	322.7	14 859.7	34.90
1988–89	4 705.6	246.7	186.1	14 696.9	34.96
1989–90	5 274.6	501.7	192.5	16 296.9	36.62
1990–91	5 175.9	595.7	211.5	16 600.2	36.04
1991–92	4 903.3	653.3	120.3	15 347.3	36.99
1992–93	5 633.9	718.8	203.9	15 813.1	41.46
1993–94	6 292.9	997.0	276.8	17 136.6	44.15
1994–95	5 914.4	1 309.2	144.3	17 556.5	41.97
1995–96	5 983.9	1 372.1	140.5	19 217.0	39.01
1996–97	6 220.4	1 704.9	332.2	19 822.4	41.66
1997–98	7 421.7	1 461.4	412.6	22 287.2	41.71
1998–99	8 408.6	1 304.2	428.5	24 585.9	41.25
1999–00	7 850.7	954.9	207.6	24 652.0	36.56
2000–01	6 709.2	728.3	237.9	21 745.2	35.30
2001–02	6 490.1	1 019.7	377.8	23 604.3	33.42
2002–03	7 608.4	1 477.0	343.3	28 359.4	33.25
2003–04	8 775.0	1 676.1	503.0	30 482.7	35.94
2004–05	10 401.6	2 364.3	976.5	34 938.3	39.33
2005–06	11 181.7	2 239.4	1 011.7	43 925.9	32.86
2006–07	11 623.3	2 422.1	1 068.9	47 538.5	31.79
2007–08	11 973.4	2 625.9	1 310.5	52 810.4	30.13

Source: (ABS 2008e), *Engineering Construction Activity, Australia* (ABS cat. no. 8762.0) and unpublished data.

Table 3.2a Total road expenditure by state/territory, by level of government, 2006–07 prices—Commonwealth

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT*	*Total*
					($ millions)				
1985–86	800.8	511.2	514.9	238.2	351.0	104.4	91.2	93.7	2 705.3
1986–87	870.6	484.5	507.0	215.5	313.5	95.8	80.0	97.2	2 664.1
1987–88	767.2	468.1	476.3	174.2	288.6	87.7	73.0	0.0	2 335.1
1988–89	692.3	435.7	434.8	159.3	283.8	84.6	69.3	0.0	2 159.8
1989–90	750.7	474.7	458.9	158.5	272.6	84.5	69.2	20.7	2 289.7
1990–91	845.2	520.5	493.3	172.4	273.2	87.8	90.5	20.5	2 503.4
1991–92	924.3	560.9	523.4	179.5	286.9	96.0	81.2	24.1	2 676.4
1992–93	1 094.3	694.5	706.1	231.8	339.1	121.3	107.7	29.0	3 323.7
1993–94	841.6	493.0	460.9	158.0	228.8	81.9	60.7	17.4	2 342.3
1994–95	819.2	472.9	437.7	149.0	222.8	83.3	58.4	20.8	2 264.0
1995–96	793.4	475.2	462.4	169.8	252.5	89.8	79.7	25.5	2 348.2
1996–97	790.7	429.0	508.1	171.3	260.6	99.6	77.6	27.8	2 364.7
1997–98	856.5	349.8	493.2	221.8	256.1	91.8	78.4	28.6	2 376.2
1998–99	809.4	411.3	502.7	236.9	270.1	97.8	77.9	45.2	2 454.0
1999–00	768.0	369.0	511.3	180.9	237.6	102.8	79.8	63.5	2 316.6
2000–01	639.8	296.3	501.0	108.1	205.9	75.9	57.9	23.4	1 911.1
2001–02	720.1	532.8	500.3	145.6	264.4	68.9	56.1	43.5	2 335.2
2002–03	704.0	433.0	460.8	121.5	225.9	67.4	52.1	24.8	2 093.8
2003–04	803.1	334.0	478.7	138.5	225.6	58.3	48.6	24.5	2 114.9
2004–05	854.1	447.2	446.3	147.6	245.8	70.6	55.0	25.1	2 295.9
2005–06	1 818.2	542.7	842.5	261.1	614.1	138.5	89.4	32.0	4 346.4
2006–07	936.0	534.4	673.6	175.3	301.4	68.2	45.9	29.3	2 771.9

Source: (BITRE 2009), *Public road related expenditure and revenue in Australia* and unpublished estimates.

Table 3.2b Total road expenditure by state/territory, by level of government, 2006–07 prices—state/territory

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT*	*Total*
					($ millions)				
1985–86	1 120.7	685.7	621.3	157.3	247.5	176.0	36.6	na	3 045.2
1986–87	925.3	640.3	579.5	152.1	273.0	147.9	85.9	na	2 804.1
1987–88	1 022.0	654.3	464.5	176.6	258.1	101.4	72.0	na	2 749.0
1988–89	1 151.5	734.8	543.8	217.1	285.0	124.6	154.5	na	3 211.3
1989–90	1 597.0	626.9	396.7	226.2	315.5	119.7	99.9	177.5	3 559.4
1990–91	2 193.7	458.4	605.9	208.7	275.5	76.6	65.4	127.4	4 011.5
1991–92	1 888.4	410.0	520.9	189.9	302.7	73.9	47.3	160.9	3 594.0
1992–93	1 435.0	367.3	601.3	188.6	351.4	82.2	67.6	95.0	3 188.4
1993–94	1 531.8	475.6	790.5	178.0	372.8	98.9	128.2	106.3	3 682.1
1994–95	1 500.4	708.8	823.1	221.7	376.4	86.3	78.5	36.1	3 831.3
1995–96	1 628.6	616.3	992.6	286.2	779.0	91.0	71.5	27.4	4 492.6
1996–97	1 650.3	642.1	1100.3	206.2	456.0	88.3	72.0	17.7	4 232.9
1997–98	1 716.3	700.0	1350.8	311.0	629.3	101.0	77.3	22.1	4 907.7
1998–99	1 458.3	715.7	1238.7	134.1	568.3	51.8	49.9	-25.0	4 191.8
1999–00	1 543.6	902.5	701.9	181.6	577.2	46.6	11.7	-37.2	3 927.9
2000–01	1 687.9	765.7	1251.1	289.2	687.8	60.3	50.4	51.3	4 843.7
2001–02	1 937.6	375.3	814.8	260.7	742.5	91.2	48.1	47.6	4 317.7
2002–03	1 574.8	930.8	801.1	234.1	659.2	105.0	45.7	56.7	4 407.5
2003–04	1 557.7	521.5	1122.8	225.8	653.6	70.6	47.8	47.7	4 247.5
2004–05	1 398.6	722.2	1076.5	169.5	663.5	112.4	40.1	39.4	4 222.1
2005–06	654.5	483.6	803.5	204.2	318.1	23.9	149.8	45.7	2 683.4
2006–07	1 991.7	1 071.1	1710.3	192.7	826.0	77.8	181.9	60.7	6 112.1

na: not applicable.

Source: (BITRE 2009), *Public road related expenditure and revenue in Australia* and unpublished estimates.

Table 3.2c Total road expenditure by state/territory, by level of government, 2006–07 prices—local

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT*	*Total*
					($ millions)				
1985–86	978.1	573.1	504.6	176.8	175.4	65.5	8.0	na	2 481.5
1986–87	1 047.0	590.6	495.6	181.5	179.1	69.9	6.3	na	2 570.0
1987–88	1 056.8	574.4	594.1	169.8	155.5	66.7	8.8	na	2 626.0
1988–89	953.9	595.1	538.3	169.7	170.4	68.5	6.6	na	2 502.5
1989–90	1 004.9	662.4	605.7	185.6	201.4	77.7	7.6	na	2 745.3
1990–91	757.2	594.2	635.3	171.1	197.6	69.0	9.0	na	2 433.5
1991–92	799.0	605.7	602.0	172.5	195.3	56.3	11.3	na	2 442.1
1992–93	771.3	782.6	570.3	189.7	225.6	66.4	14.9	na	2 620.8
1993–94	810.2	666.5	565.7	185.5	209.4	61.9	15.7	na	2 515.0
1994–95	807.8	624.4	581.7	184.2	246.2	67.8	9.1	na	2 521.2
1995–96	821.9	657.6	579.8	189.3	160.4	72.4	15.7	na	2 497.0
1996–97	931.9	550.5	770.5	192.4	154.1	76.2	12.8	na	2 688.4
1997–98	955.0	663.6	806.8	202.4	192.0	66.8	18.0	na	2 904.5
1998–99	1 375.5	667.5	1 136.0	237.3	469.2	109.3	- 7.0	na	3 987.8
1999–00	1 279.9	681.8	1 264.4	244.9	661.2	105.1	5.4	na	4 242.8
2000–01	1 087.0	491.3	1 118.5	237.1	636.0	70.2	9.7	na	3 649.8
2001–02	1 038.1	610.4	1 098.0	240.1	597.5	80.3	2.2	na	3 666.6
2002–03	1 212.6	766.6	1 289.3	233.6	595.2	55.2	- 5.2	na	4 147.2
2003–04	985.9	724.2	1 360.4	219.6	530.5	25.8	- 1.0	na	3 845.5
2004–05	942.3	614.0	918.3	197.6	580.7	22.4	- 3.3	na	3 271.9
2005–06	712.1	522.5	934.4	160.4	203.4	11.5	- 14.3	na	2 529.9
2006–07	915.0	593.5	966.1	219.8	422.4	32.1	10.1	na	3 159.0

na: not applicable.

Source: (BITRE 2009), *Public road related expenditure and revenue in Australia* and unpublished estimates.

Table 3.2d Total road expenditure by state/territory, by level of government, 2006–07 prices—all levels of government

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT*	*Total*
					($ millions)				
1985–86	2 899.6	1 770.0	1 640.8	572.3	773.9	345.9	135.9	93.7	8 232.0
1986–87	2 843.0	1 715.4	1 582.1	549.1	765.6	313.7	172.2	97.2	8 038.2
1987–88	2 846.0	1 696.7	1 534.9	520.6	702.2	255.8	153.8	0.0	7 710.1
1988–89	2 797.8	1 765.6	1 517.0	546.0	739.1	277.8	230.4	0.0	7 873.6
1989–90	3 352.6	1 764.0	1 461.3	570.3	789.5	281.8	176.7	198.2	8 594.4
1990–91	3 796.1	1 573.0	1 734.4	552.3	746.2	233.5	165.0	147.9	8 948.4
1991–92	3 611.8	1 576.6	1 646.3	541.9	784.8	226.2	139.8	185.0	8 712.5
1992–93	3 300.6	1 844.3	1 877.7	610.1	916.1	269.8	190.2	124.0	9 133.0
1993–94	3 183.6	1 635.1	1 817.2	521.5	811.0	242.7	204.7	123.7	8 539.4
1994–95	3 127.4	1 806.1	1 842.5	554.8	845.4	237.3	146.0	56.9	8 616.5
1995–96	3 244.0	1 749.0	2 034.8	645.3	1 191.8	253.2	166.9	52.9	9 337.8
1996–97	3 372.9	1 621.7	2 378.9	569.8	870.7	264.0	162.4	45.5	9 285.9
1997–98	3 527.7	1 713.4	2 650.8	735.2	1 077.4	259.6	173.7	50.7	10 188.5
1998–99	3 643.1	1 794.6	2 877.4	608.3	1 307.6	258.8	120.8	20.1	10 633.5
1999–00	3 591.5	1 953.3	2 477.6	607.3	1 476.1	254.5	96.8	26.3	10 487.3
2000–01	3 414.7	1 553.3	2 870.6	634.4	1 529.7	206.4	118.0	74.7	10 404.6
2001–02	3 695.8	1 518.5	2 413.1	646.4	1 604.4	240.5	106.4	91.1	10 319.6
2002–03	3 491.4	2 130.5	2 551.1	589.2	1 480.3	227.6	92.5	81.6	10 648.5
2003–04	3 346.7	1 579.7	2 962.0	584.0	1 409.7	154.7	95.4	72.1	10 207.9
2004–05	3 195.0	1 783.3	2 441.1	514.7	1 490.0	205.4	91.8	64.5	9 789.8
2005–06	3 184.8	1 548.9	2 580.4	625.7	1 135.5	173.8	224.9	77.7	9 559.7
2006–07	3 842.7	2 199.0	3 350.0	587.8	1 549.8	178.0	238.0	90.0	12 042.9

Source: (BITRE 2009), *Public road related expenditure and revenue in Australia*.

Table 3.3 Total road length by state/territory

	NSW [1]	VIC [2]	QLD [3]	SA	WA [4]	TAS [5]	NT [6]	ACT	Total
					(kilometres)				
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	151 400		96 969	151 261				
2006	183 120	149 000		97 090	151 603	24 931			
2007	184 094	149 012	182 281	96 975	152 262	25 240	22 187	3 023	815 074

Data are not readily available for missing years.

1, 2, 3, 4, 5, 6. See End Notes.

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

Table 3.4 Total road length by road type

	Bitumen or concrete	*Gravel, crushed stone or other improved surface*	*Formed only*	*Cleared only*	*Total*	*Percentage of total surface with bitumen or concrete*
			(kilometres)			*(per cent)*
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						
2007	337 979	293 691	136 876	46 528	815 074	41.47

Data are not readily available for missing years.
Source: BITRE survey and ABS (2005), *Year Book Australia* (ABS cat. no. 1301.0).

Table 3.5 Selected road construction and maintenance price and cost indexes, for Australia and for states and territories

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*Australia (BITRE)*	*Australia (ABS)*
				(index)			
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	150.5	139.9
2007–08	143.1	144.6	156.7	145.2	151.1		147.5

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 (2008h), *Producer Price Indexes, Australia* (ABS cat. no. 6427.0) and BITRE (2009), *Public road related expenditure and revenue in Australia*.

Chapter 4

Domestic freight transport

Chapter 4 figures and tables

Figures

Tables

Chapter 4 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 9 Shipping (Table 9.4), while international air freight statistics are included in Chapter 8 Aviation (Table 8.2).

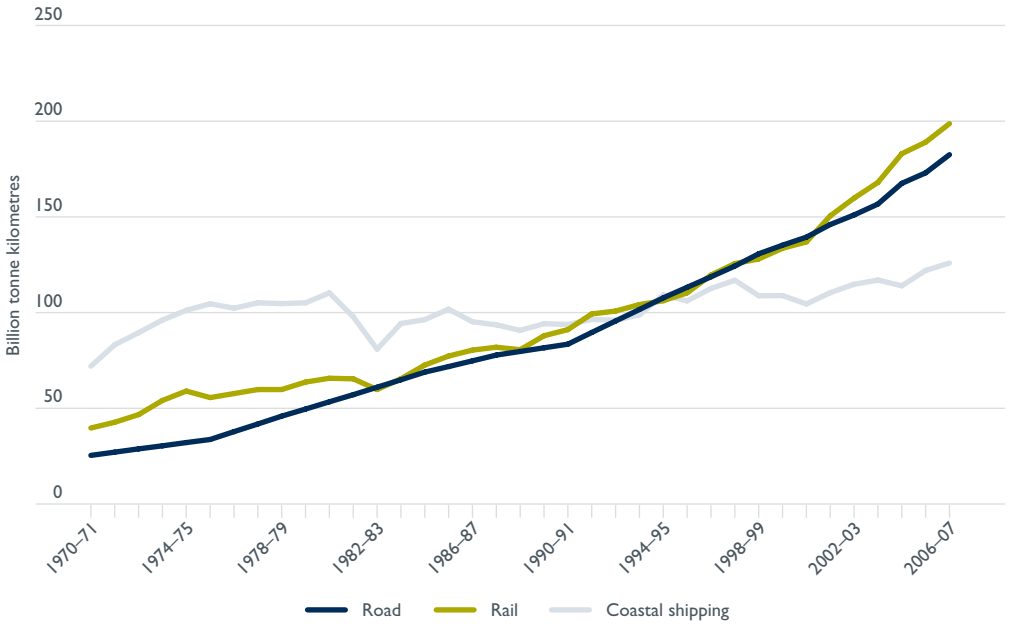
Recent events

- July 2007: an initial network for B-triples (a prime mover towing three semi-trailers), based on existing road train routes, became operational.
- July 2008: new national heavy vehicle charging determination introduced. Increases in registration charges for larger heavy vehicles to be phased in over a 3 year period.
- September 2008: new fatigue laws for heavy vehicle drivers commenced in New South Wales, Victoria, Queensland and South Australia. The Northern Territory, Tasmania and the Australian Capital Territory will implement these laws at a later date, while the Western Australian Government will continue to regulate fatigue under its own Occupational Health and Safety laws.
- October 2008: construction commenced on the Southern Sydney Freight Line between Macarthur and Sefton.

Future plans

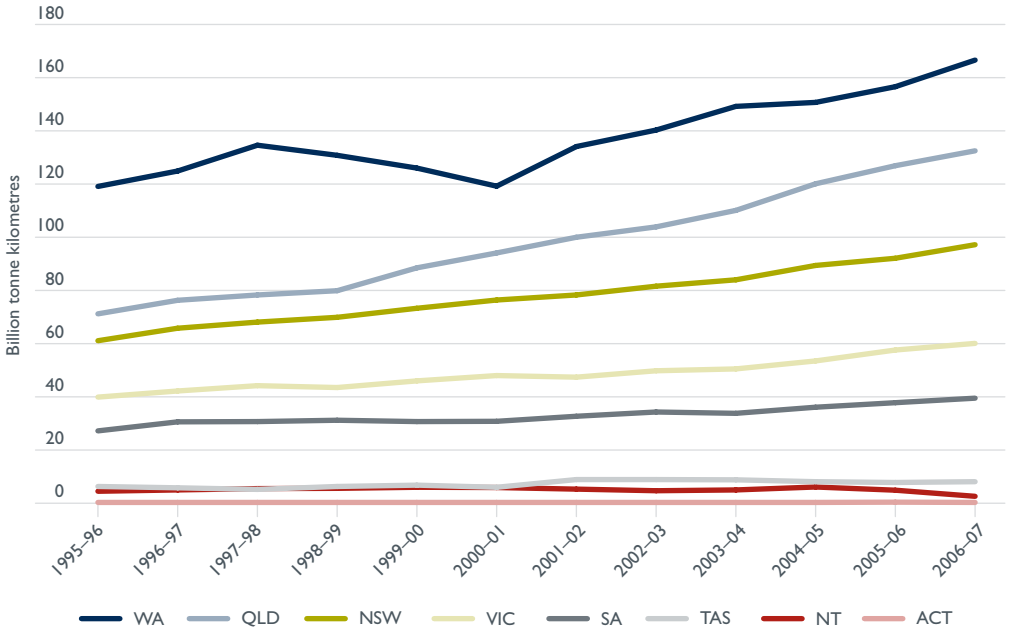
- Early 2009: the National Transport Commission (NTC) to complete a review of heavy vehicle Performance Based Standards (PBS).
- 2009: major construction to commence on the Enfield Intermodal Logistics Centre in Sydney incorporating a freight rail link to Port Botany. The terminal is expected to be operating at full capacity by 2016.

Figure 4.1 Total domestic freight task, by mode



Source: ARA (2008), *Australian Rail Industry Report*, BTRE (2006b), *Freight measurement and modelling in Australia* (Report 112), BITRE estimates and BITRE (2008i), Domestic sea freight database.

Figure 4.2 Total domestic freight task, by state/territory



Source: ARA (2008), *Australian Rail Industry Report*, BTRE (2006b), *Freight measurement and modelling in Australia* (Report 112), BITRE estimates and BITRE (2008i), Domestic sea freight database

Table 4.1a Total, bulk and non-bulk domestic freight, by transport mode—bulk

Financial year	*Goods moved (billion tonne kilometres)*				*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	11.3	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	21.6	62.0			305.3			
1986–87	22.5	64.3			301.3			
1987–88	23.4	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	28.7	79.0			338.7			
1993–94	30.5	81.6			353.0			
1994–95	32.3	84.5			367.4			
1995–96	34.0	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	37.3	100.1	112.1	249.3	403.9		47.6	
1998–99	39.2	101.6	104.4	246.1	439.5		43.3	
1999–00	40.6	106.2	102.6	250.6	440.7		45.1	
2000–01	41.8	109.0	97.1	248.8	444.6		45.3	
2001–02	43.8	120.9	102.8	268.1	499.2		46.1	
2002–03	45.3	130.1	106.3	282.4	465.9		45.7	
2003–04	47.0		108.2		508.8		45.5	
2004–05	50.2		106.7		526.8		45.9	
2005–06	51.9		115.3		553.2		48.6	
2006–07	54.7		117.9		643.8		49.3	

Data are not readily available for missing years.

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

Source: ARA (2008), *Australian Rail Industry Report*, BTRE (2006b), *Freight Measurement and Modelling in Australia* (Report 112), BITRE estimates and BITRE (2008i), Domestic sea freight database.

Table 4.1b Total, bulk and non-bulk domestic freight, by transport mode—non-bulk

Financial year	*Goods moved (billion tonne kilometres)*				*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	20.1	14.0						
1973–74	21.3	13.9						
1974–75	22.4	13.7						
1975–76	23.6	14.2						
1976–77	26.4	14.0						
1977–78	29.3	14.6						
1978–79	32.1	15.9						
1979–80	34.7	15.8						
1980–81	37.4	15.1						
1981–82	40.0	14.1						
1982–83	42.7	12.0						
1983–84	45.5	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	62.7	19.7			756.9			
1992–93	66.9	21.8			790.3			
1993–94	71.1	22.7			823.7			
1994–95	75.4	21.7			857.2			
1995–96	79.2	20.9	3.7	104.0	885.6		4.3	
1996–97	83.1	22.3	3.6	108.9	914.0		4.4	
1997–98	87.0	25.5	4.8	116.8	942.4		4.9	
1998–99	91.5	26.3	4.4	124.2	1 025.5		5.1	
1999–00	94.6	27.4	6.3	131.4	1 028.3		6.2	
2000–01	97.6	28.0	7.4	135.1	1 037.4		6.7	
2001–02	102.2	29.6	7.6	140.9	1 164.8		6.3	
2002–03	105.7	31.0	8.5	146.8	1 087.1		7.1	
2003–04	109.7		8.7		1 187.2		7.7	
2004–05	117.2		7.4		1 229.2		7.7	
2005–06	121.1		6.7		1 290.8		6.7	
2006–07	127.7		8.0		1 502.2		7.1	

Data are not readily available for missing years.

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

Source: ARA (2008), *Australian Rail Industry Report*, BTRE (2006b), *Freight Measurement and Modelling in Australia* (Report 112), BITRE estimates and BITRE (2008i), Domestic sea freight database.

Table 4.1c Total, bulk and non-bulk domestic freight, by transport mode—total bulk and non-bulk

Financial year	Goods moved (billion tonne kilometres)				Goods moved (million tonnes)			
	Road	Rail	Coastal shipping	Total freight task	Road	Rail	Coastal shipping	Total freight weight
1970–71	25.4	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	30.4	54.1	96.1	180.6			46.3	
1974–75	32.1	59.0	101.2	192.3			46.4	
1975–76	33.7	55.6	104.6	194.0			47.5	
1976–77	37.8	57.7	102.3	197.8			47.2	
1977–78	41.8	59.8	105.1	206.8			48.0	
1978–79	45.9	59.8	104.7	210.4			47.4	
1979–80	49.6	63.7	105.1	218.4			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	201.8			38.3	
1983–84	64.9	65.4	94.3	224.7			42.7	
1984–85	68.9	72.6	96.3	237.8	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	263.7	1 019.5		44.5	
1990–91	83.5	91.1	93.8	268.4	1 033.6		44.2	
1991–92	89.6	99.3	96.4	285.3	1 081.3		43.6	
1992–93	95.6	100.8	96.0	292.4	1 129.1		44.2	
1993–94	101.6	104.2	98.8	304.6	1 176.8		45.3	
1994–95	107.7	106.2	109.2	323.1	1 224.5		49.2	
1995–96	113.2	110.3	106.1	329.5	1 265.1		47.8	
1996–97	118.7	119.6	112.6	351.0	1 305.7		49.1	
1997–98	124.3	125.6	116.9	366.8	1 346.3		52.5	
1998–99	130.7	128.0	108.8	367.4	1 465.0		48.4	
1999–00	135.2	133.6	108.9	377.6	1 469.0		51.3	
2000–01	139.4	136.9	104.5	380.8	1 482.0		52.0	
2001–02	146.0	150.5	110.4	406.9	1 664.0		52.4	
2002–03	151.0	159.8	114.8	425.6	1 553.0	575.7	52.8	2 181.5
2003–04	156.7	168.0	117.0	441.6	1 696.0	590.9	53.2	2 340.1
2004–05	167.5	183.0	114.0	464.5	1 756.0	634.3	53.7	2 443.9
2005–06	173.0	189.0	122.0	484.1	1 844.0	641.2	55.2	2 540.5
2006–07	182.5	198.7	125.9	507.0	2 146.0	665.6	56.4	2 868.0

Data are not readily available for missing years.

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

Source: ARA (2008), *Australian Rail Industry Report*, BTRE (2006b), *Freight Measurement and Modelling in Australia* (Report 112), BITRE estimates and BITRE (2008i), Domestic sea freight database.

Table 4.2a Total domestic freight by state/territory, by transport mode—road

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT*	*Total*
				(billion tonne kilometres)					
1971–72	10.5	6.5	2.8	2.7	3.1	0.6	0.7	0.1	27.1
1972–73	11.3	6.9	2.9	2.9	3.2	0.7	0.8	0.1	28.8
1973–74	12.0	7.3	3.1	3.1	3.3	0.7	0.8	0.1	30.4
1974–75	12.6	7.7	3.2	3.3	3.4	0.7	0.9	0.1	32.1
1975–76	13.5	8.2	3.4	3.4	3.4	0.7	1.0	0.1	33.7
1976–77	15.0	9.0	4.1	3.8	3.8	0.8	1.1	0.2	37.8
1977–78	16.4	9.7	4.9	4.2	4.3	1.0	1.2	0.2	41.8
1978–79	18.0	10.4	5.8	4.5	4.7	1.0	1.3	0.2	45.9
1979–80	19.5	11.2	6.3	4.8	5.1	1.1	1.4	0.2	49.6
1980–81	20.8	12.0	7.0	5.2	5.5	1.2	1.6	0.2	53.4
1981–82	22.1	12.8	7.6	5.5	5.9	1.3	1.7	0.2	57.1
1982–83	22.9	13.6	8.5	5.9	6.6	1.5	1.9	0.2	61.0
1983–84	24.5	14.4	9.1	6.3	6.9	1.5	2.0	0.2	64.9
1984–85	25.5	15.2	9.9	6.8	7.5	1.6	2.1	0.2	68.9
1985–86	26.4	15.9	10.5	6.9	8.1	1.7	2.2	0.3	71.8
1986–87	26.8	16.6	11.3	7.0	8.8	1.8	2.2	0.3	74.8
1987–88	27.6	17.3	11.8	7.1	9.5	1.9	2.3	0.3	77.8
1988–89	28.3	17.9	12.2	7.3	9.7	1.8	2.3	0.3	79.7
1989–90	28.6	18.5	12.6	7.4	9.9	1.8	2.4	0.3	81.6
1990–91	28.8	19.2	13.3	7.5	10.2	1.8	2.5	0.3	83.5
1991–92	30.4	20.6	14.6	8.0	11.1	2.0	2.7	0.3	89.6
1992–93	32.3	22.0	15.6	8.7	12.0	2.0	2.8	0.3	95.6
1993–94	34.2	23.6	16.7	9.2	12.7	2.1	2.9	0.3	101.6
1994–95	36.1	25.0	17.8	9.8	13.5	2.2	2.9	0.3	107.7
1995–96	38.3	26.5	18.7	10.3	14.0	2.2	2.9	0.3	113.2
1996–97	40.4	27.9	19.8	10.7	14.6	2.2	2.8	0.3	118.7
1997–98	42.5	29.4	20.8	11.2	15.2	2.3	2.7	0.3	124.3
1998–99	45.5	31.0	21.9	11.5	15.5	2.3	2.7	0.3	130.7
1999–00	47.0	32.4	22.6	11.6	16.3	2.3	2.8	0.3	135.2
2000–01	48.0	33.7	24.0	11.7	16.7	2.3	2.8	0.3	139.4
2001–02	49.9	35.3	25.7	12.2	17.4	2.4	2.9	0.3	146.0
2002–03	51.7	36.5	26.7	12.7	18.3	2.4	2.5	0.3	151.0
2003–04	53.3	37.9	28.0	13.3	19.0	2.4	2.5	0.3	156.7
2004–05	56.1	40.3	30.3	14.3	21.1	2.6	2.6	0.3	167.5
2005–06	57.8	41.8	31.3	15.1	21.8	2.4	2.5	0.4	173.0
2006–07	60.6	43.8	33.3	15.8	23.3	2.7	2.6	0.3	182.5

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

Table 4.2b Total domestic freight by state/territory, by transport mode—rail

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
				(billion tonne kilometres)					
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	29.0	6.9	54.4	13.8	84.0	1.0	na	na	189.0
2006–07	30.5	7.2	57.2	14.5	88.2	1.0	na	na	198.7

na: not applicable.

Source: ARA (2008), *Australian Rail Industry Report*, BTRE (2006b), *Freight Measurement and Modelling in Australia* (Report 112) and BITRE estimates.

Table 4.2c Total domestic freight by state/territory, by transport mode—shipping

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
				(billion tonne kilometres)					
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
2006–07	6.2	9.1	42.0	9.3	55.1	4.3	0.0	na	125.9

na: not applicable.
Source: BITRE (2008i), Domestic sea freight database.

Table 4.2d Total domestic freight by state/territory, by transport mode—total

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
				(billion tonne kilometres)					
1995–96	61.1	39.9	71.2	27.2	119.1	6.3	4.5	0.3	329.5
1996–97	65.8	42.2	76.3	30.6	124.9	5.8	5.0	0.3	351.0
1997–98	68.1	44.2	78.3	30.7	134.6	5.2	5.5	0.3	366.8
1998–99	69.9	43.5	79.9	31.2	130.8	6.3	5.6	0.3	367.4
1999–00	73.3	46.0	88.5	30.7	126.0	6.8	6.0	0.3	377.6
2000–01	76.4	48.0	94.1	30.8	119.2	6.0	5.9	0.3	380.8
2001–02	78.3	47.4	100.0	32.7	134.1	8.9	5.3	0.3	406.9
2002–03	81.6	49.8	103.9	34.3	140.3	8.9	4.7	0.3	424.0
2003–04	84.0	50.5	110.1	33.8	149.2	8.8	5.0	0.3	441.7
2004–05	89.4	53.5	120.1	36.1	150.7	8.1	6.1	0.3	464.5
2005–06	92.1	57.6	126.9	37.8	156.6	7.8	4.9	0.4	484.1
2006–07	97.2	60.1	132.5	39.5	166.6	8.1	2.6	0.3	507.0

Source: ARA (2008), *Australian Rail Industry Report*, BTRE (2006b), *Freight Measurement and Modelling in Australia* (Report 112), BITRE estimates and BITRE (2008i), Domestic sea freight database.

Table 4.3a Intrastate freight by state/territory, by transport mode—road

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
				(billion tonne kilometres)					
1970–71	7.8	5.1	2.4	2.2	2.9	0.6	0.5	0.1	21.8
1971–72	7.9	5.3	2.4	2.3	2.9	0.7	0.5	0.1	22.1
1972–73	8.1	5.4	2.5	2.3	2.9	0.7	0.6	0.1	22.5
1973–74	8.4	5.7	2.6	2.5	3.0	0.7	0.6	0.1	23.7
1974–75	8.7	5.9	2.7	2.6	3.0	0.7	0.7	0.1	24.4
1975–76	10.0	6.6	3.4	2.9	3.4	0.8	0.8	0.1	28.0
1976–77	11.4	7.3	4.2	3.2	3.9	1.0	0.9	0.2	31.9
1977–78	12.5	7.7	4.9	3.4	4.2	1.0	0.9	0.2	35.0
1978–79	13.2	8.2	5.4	3.6	4.5	1.1	1.0	0.2	37.2
1979–80	14.0	8.7	5.9	3.8	4.9	1.2	1.2	0.2	39.9
1980–81	14.9	9.3	6.5	4.0	5.2	1.3	1.3	0.2	42.7
1981–82	16.5	10.4	7.5	4.6	6.0	1.5	1.5	0.2	48.2
1982–83	16.5	10.6	7.9	4.6	6.1	1.5	1.5	0.2	48.8
1983–84	17.3	11.2	8.6	4.9	6.6	1.6	1.6	0.2	52.2
1984–85	17.1	11.5	9.1	4.8	7.0	1.7	1.6	0.2	53.1
1985–86	17.5	12.1	9.9	4.8	7.7	1.8	1.7	0.2	55.8
1986–87	17.2	12.4	10.2	4.6	8.1	1.9	1.7	0.3	56.2
1987–88	16.7	12.5	10.4	4.4	8.0	1.8	1.7	0.3	55.7
1988–89	16.5	12.8	10.8	4.3	8.0	1.8	1.8	0.3	56.3
1989–90	16.7	13.3	11.4	4.3	8.3	1.8	1.9	0.3	58.0
1990–91	18.1	14.7	12.7	4.7	9.1	2.0	2.0	0.3	63.6
1991–92	18.9	15.6	13.5	4.9	9.6	2.0	2.1	0.3	66.9
1992–93	20.1	16.8	14.6	5.2	10.2	2.1	2.1	0.3	71.2
1993–94	21.0	17.8	15.5	5.4	10.7	2.2	2.1	0.3	75.1
1994–95	21.7	18.6	16.1	5.6	11.1	2.2	2.0	0.3	77.6
1995–96	22.4	19.5	16.9	5.9	11.6	2.2	1.9	0.2	80.7
1996–97	23.2	20.3	17.7	6.1	12.1	2.3	1.8	0.2	83.7
1997–98	24.5	21.2	18.6	6.3	12.6	2.3	1.7	0.2	87.5
1998–99	24.5	21.9	19.1	6.3	13.5	2.3	1.7	0.3	89.4
1999–00	24.8	22.8	20.3	6.4	14.0	2.3	1.7	0.2	92.5
2000–01	25.3	23.7	21.8	6.7	14.8	2.4	1.7	0.3	96.7
2001–02	25.5	24.2	22.6	7.1	15.6	2.4	1.4	0.3	99.1
2002–03	25.6	24.8	23.6	7.4	16.2	2.4	1.4	0.3	101.7
2003–04	26.9	26.5	25.7	8.0	18.1	2.6	1.4	0.3	109.5
2004–05	27.0	27.3	26.5	8.4	18.6	2.4	1.3	0.3	111.9
2006–07	27.6	28.5	28.1	8.8	20.0	2.7	1.4	0.3	117.5

Source: BTRE (2006b), *Freight measurement and modelling in Australia* (Report 112) and BITRE estimates.

Table 4.3b Intrastate freight by state/territory, by transport mode—shipping

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT*	*Total*
				(billion tonne kilometres)					
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
2006–07	0.0	0.1	32.2	0.1	5.4	0.1	0.0	na	38.0

na: not applicable.
Source: BITRE (2008i), Domestic sea freight data base.

Table 4.4a Interstate freight by state/territory, by transport mode—road

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT*	*Total*
				(billion tonne kilometres)					
1970–71	2.7	1.4	0.4	0.5	0.2	0.0	0.2	0.0	5.3
1971–72	3.3	1.7	0.5	0.7	0.3	0.0	0.2	0.0	6.6
1972–73	4.0	1.9	0.6	0.8	0.3	0.0	0.3	0.0	7.9
1973–74	4.2	2.1	0.6	0.9	0.4	0.0	0.3	0.0	8.4
1974–75	4.8	2.3	0.7	0.9	0.3	0.0	0.3	0.0	9.3
1975–76	5.0	2.4	0.8	0.9	0.4	0.0	0.3	0.0	9.8
1976–77	5.0	2.5	0.8	1.0	0.4	0.0	0.3	0.0	9.9
1977–78	5.6	2.7	0.8	1.1	0.4	0.0	0.3	0.0	10.9
1978–79	6.3	3.0	1.0	1.2	0.5	0.0	0.4	0.0	12.5
1979–80	6.8	3.2	1.0	1.4	0.6	0.0	0.4	0.0	13.5
1980–81	7.3	3.5	1.1	1.5	0.7	0.0	0.4	0.0	14.4
1981–82	6.4	3.2	1.0	1.3	0.6	0.0	0.4	0.0	12.8
1982–83	8.0	3.8	1.2	1.7	0.9	0.0	0.5	0.0	16.1
1983–84	8.2	4.0	1.3	1.8	0.9	0.0	0.5	0.0	16.6
1984–85	9.2	4.4	1.4	2.1	1.1	0.0	0.5	0.0	18.8
1985–86	9.3	4.5	1.4	2.1	1.1	0.0	0.5	0.0	19.0
1986–87	10.5	5.0	1.6	2.5	1.4	0.0	0.6	0.0	21.6
1987–88	11.6	5.5	1.8	2.9	1.7	0.0	0.6	0.0	24.0
1988–89	12.1	5.7	1.9	3.1	1.9	0.0	0.6	0.0	25.3
1989–90	12.2	5.8	1.9	3.2	1.9	0.0	0.7	0.0	25.5
1990–91	12.2	5.9	1.9	3.3	2.0	0.0	0.7	0.0	25.9
1991–92	13.3	6.4	2.0	3.8	2.4	0.0	0.7	0.0	28.7
1992–93	14.2	6.8	2.2	4.0	2.5	0.0	0.7	0.0	30.4
1993–94	15.1	7.2	2.3	4.4	2.8	0.0	0.8	0.0	32.6
1994–95	16.7	7.9	2.6	4.7	2.9	0.0	0.8	0.0	35.6
1995–96	18.0	8.5	2.8	4.9	3.0	0.0	0.9	0.0	38.0
1996–97	19.3	9.1	3.0	5.1	3.0	0.0	1.0	0.0	40.6
1997–98	20.9	9.8	3.3	5.2	2.9	0.0	1.0	0.0	43.2
1998–99	22.5	10.5	3.6	5.3	2.8	0.0	1.1	0.0	45.8
1999–00	23.2	10.9	3.7	5.3	2.6	0.0	1.1	0.0	46.9
2000–01	24.6	11.6	3.9	5.5	2.6	0.0	1.2	0.0	49.4
2001–02	26.2	12.3	4.1	5.6	2.6	0.0	1.1	0.0	52.0
2002–03	27.8	13.0	4.3	5.9	2.8	0.0	1.1	0.0	55.0
2003–04	29.2	13.7	4.6	6.3	3.0	0.0	1.2	0.0	58.0
2004–05	30.7	14.5	4.8	6.6	3.2	0.0	1.2	0.0	61.1
2006–07	33.0	15.3	5.2	6.9	3.3	0.0	1.2	0.0	64.9

Source: BTRE (2006b), *Freight measurement and modelling in Australia* (Report 112) and BITRE estimates

Table 4.4b Interstate freight by state/territory, by transport mode—shipping

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT*	*Total*
				(billion tonne kilometres)					
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
2006–07	6.2	8.9	9.7	9.2	49.6	4.2	0.0	na	87.9

na: not applicable.
Source: BITRE (2008i), Domestic sea freight data base.

Table 4.5 Urban road freight by capital city

Financial year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Total
				(billion tonne kilometres)					
1970–71	3.00	2.10	0.69	0.71	0.84	0.13	0.05	0.11	7.63
1971–72	3.16	2.23	0.75	0.75	0.90	0.14	0.05	0.11	8.09
1972–73	3.31	2.36	0.82	0.79	0.95	0.15	0.06	0.12	8.56
1973–74	3.46	2.49	0.89	0.83	1.00	0.16	0.06	0.13	9.02
1974–75	3.61	2.61	0.96	0.87	1.06	0.18	0.06	0.13	9.48
1975–76	3.86	2.84	1.13	0.94	1.15	0.19	0.06	0.15	10.32
1976–77	4.11	3.07	1.30	1.01	1.25	0.21	0.06	0.16	11.16
1977–78	4.34	3.29	1.50	1.07	1.34	0.23	0.06	0.17	12.00
1978–79	4.56	3.49	1.67	1.05	1.42	0.24	0.09	0.18	12.70
1979–80	4.76	3.69	1.86	1.03	1.50	0.24	0.13	0.19	13.40
1980–81	4.96	3.89	2.05	1.00	1.58	0.25	0.17	0.20	14.10
1981–82	5.13	4.06	2.14	1.04	1.63	0.27	0.18	0.20	14.66
1982–83	5.29	4.24	2.24	1.08	1.67	0.30	0.19	0.21	15.23
1983–84	5.46	4.41	2.33	1.12	1.72	0.32	0.21	0.22	15.79
1984–85	5.74	4.72	2.47	1.19	1.82	0.33	0.21	0.23	16.72
1985–86	6.02	5.04	2.61	1.26	1.93	0.34	0.21	0.24	17.65
1986–87	6.29	5.36	2.75	1.33	2.04	0.35	0.21	0.26	18.58
1987–88	6.45	5.58	2.84	1.36	2.12	0.35	0.22	0.26	19.18
1988–89	6.61	5.80	2.92	1.40	2.20	0.35	0.23	0.27	19.78
1989–90	6.76	6.02	3.00	1.43	2.29	0.35	0.24	0.28	20.38
1990–91	7.06	6.36	3.17	1.50	2.41	0.35	0.24	0.27	21.36
1991–92	7.36	6.71	3.33	1.57	2.52	0.34	0.24	0.27	22.34
1992–93	7.65	7.06	3.50	1.63	2.64	0.34	0.23	0.26	23.32
1993–94	7.95	7.41	3.67	1.70	2.76	0.33	0.23	0.25	24.30
1994–95	8.21	7.69	3.87	1.76	2.87	0.31	0.23	0.25	25.19
1995–96	8.47	7.98	4.07	1.83	2.97	0.29	0.24	0.24	26.08
1996–97	8.72	8.26	4.27	1.89	3.07	0.27	0.24	0.24	26.97
1997–98	8.95	8.62	4.64	1.93	3.17	0.27	0.23	0.24	28.05
1998–99	9.13	8.98	4.92	1.96	3.32	0.28	0.22	0.25	29.05
1999–00	9.49	9.32	5.27	2.01	3.47	0.29	0.21	0.23	30.30
2000–01	9.69	9.72	5.68	2.07	3.62	0.30	0.19	0.24	31.51
2001–02	10.15	10.12	6.05	2.18	3.81	0.31	0.18	0.26	33.07
2002–03	10.33	10.30	6.26	2.23	4.08	0.34	0.19	0.27	33.98
2003–04	10.61	10.52	6.52	2.29	4.22	0.35	0.21	0.28	34.99
2004–05	10.72	10.90	6.79	2.36	4.59	0.36	0.24	0.30	36.26
2006–07	10.89	11.43	7.64	2.45	5.17	0.37	0.26	0.30	38.51

Source: BTRE (2006b), *Freight measurement and modelling in Australia* (Report 112) and BITRE estimates.

Chapter 5

Passenger transport

Chapter 5 figures and tables

Figures

Tables

Chapter 5 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 8 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, other than travel to work estimates, robust datasets for these forms of passenger travel do not yet exist.

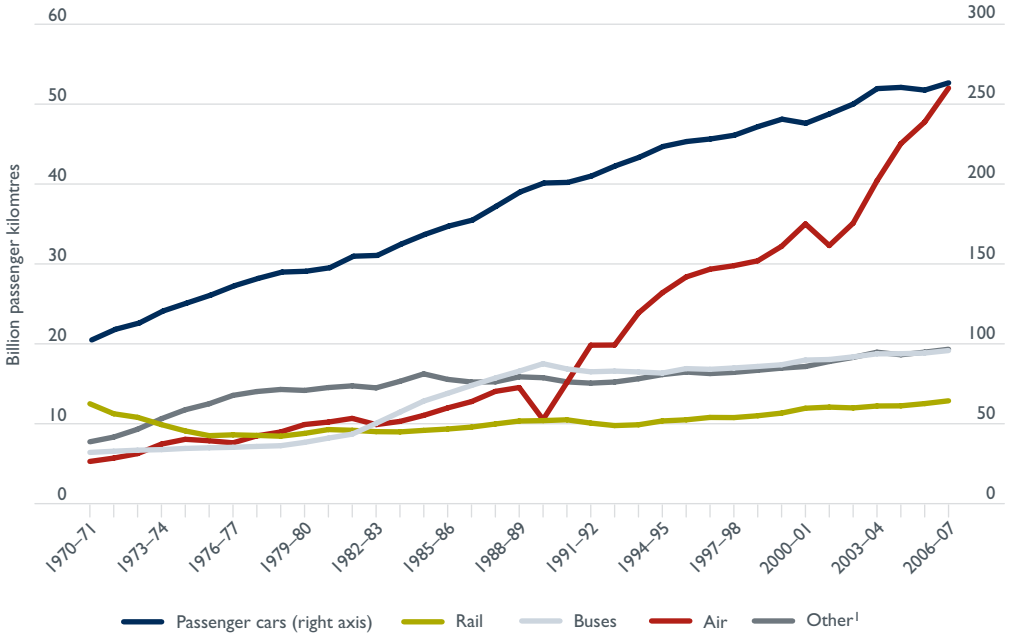
Recent events

- October 2007: Glenelg tramline from Victoria Square to the vicinity of the Adelaide Railway Station began operating.
- December 2007: Southern Suburbs Railway linking Perth with Mandurah opens.
- February 2008: Go Card—Brisbane public transport smart card introduced.
- May 2008: Brisbane's Inner Northern Busway opened.

Future plans

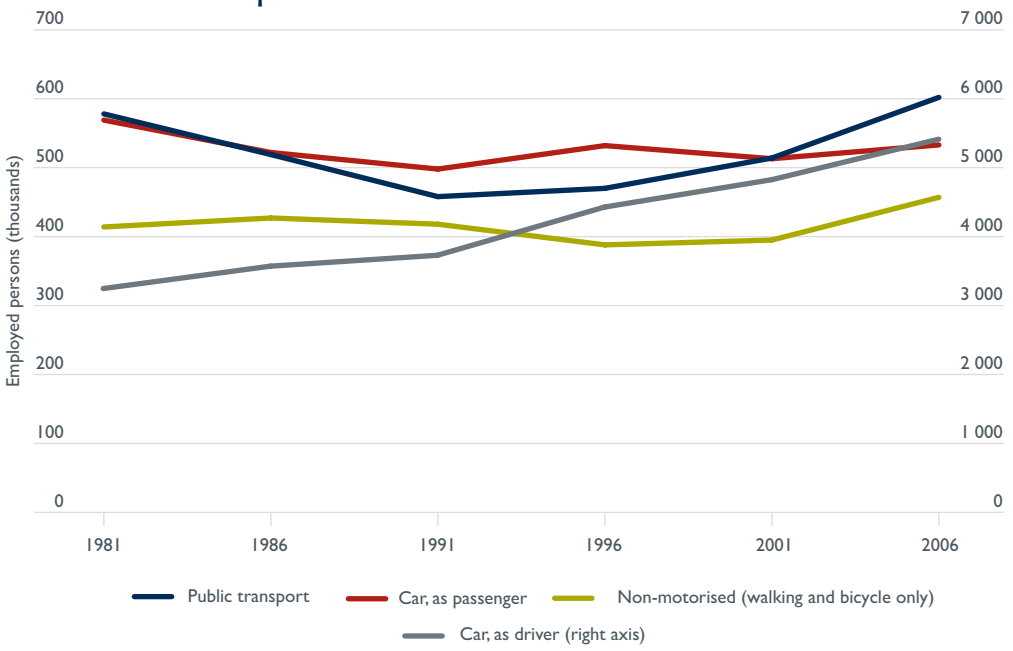
- Early 2009: expected opening of the Epping to Chatswood rail line in Sydney.
- Late 2009: extension of the Brisbane to Gold Coast railway to Varsity Lakes.

Figure 5.1 Domestic passenger task, by mode of travel



Source: BTRE 2007, *Estimating urban traffic and congeston cost trends for Australian cities* and BITRE estimates.

Figure 5.2 Method of travel to work, one method only, by selected transport modes



Source: ABS 2007a, 2006 Census Basic Community Profile Series.

Table 5.1 Total passenger travel by transport mode

Financial year	Passenger cars	Buses	Rail	Air	Other[1]	Total
			(billion passenger kilometres)			
1970–71	103.03	6.41	12.50	5.28	7.67	134.88
1971–72	109.71	6.56	11.44	5.70	8.27	141.67
1972–73	113.66	6.69	11.39	6.26	9.29	147.29
1973–74	121.16	6.78	10.13	7.45	10.66	156.18
1974–75	126.15	6.93	9.37	8.05	11.80	162.31
1975–76	131.12	7.00	8.47	7.87	12.58	167.04
1976–77	137.01	7.13	8.90	7.61	13.58	174.23
1977–78	141.61	7.22	8.72	8.31	14.05	179.91
1978–79	145.54	7.28	8.58	8.79	14.26	184.45
1979–80	146.06	7.69	8.89	9.69	14.11	186.45
1980–81	148.26	8.23	9.31	9.98	14.47	190.25
1981–82	155.49	8.70	9.18	10.41	14.67	198.45
1982–83	155.99	10.04	9.02	9.59	14.44	199.08
1983–84	163.05	11.43	8.97	9.94	15.28	208.68
1984–85	169.17	12.80	9.13	10.60	15.91	217.62
1985–86	174.38	13.75	9.32	11.59	15.57	224.61
1986–87	178.14	14.75	9.61	12.37	15.26	230.14
1987–88	186.84	15.70	10.08	13.62	15.30	241.54
1988–89	195.76	16.52	10.44	14.17	15.92	252.81
1989–90	201.34	17.43	10.45	10.49	15.79	255.50
1990–91	201.75	16.77	10.57	15.14	15.28	259.51
1991–92	205.78	16.38	10.18	19.81	15.10	267.25
1992–93	212.10	16.41	9.86	19.85	15.23	273.45
1993–94	217.46	16.27	9.97	23.86	15.63	283.18
1994–95	224.24	16.13	10.44	26.39	16.38	293.58
1995–96	227.38	16.68	10.64	28.37	16.39	299.46
1996–97	228.99	16.54	10.97	29.34	16.16	301.99
1997–98	231.32	16.73	10.92	29.78	16.31	305.05
1998–99	236.75	16.83	11.15	30.39	16.58	311.70
1999–00	241.36	17.21	11.51	32.20	16.83	319.12
2000–01	238.80	17.51	12.13	35.01	17.04	320.50
2001–02	244.69	17.58	11.97	32.30	17.66	324.19
2002–03	250.89	17.92	11.97	35.10	18.13	334.01
2003–04	262.73	18.00	12.05	40.40	18.74	351.92
2004–05	263.49	18.05	12.02	45.05	18.39	357.00
2005–06	261.79	18.49	12.52	47.78	18.61	359.19
2006–07	264.15	18.67	13.24	52.02	18.73	366.81
2007–08	263.62	18.99	14.18	56.19	19.03	372.02

1. See End Notes.

Source: BTRE 2007, *Estimating urban traffic and congestion cost trends for Australian cities* and BITRE estimates.

Table 5.2 Intercapital city passenger travel by city pair

Financial year	*Sydney–Melbourne*	*Sydney–Canberra*	*Sydney–Brisbane*	*Melbourne–Adelaide*	*Melbourne–Brisbane*	*Sydney–Adelaide*
			(thousand passenger movements)			
1998–99	5 971	3 426	3 628	1 851	1 847	1 337
1999–00	7 206	6 487	4 351	2 466	2 192	1 599
2000–01	8 237	5 997	5 443	2 573	2 625	1 730
2001–02	7 211	5 843	4 828	2 575	2 896	1 460
2002–03	7 128	6 232	4 559	2 537	2 727	1 405
2003–04	7 294	5 525	4 887	2 585	2 986	1 630
2004–05	7 399	5 127	4 764	2 626	2 736	1 604
2005–06	7 543	5 178	4 837	2 527	2 807	1 657
2006–07	7 589	5 578	4 906	2 614	2 821	1 722
2007–08	7 987	6 545	5 449	2 829	2 937	1 883

Source: BTRE (2006d), *Passenger movements between Australian cities 1970–71 to 2030–31*, updated by TRA and BITRE estimates.

Table 5.3a Total passenger kilometres travelled, by capital city—Sydney

Financial year	*Passenger cars*	*Light commercial vehicles*	*Motor cycles*	*Rail*	*Light rail*	*Bus*	*Ferry*	*Total*
				(billion passenger kilometres)				
1976–77	23.92	1.37	0.23	3.14		1.54	0.11	30.30
1977–78	24.80	1.46	0.24	3.06		1.57	0.11	31.26
1978–79	25.32	1.53	0.26	3.09		1.60	0.12	31.92
1979–80	25.60	1.46	0.28	3.52		1.64	0.13	32.63
1980–81	26.01	1.44	0.30	3.64		1.70	0.12	33.22
1981–82	27.54	1.42	0.32	3.76		1.72	0.14	34.90
1982–83	27.66	1.38	0.33	3.55		1.75	0.14	34.81
1983–84	28.89	1.47	0.34	3.47		1.79	0.13	36.08
1984–85	30.32	1.57	0.35	3.45		1.82	0.13	37.63
1985–86	31.35	1.58	0.34	3.72		1.85	0.12	38.97
1986–87	32.10	1.60	0.33	3.81		1.90	0.12	39.86
1987–88	33.30	1.69	0.32	4.13		1.95	0.11	41.51
1988–89	34.64	1.67	0.31	4.18	0.01	1.96	0.11	42.88
1989–90	35.22	1.65	0.31	4.29	0.01	1.97	0.11	43.56
1990–91	35.33	1.58	0.28	4.37	0.01	2.03	0.10	43.70
1991–92	35.76	1.61	0.28	4.27	0.01	2.04	0.10	44.07
1992–93	36.88	1.65	0.28	4.12	0.01	2.04	0.10	45.07
1993–94	37.84	1.73	0.27	4.22	0.01	2.07	0.11	46.26
1994–95	39.05	1.90	0.27	4.51	0.01	2.12	0.11	47.98
1995–96	39.62	1.94	0.26	4.62	0.01	2.17	0.12	48.74
1996–97	40.03	1.91	0.26	4.76	0.01	2.22	0.12	49.31
1997–98	40.17	1.92	0.25	4.80	0.01	2.26	0.11	49.54
1998–99	40.97	1.94	0.24	4.88	0.02	2.30	0.11	50.46
1999–00	42.24	1.97	0.24	5.05	0.02	2.32	0.11	51.95
2000–01	41.89	1.95	0.25	5.44	0.02	2.36	0.13	52.03
2001–02	43.00	2.01	0.26	5.06	0.02	2.26	0.12	52.73
2002–03	44.17	2.01	0.26	5.07	0.02	2.26	0.12	53.90
2003–04	46.34	2.07	0.28	5.12	0.02	2.25	0.12	56.20
2004–05	46.56	2.03	0.29	5.16	0.02	2.29	0.12	56.48
2005–06	46.34	2.05	0.32	5.28	0.02	2.30	0.12	56.43
2006–07	46.85	2.07	0.33	5.46	0.03	2.32	0.12	57.18
2007–08	46.84	2.11	0.34	5.75	0.03	2.37	0.12	57.55

Source: BTRE 2007, *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates.

Table 5.3b Total passenger kilometres travelled, by capital city—Melbourne

Financial year	Passenger cars	Light commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
				(billion passenger kilometres)				
1976–77	21.84	1.24	0.17	1.96	0.53	0.58	na	26.33
1977–78	22.72	1.31	0.16	1.88	0.52	0.58	na	27.16
1978–79	23.25	1.35	0.15	1.79	0.53	0.58	na	27.65
1979–80	23.57	1.29	0.17	1.66	0.52	0.59	na	27.81
1980–81	24.02	1.29	0.18	1.58	0.53	0.60	na	28.20
1981–82	25.51	1.26	0.20	1.52	0.54	0.62	na	29.65
1982–83	25.69	1.22	0.20	1.55	0.53	0.63	na	29.82
1983–84	26.91	1.29	0.20	1.57	0.54	0.65	na	31.16
1984–85	28.32	1.34	0.20	1.67	0.60	0.67	na	32.80
1985–86	29.45	1.37	0.20	1.75	0.62	0.70	na	34.09
1986–87	30.32	1.38	0.20	1.83	0.63	0.73	na	35.09
1987–88	31.63	1.42	0.20	1.83	0.65	0.77	na	36.51
1988–89	33.09	1.43	0.20	2.00	0.66	0.81	na	38.18
1989–90	33.83	1.42	0.20	1.95	0.55	0.82	na	38.78
1990–91	33.78	1.39	0.18	1.94	0.60	0.81	na	38.71
1991–92	34.28	1.41	0.18	1.90	0.56	0.81	na	39.14
1992–93	35.39	1.44	0.18	1.81	0.51	0.82	na	40.14
1993–94	36.34	1.50	0.17	1.81	0.51	0.85	na	41.19
1994–95	37.53	1.63	0.17	1.94	0.51	0.88	na	42.67
1995–96	38.12	1.65	0.17	1.98	0.52	0.91	na	43.35
1996–97	38.45	1.62	0.17	1.97	0.52	0.92	na	43.65
1997–98	39.26	1.63	0.16	1.90	0.51	0.94	na	44.40
1998–99	40.30	1.66	0.15	1.99	0.53	0.94	na	45.57
1999–00	41.02	1.69	0.15	2.11	0.56	0.94	na	46.47
2000–01	40.70	1.69	0.16	2.19	0.58	0.95	na	46.26
2001–02	41.79	1.75	0.17	2.30	0.59	0.95	na	47.56
2002–03	42.86	1.76	0.17	2.35	0.60	0.96	na	48.70
2003–04	44.90	1.82	0.18	2.42	0.60	0.97	na	50.88
2004–05	45.04	1.80	0.19	2.50	0.61	0.96	na	51.09
2005–06	44.77	1.81	0.20	2.78	0.62	0.99	na	51.16
2006–07	45.18	1.80	0.21	3.07	0.63	1.02	na	51.92
2007–08	45.11	1.82	0.22	3.46	0.65	1.09	na	52.34

na: not applicable.
Source: BTRE 2007, *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates.

Table 5.3c Total passenger kilometres travelled, by capital city—Brisbane

Financial year	*Passenger cars*	*Light commercial vehicles*	*Motor cycles*	*Rail*	*Light rail*	*Bus*	*Ferry*	*Total*
				(billion passenger kilometres)				
1976–77	7.16	0.54	0.15	0.38	na	0.44	0.00	8.66
1977–78	7.70	0.58	0.15	0.37	na	0.47	0.00	9.27
1978–79	8.24	0.62	0.15	0.35	na	0.47	0.00	9.83
1979–80	8.85	0.60	0.16	0.38	na	0.47	0.00	10.46
1980–81	9.45	0.60	0.17	0.42	na	0.43	0.00	11.07
1981–82	10.05	0.60	0.18	0.46	na	0.45	0.00	11.74
1982–83	10.22	0.59	0.17	0.47	na	0.47	0.00	11.93
1983–84	10.40	0.64	0.15	0.52	na	0.45	0.00	12.16
1984–85	10.57	0.69	0.14	0.55	na	0.46	0.00	12.41
1985–86	11.17	0.70	0.15	0.62	na	0.46	0.00	13.10
1986–87	11.78	0.72	0.15	0.68	na	0.48	0.00	13.82
1987–88	12.38	0.76	0.16	0.74	na	0.52	0.00	14.57
1988–89	12.97	0.77	0.17	0.85	na	0.60	0.00	15.36
1989–90	13.55	0.77	0.17	0.78	na	0.58	0.00	15.85
1990–91	13.61	0.74	0.16	0.79	na	0.60	0.00	15.90
1991–92	14.05	0.76	0.16	0.75	na	0.62	0.00	16.34
1992–93	14.45	0.79	0.16	0.74	na	0.61	0.00	16.75
1993–94	14.81	0.83	0.16	0.72	na	0.63	0.00	17.16
1994–95	15.27	0.92	0.16	0.70	na	0.70	0.01	17.75
1995–96	15.48	0.95	0.16	0.74	na	0.68	0.01	18.02
1996–97	15.59	0.94	0.16	0.79	na	0.68	0.01	18.17
1997–98	15.75	0.95	0.15	0.80	na	0.68	0.01	18.34
1998–99	16.38	0.96	0.15	0.81	na	0.64	0.01	18.96
1999–00	16.49	0.98	0.15	0.87	na	0.69	0.01	19.18
2000–01	16.39	0.98	0.15	0.94	na	0.69	0.01	19.16
2001–02	16.87	1.01	0.16	0.97	na	0.71	0.01	19.74
2002–03	17.41	1.02	0.16	0.97	na	0.74	0.01	20.31
2003–04	18.33	1.05	0.18	1.01	na	0.77	0.01	21.35
2004–05	18.49	1.04	0.18	1.00	na	0.83	0.01	21.56
2005–06	18.48	1.04	0.20	1.08	na	0.91	0.02	21.73
2006–07	18.75	1.04	0.21	1.18	na	0.96	0.02	22.15
2007–08	18.82	1.05	0.22	1.25	na	1.00	0.02	22.36

na: not applicable.
Source: BTRE 2007, *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates.

Table 5.3d Total passenger kilometres travelled, by capital city—Adelaide

Financial year	*Passenger cars*	*Light commercial vehicles*	*Motor cycles*	*Rail*	*Light rail*	*Bus*	*Ferry*	*Total*
				(billion passenger kilometres)				
1976–77	7.54	0.42	0.11	0.16	0.02	0.43	na	8.68
1977–78	7.75	0.44	0.11	0.16	0.02	0.43	na	8.91
1978–79	7.83	0.46	0.11	0.16	0.02	0.46	na	9.04
1979–80	7.84	0.44	0.11	0.18	0.02	0.46	na	9.05
1980–81	7.89	0.43	0.10	0.19	0.02	0.53	na	9.16
1981–82	8.27	0.41	0.10	0.20	0.02	0.56	na	9.56
1982–83	8.22	0.40	0.10	0.18	0.02	0.48	na	9.39
1983–84	8.50	0.42	0.09	0.18	0.02	0.50	na	9.71
1984–85	8.82	0.45	0.09	0.18	0.02	0.48	na	10.04
1985–86	9.03	0.45	0.09	0.18	0.02	0.50	na	10.26
1986–87	9.16	0.45	0.08	0.18	0.02	0.49	na	10.37
1987–88	9.40	0.47	0.08	0.13	0.02	0.51	na	10.61
1988–89	9.68	0.46	0.07	0.14	0.02	0.48	na	10.85
1989–90	9.74	0.44	0.07	0.14	0.02	0.51	na	10.92
1990–91	9.88	0.43	0.06	0.12	0.02	0.54	na	11.05
1991–92	10.02	0.43	0.06	0.12	0.01	0.54	na	11.19
1992–93	10.33	0.44	0.06	0.13	0.01	0.52	na	11.49
1993–94	10.59	0.46	0.06	0.15	0.01	0.53	na	11.81
1994–95	10.92	0.50	0.06	0.16	0.01	0.55	na	12.21
1995–96	11.08	0.50	0.06	0.15	0.01	0.55	na	12.36
1996–97	11.15	0.49	0.06	0.15	0.01	0.55	na	12.41
1997–98	11.61	0.49	0.05	0.14	0.01	0.56	na	12.87
1998–99	11.69	0.49	0.05	0.14	0.01	0.54	na	12.92
1999–00	11.99	0.50	0.05	0.13	0.01	0.54	na	13.22
2000–01	11.81	0.49	0.05	0.13	0.01	0.55	na	13.06
2001–02	12.06	0.51	0.06	0.15	0.02	0.57	na	13.35
2002–03	12.32	0.50	0.05	0.16	0.02	0.58	na	13.64
2003–04	12.86	0.52	0.06	0.18	0.02	0.58	na	14.21
2004–05	12.85	0.51	0.06	0.18	0.02	0.59	na	14.21
2005–06	12.73	0.50	0.07	0.19	0.02	0.62	na	14.12
2006–07	12.80	0.49	0.07	0.19	0.02	0.63	na	14.20
2007–08	12.73	0.49	0.07	0.19	0.02	0.64	na	14.14

na: not applicable.
Source: BTRE 2007, *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates.

Table 5.3e Total passenger kilometres travelled, by capital city—Perth

Financial year	*Passenger cars*	*Light commercial vehicles*	*Motor cycles*	*Rail*	*Light rail*	*Bus*	*Ferry*	*Total*
				(billion passenger kilometres)				
1976–77	7.66	0.57	0.11	0.09	na	0.44	0.00	8.88
1977–78	7.98	0.61	0.11	0.10	na	0.53	0.00	9.34
1978–79	8.19	0.65	0.11	0.10	na	0.52	0.00	9.57
1979–80	8.32	0.62	0.12	0.09	na	0.56	0.00	9.70
1980–81	8.49	0.62	0.12	0.08	na	0.58	0.00	9.89
1981–82	9.03	0.61	0.13	0.07	na	0.56	0.00	10.40
1982–83	9.11	0.60	0.13	0.08	na	0.57	0.00	10.49
1983–84	9.56	0.64	0.14	0.11	na	0.50	0.00	10.94
1984–85	10.08	0.69	0.14	0.11	na	0.49	0.00	11.50
1985–86	10.47	0.70	0.13	0.12	na	0.53	0.00	11.94
1986–87	10.77	0.71	0.11	0.12	na	0.55	0.00	12.27
1987–88	11.23	0.75	0.10	0.12	na	0.55	0.00	12.74
1988–89	11.73	0.75	0.08	0.11	na	0.59	0.00	13.27
1989–90	11.99	0.76	0.07	0.11	na	0.63	0.00	13.55
1990–91	11.95	0.73	0.06	0.10	na	0.61	0.00	13.46
1991–92	12.34	0.74	0.06	0.12	na	0.60	0.00	13.87
1992–93	12.74	0.77	0.06	0.17	na	0.59	0.00	14.34
1993–94	13.08	0.81	0.06	0.30	na	0.59	0.00	14.85
1994–95	13.52	0.89	0.06	0.30	na	0.62	0.00	15.40
1995–96	13.73	0.92	0.06	0.30	na	0.61	0.00	15.62
1996–97	13.83	0.91	0.06	0.38	na	0.62	0.00	15.80
1997–98	13.85	0.91	0.06	0.36	na	0.64	0.00	15.83
1998–99	14.14	0.93	0.06	0.36	na	0.64	0.00	16.13
1999–00	14.56	0.95	0.06	0.37	na	0.67	0.00	16.60
2000–01	14.48	0.94	0.06	0.38	na	0.71	0.00	16.58
2001–02	14.88	0.97	0.06	0.38	na	0.73	0.00	17.03
2002–03	15.33	0.98	0.06	0.37	na	0.76	0.00	17.51
2003–04	16.12	1.01	0.07	0.37	na	0.79	0.00	18.36
2004–05	16.24	1.00	0.07	0.38	na	0.82	0.00	18.51
2005–06	16.20	1.02	0.08	0.40	na	0.84	0.00	18.54
2006–07	16.41	1.02	0.08	0.42	na	0.85	0.00	18.77
2007–08	16.44	1.02	0.09	0.52	na	0.88	0.00	18.95

na: not applicable.
Source: BTRE 2007, *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates.

Table 5.3f Total passenger kilometres travelled, by capital city—Hobart

Financial year	Passenger cars	Light commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
				(billion passenger kilometres)				
1976–77	1.10	0.07	0.01	na	na	0.12	na	1.31
1977–78	1.15	0.08	0.01	na	na	0.13	na	1.36
1978–79	1.17	0.08	0.01	na	na	0.12	na	1.38
1979–80	1.19	0.08	0.01	na	na	0.12	na	1.39
1980–81	1.21	0.08	0.01	na	na	0.12	na	1.41
1981–82	1.29	0.07	0.01	na	na	0.10	na	1.47
1982–83	1.30	0.07	0.01	na	na	0.10	na	1.48
1983–84	1.36	0.08	0.01	na	na	0.10	na	1.55
1984–85	1.43	0.08	0.01	na	na	0.11	na	1.63
1985–86	1.49	0.08	0.01	na	na	0.11	na	1.69
1986–87	1.53	0.08	0.01	na	na	0.11	na	1.73
1987–88	1.59	0.09	0.01	na	na	0.11	na	1.79
1988–89	1.66	0.08	0.01	na	na	0.10	na	1.86
1989–90	1.69	0.09	0.01	na	na	0.11	na	1.90
1990–91	1.65	0.08	0.01	na	na	0.10	na	1.85
1991–92	1.72	0.08	0.01	na	na	0.10	na	1.92
1992–93	1.77	0.09	0.01	na	na	0.10	na	1.97
1993–94	1.82	0.09	0.01	na	na	0.11	na	2.03
1994–95	1.88	0.10	0.01	na	na	0.11	na	2.10
1995–96	1.91	0.10	0.01	na	na	0.11	na	2.13
1996–97	1.93	0.10	0.01	na	na	0.10	na	2.14
1997–98	1.88	0.09	0.01	na	na	0.10	na	2.08
1998–99	1.97	0.09	0.01	na	na	0.10	na	2.17
1999–00	2.03	0.09	0.01	na	na	0.10	na	2.23
2000–01	1.98	0.09	0.01	na	na	0.10	na	2.18
2001–02	2.01	0.09	0.01	na	na	0.10	na	2.21
2002–03	2.03	0.09	0.01	na	na	0.10	na	2.24
2003–04	2.11	0.09	0.01	na	na	0.10	na	2.32
2004–05	2.10	0.10	0.01	na	na	0.10	na	2.31
2005–06	2.06	0.09	0.01	na	na	0.10	na	2.27
2006–07	2.06	0.09	0.01	na	na	0.10	na	2.27
2007–08	2.04	0.09	0.01	na	na	0.10	na	2.24

na: not applicable.
Source: BTRE 2007, *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates.

Table 5.3g Total passenger kilometres travelled, by capital city—Darwin

Financial year	*Passenger cars*	*Light commercial vehicles*	*Motor cycles*	*Rail*	*Light rail*	*Bus*	*Ferry*	*Total*
				(billion passenger kilometres)				
1976–77	0.33	0.05	0.01	na	na	0.02	na	0.41
1977–78	0.34	0.06	0.01	na	na	0.02	na	0.43
1978–79	0.36	0.06	0.01	na	na	0.02	na	0.45
1979–80	0.37	0.06	0.01	na	na	0.02	na	0.46
1980–81	0.38	0.06	0.01	na	na	0.03	na	0.48
1981–82	0.41	0.06	0.01	na	na	0.03	na	0.51
1982–83	0.42	0.06	0.01	na	na	0.03	na	0.52
1983–84	0.44	0.06	0.01	na	na	0.03	na	0.55
1984–85	0.47	0.07	0.01	na	na	0.04	na	0.59
1985–86	0.50	0.07	0.01	na	na	0.04	na	0.61
1986–87	0.52	0.07	0.01	na	na	0.04	na	0.64
1987–88	0.54	0.07	0.01	na	na	0.05	na	0.67
1988–89	0.57	0.07	0.01	na	na	0.05	na	0.71
1989–90	0.59	0.07	0.01	na	na	0.06	na	0.73
1990–91	0.62	0.07	0.01	na	na	0.06	na	0.76
1991–92	0.67	0.07	0.01	na	na	0.06	na	0.81
1992–93	0.68	0.07	0.01	na	na	0.06	na	0.83
1993–94	0.70	0.08	0.01	na	na	0.06	na	0.84
1994–95	0.72	0.09	0.01	na	na	0.06	na	0.87
1995–96	0.72	0.09	0.01	na	na	0.07	na	0.89
1996–97	0.73	0.09	0.01	na	na	0.07	na	0.89
1997–98	0.76	0.09	0.01	na	na	0.07	na	0.92
1998–99	0.77	0.09	0.01	na	na	0.07	na	0.93
1999–00	0.80	0.09	0.01	na	na	0.07	na	0.96
2000–01	0.79	0.09	0.01	na	na	0.07	na	0.96
2001–02	0.82	0.09	0.01	na	na	0.07	na	0.99
2002–03	0.85	0.09	0.01	na	na	0.08	na	1.02
2003–04	0.89	0.09	0.01	na	na	0.08	na	1.06
2004–05	0.90	0.09	0.01	na	na	0.08	na	1.07
2005–06	0.89	0.09	0.01	na	na	0.08	na	1.07
2006–07	0.91	0.09	0.01	na	na	0.08	na	1.09
2007–08	0.91	0.09	0.01	na	na	0.08	na	1.09

na: not applicable.
Source: BTRE 2007, *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates.

Table 5.3h Total passenger kilometres travelled, by capital city—Canberra

Financial year	Passenger cars	Light commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
				(billion passenger kilometres)				
1976–77	1.89	0.12	0.02	na	na	0.11	na	2.13
1977–78	2.00	0.12	0.02	na	na	0.12	na	2.26
1978–79	2.07	0.13	0.02	na	na	0.12	na	2.35
1979–80	2.13	0.13	0.02	na	na	0.14	na	2.43
1980–81	2.21	0.13	0.03	na	na	0.12	na	2.49
1981–82	2.38	0.13	0.03	na	na	0.13	na	2.66
1982–83	2.43	0.12	0.03	na	na	0.16	na	2.75
1983–84	2.58	0.13	0.03	na	na	0.18	na	2.93
1984–85	2.75	0.14	0.03	na	na	0.19	na	3.13
1985–86	2.90	0.15	0.03	na	na	0.19	na	3.26
1986–87	3.01	0.15	0.03	na	na	0.20	na	3.40
1987–88	3.18	0.16	0.03	na	na	0.21	na	3.58
1988–89	3.36	0.16	0.03	na	na	0.21	na	3.76
1989–90	3.47	0.16	0.04	na	na	0.21	na	3.88
1990–91	3.44	0.15	0.03	na	na	0.22	na	3.83
1991–92	3.61	0.15	0.03	na	na	0.21	na	4.01
1992–93	3.72	0.15	0.03	na	na	0.21	na	4.12
1993–94	3.82	0.15	0.03	na	na	0.21	na	4.21
1994–95	3.94	0.17	0.03	na	na	0.22	na	4.35
1995–96	3.99	0.17	0.03	na	na	0.26	na	4.44
1996–97	4.02	0.16	0.03	na	na	0.27	na	4.48
1997–98	3.95	0.16	0.03	na	na	0.27	na	4.41
1998–99	4.10	0.16	0.03	na	na	0.26	na	4.54
1999–00	4.12	0.16	0.03	na	na	0.26	na	4.57
2000–01	4.06	0.16	0.03	na	na	0.25	na	4.50
2001–02	4.14	0.16	0.03	na	na	0.26	na	4.59
2002–03	4.24	0.16	0.03	na	na	0.27	na	4.70
2003–04	4.45	0.17	0.03	na	na	0.28	na	4.93
2004–05	4.46	0.16	0.03	na	na	0.29	na	4.94
2005–06	4.42	0.16	0.04	na	na	0.29	na	4.91
2006–07	4.45	0.16	0.04	na	na	0.29	na	4.93
2007–08	4.43	0.16	0.04	na	na	0.29	na	4.92

na: not applicable.
Source: BTRE 2007, *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates.

Table 5.3i Total passenger kilometres travelled, by capital city—total metropolitan

Financial year	Passenger cars	Light commercial vehicles	Motor cycles	Rail	Light rail	Bus	Ferry	Total
			(billion passenger kilometres)					
1976–77	71.45	4.39	0.80	5.72	0.55	3.68	0.11	86.70
1977–78	74.44	4.66	0.81	5.57	0.54	3.85	0.12	89.99
1978–79	76.43	4.89	0.81	5.49	0.55	3.90	0.12	92.19
1979–80	77.87	4.67	0.87	5.84	0.54	4.02	0.13	93.94
1980–81	79.65	4.64	0.92	5.91	0.55	4.12	0.13	95.92
1981–82	84.48	4.56	0.98	6.01	0.56	4.16	0.14	100.89
1982–83	85.05	4.45	0.97	5.83	0.55	4.18	0.14	101.18
1983–84	88.63	4.74	0.97	5.84	0.56	4.20	0.13	105.08
1984–85	92.76	5.04	0.97	5.95	0.62	4.25	0.13	109.72
1985–86	96.35	5.10	0.95	6.39	0.64	4.37	0.13	113.93
1986–87	99.17	5.17	0.93	6.62	0.65	4.50	0.12	117.17
1987–88	103.26	5.41	0.91	6.95	0.67	4.67	0.12	121.98
1988–89	107.70	5.39	0.89	7.28	0.70	4.81	0.11	126.88
1989–90	110.09	5.36	0.88	7.27	0.58	4.89	0.11	129.17
1990–91	110.26	5.17	0.79	7.32	0.63	4.97	0.11	129.26
1991–92	112.45	5.25	0.79	7.17	0.58	4.99	0.10	131.34
1992–93	115.98	5.40	0.79	6.96	0.54	4.95	0.10	134.72
1993–94	119.00	5.66	0.78	7.20	0.54	5.05	0.11	138.34
1994–95	122.82	6.20	0.77	7.60	0.54	5.26	0.12	143.32
1995–96	124.65	6.32	0.75	7.80	0.55	5.36	0.12	145.55
1996–97	125.73	6.21	0.75	8.05	0.54	5.44	0.13	146.85
1997–98	127.24	6.25	0.72	8.00	0.54	5.52	0.12	148.39
1998–99	130.32	6.32	0.69	8.19	0.56	5.49	0.12	151.69
1999–00	133.24	6.43	0.70	8.52	0.60	5.58	0.12	155.19
2000–01	132.11	6.38	0.72	9.08	0.62	5.69	0.14	154.73
2001–02	135.58	6.60	0.76	8.85	0.62	5.66	0.13	158.21
2002–03	139.21	6.62	0.75	8.94	0.63	5.75	0.13	162.02
2003–04	146.00	6.81	0.81	9.10	0.63	5.82	0.13	169.32
2004–05	146.64	6.72	0.85	9.22	0.64	5.96	0.14	170.16
2005–06	145.90	6.77	0.92	9.73	0.66	6.14	0.14	170.24
2006–07	147.42	6.77	0.96	10.31	0.68	6.24	0.14	172.51
2007–08	147.32	6.84	0.99	11.17	0.69	6.45	0.14	173.59

Source: BTRE 2007, *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates.

Table 5.4a Method of travel to work by state/territory—New South Wales

Census year	One method only								Public transport and other method[2]
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
	(Number of employed persons)								
1981	256 812	11 767	1 105 606	188 679		32 294	15 682	122 544	
1986	225 068	10 632	1 164 920	171 024		26 294	18 851	118 626	
1991	211 372	8 407	1 197 033	168 743		17 269	16 970	123 248	86 035
1996	225 515	9 496	1 396 204	176 686		16 423	17 305	114 538	97 989
2001	249 096	8 223	1 487 981	168 862	54 094	14 157	17 730	114 927	112 728
2006	265 113	8 219	1 639 528	166 871	45 953	16 495	19 274	127 446	93 564

Data are not readily available for missing years.
2. See End Notes.
Source: ABS 2007a, 2006 Census Basic Community Profile Series.

Table 5.4b Method of travel to work by state/territory—Victoria

Census year	One method only								Public transport and other method[2]
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
	(Number of employed persons)								
1981	157 446	6 894	890 359	151 666		13 757	23 737	83 208	
1986	134 654	5 873	986 891	132 471		12 132	24 022	79 580	
1991	106 427	4 022	1 008 838	114 370		8 704	18 334	74 133	41 684
1996	103 778	4 989	1 157 773	114 478		8 414	17 190	63 668	46 918
2001	119 408	4 520	1 276 600	109 752	25 682	8 376	18 910	64 732	57 770
2006	143 412	4 555	1 394 017	111 030	22 806	10 838	25 180	80 539	63 067

Data are not readily available for missing years.
2. See End Notes.
Source: ABS 2007a, 2006 Census Basic Community Profile Series.

Table 5.4c Method of travel to work by state/territory—Queensland

Census year	One method only								Public transport and other method[2]
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
	(Number of employed persons)								
1981	53 762	5 213	462 167	93 082		23 462	15 586	56 752	
1986	59 836	5 131	553 352	90 210		20 495	19 469	62 369	
1991	55 908	3 787	624 144	93 935		16 819	22 964	62 908	16 016
1996	62 621	5 255	809 145	111 524		16 608	20 454	62 025	18 470
2001	68 732	4 020	906 073	112 409	30 538	15 601	20 252	60 529	24 510
2006	91 302	4 531	1 090 011	123 254	29 283	20 071	20 580	72 981	27 915

Data are not readily available for missing years.
2. See End Notes.
Source: ABS 2007a, 2006 Census Basic Community Profile Series

Table 5.4d Method of travel to work by state/territory—South Australia

Census year	One method only								Public transport and other method[2]
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
	(Number of employed persons)								
1981	49 234	1 740	289 771	48 814		10 922	10 700	25 988	
1986	41 952	1 954	322 855	44 187		9 376	10 415	28 744	
1991	33 062	1 453	322 141	41 368		5 600	8 662	26 514	7 033
1996	27 567	1 840	363 074	39 302		3 740	5 962	21 015	6 539
2001	28 282	1 475	392 511	37 455	7 298	2 904	5 889	21 553	7 837
2006	36 140	1 458	429 822	38 720	6 609	4 324	7 942	24 862	8 298

Data are not readily available for missing years.
2. See End Notes.
Source: ABS 2007a, 2006 Census Basic Community Profile Series.

Table 5.4e Method of travel to work by state/territory—Western Australia

Census year	One method only								Public transport and other method[2]
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
	(Number of employed persons)								
1981	37 945	2 060	312 381	51 664		7 083	6 560	26 188	
1986	36 629	2 191	324 791	48 071		6 925	7 830	27 995	
1991	33 026	1 206	361 689	46 036		6 022	9 102	26 828	7 113
1996	33 163	1 865	453 690	55 553		4 817	7 152	28 440	13 566
2001	34 294	1 521	498 685	51 929	11 019	4 247	8 279	28 307	17 701
2006	47 087	1 972	570 271	58 748	10 910	5 176	9 294	31 757	19 833

Data are not readily available for missing years.
2. See End Notes.
Source: ABS 2007a, 2006 Census Basic Community Profile Series.

Table 5.4f Method of travel to work by state/territory—Tasmania

Census year	One method only								Public transport and other method[2]
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
	(Number of employed persons)								
1981	11 166	645	94 613	18 579		1 207	1 043	11 541	
1986	8 622	693	101 797	17 505		1 108	1 244	12 265	
1991	5 924	546	97 245	14 746		779	1 012	10 712	858
1996	5 342	551	109 633	14 441		838	964	9 466	811
2001	4 290	416	110 241	12 645	2 740	825	1 145	10 070	779
2006	5 156	495	125 485	14 506	2 572	1 089	1 478	11 693	805

Data are not readily available for missing years.
2. See End Notes.
Source: ABS 2007a, 2006 Census Basic Community Profile Series.

Table 5.4g Method of travel to work by state/territory—Northern Territory

Census year	One method only								Public transport and other method[2]
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
	(Number of employed persons)								
1981	2 907	396	24 170	5 847		1 387	1 641	6 738	
1986	2 429	537	32 209	7 021		1 391	2 185	6 934	
1991	2 389	317	31 781	6 118		1 146	2 908	6 938	218
1996	2 887	477	40 865	7 445		1 040	2 636	9 369	381
2001	2 711	411	44 343	7 261	1 050	918	2 846	10 561	483
2006	3 082	328	46 702	7 114	795	978	2 579	10 347	369

Data are not readily available for missing years.
2. See End Notes.
Source: ABS 2007a, 2006 Census Basic Community Profile Series.

Table 5.4h Method of travel to work by state/territory—Australian Capital Territory

Census year	One method only								Public transport and other method[2]
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
	(Number of employed persons)								
1981	8 642	405	61 213	10 194		1 417	1 902	3 802	
1986	9 614	540	77 313	11 524		1 310	2 185	4 084	
1991	9 680	325	78 981	12 363		906	2 043	4 726	1 440
1996	8 638	540	89 613	12 713		986	2 760	5 373	1 728
2001	7 506	561	99 585	12 845	1 695	1 069	3 115	5 741	1 595
2006	10 374	411	107 608	13 011	1 471	1 766	3 757	7 399	1 362

Data are not readily available for missing years.
2. See End Notes.
Source: ABS 2007a, 2006 Census Basic Community Profile Series.

Table 5.4i Method of travel to work by state/territory—total Australia

Census year	One method only								Public transport and other method[2]
	Public transport	Taxi	Car, as driver	Car, as passenger	Truck	Motor bike/motor scooter	Bicycle	Walked only	
	(Number of employed persons)								
1981	577 914	29 120	3 240 280	568 525		91 529	76 851	336 761	
1986	518 804	27 551	3 564 128	522 013		79 031	86 201	340 597	
1991	457 788	20 063	3 721 852	497 679		57 245	81 995	336 007	160 397
1996	469 511	25 013	4 419 997	532 142		52 866	74 423	313 894	186 402
2001	514 319	21 147	4 816 019	513 158	134 116	48 097	78 166	316 420	223 403
2006	601 666	21 969	5 403 444	533 254	120 399	60 737	90 084	367 024	215 213

Data are not readily available for missing years.
2. See End Notes.
Source: ABS 2007a, 2006 Census Basic Community Profile Series.

Chapter 6

Road

Chapter 6 figures and tables

Figures

Tables

Chapter 6 Road

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

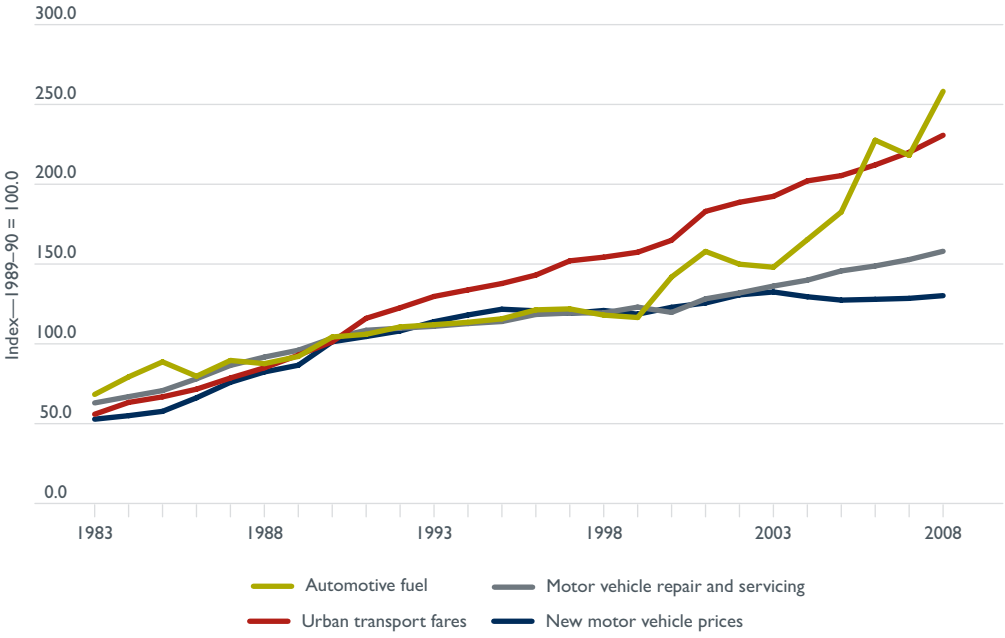
Recent events

- March 2007: Albury-Wodonga Hume Highway bypass was officially opened.
- July 2007: Pacific Highway upgrade—Brunswick Heads to Yelgun completed. This 8.6 km upgrade finalised the 'missing link' of continuous 60 kilometres of uninterrupted four lane highway from the Queensland border to Byron Bay.
- December 2007: Princes Freeway—Pakenham Bypass opened to traffic.
- June 2008: Tugun Bypass completed. Between Tweed Heads and Currumbin, the bypass included a four hundred metre long tunnel under an extension of the Gold Coast Airports runway.
- September 2008: Pacific Highway—Bonville Deviation. Construction of a new dual carriageway segment of Pacific Highway south of Coffs Harbour was completed.

Future plans

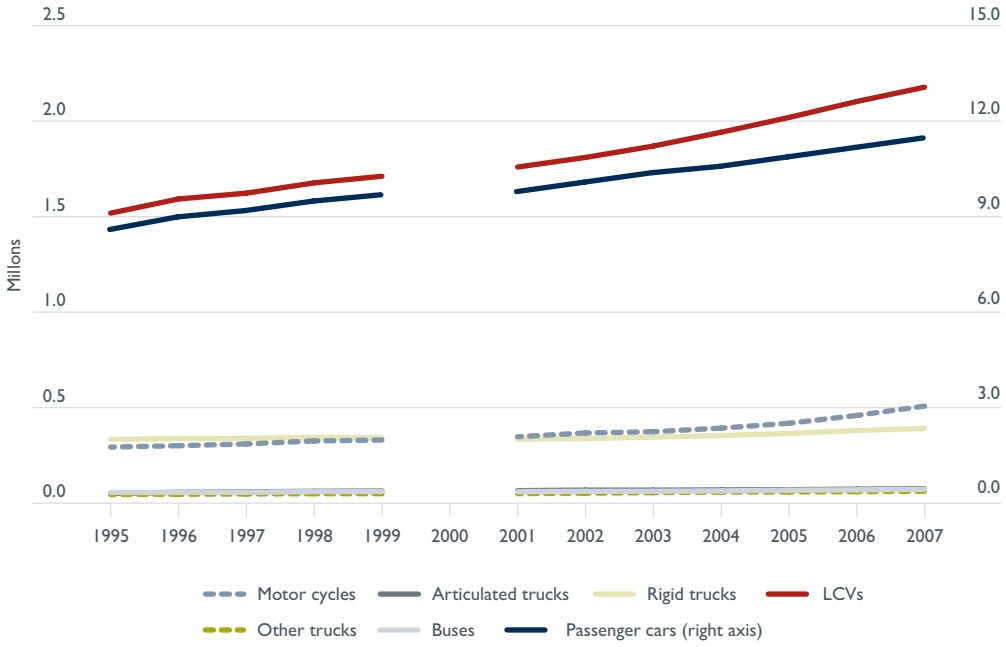
- 2009–10: the Australian Government announced in its 2007–08 Budget that it will invest $22.3 billion in Australia's land transport system from 2009–10 to 2013–14 through AusLink 2. AusLink 1 will cease in 2008–09.
- 2009: the Caboolture Motorway upgrade to six lanes from Brisbane to Caboolture is expected to be completed.
- 2009: Perth—Bunbury Highway is expected to be completed.
- 2010: construction of the new Northern Expressway in Adelaide between Gawler and Port Wakefield Road commenced in September 2008 and is expected to be completed by late 2010.

Figure 6.1 Private vehicle ownership and operating cost indexes



Source: ABS (2008d), *Consumer Price Index, Australia* (ABS cat. no. 6401.0) and ABS (2008h), *Producer Price Indexes, Australia* (ABS cat. no. 6427.0).

Figure 6.2 Stock of registered motor vehicles, by vehicle type



Data are not available for 2000.

Source: ABS (2007c), *Motor Vehicle Census, Australia* (ABS cat. no. 9309.0).

Figure 6.3 Map of Auslink national road network and recently completed projects

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

Table 6.1 Intercapital road distances

	Sydney	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Darwin*	*Canberra*
				(kilometres)			
Sydney		863	933	1 401	3 965	3 999	281
Melbourne			1 731	723	3 419	3 757	652
Brisbane				2 113	4 411	3 431	1 194
Adelaide					2 697	3 035	1 189
Perth						4 044	3 821
Darwin							3 970

Source: Whereis.com.au.

Table 6.2 Total vehicle kilometres travelled, by vehicle type

Financial year	*Passenger cars*	*Motor cycles*	*Buses*	*Light commercial vehicles*	*Rigid trucks*	*Articulated trucks*	*Total*
			(billion vehicle kilometres travelled)				
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	124.01	1.80	1.52	23.90	6.84	4.13	162.20
1990–91	124.47	1.62	1.47	23.30	6.12	4.07	161.06
1991–92	127.19	1.61	1.45	24.17	5.91	4.10	164.43
1992–93	131.34	1.62	1.46	24.95	5.82	4.39	169.58
1993–94	134.91	1.59	1.52	25.76	6.02	4.53	174.32
1994–95	139.38	1.57	1.56	27.27	6.32	4.82	180.92
1995–96	141.59	1.52	1.61	28.28	6.65	5.02	184.67
1996–97	142.87	1.52	1.62	28.65	7.15	5.21	187.03
1997–98	144.51	1.46	1.66	29.94	7.24	5.40	190.21
1998–99	148.08	1.40	1.68	30.69	7.17	5.55	194.58
1999–00	151.17	1.42	1.73	31.33	7.29	5.70	198.64
2000–01	149.75	1.46	1.77	31.70	7.17	5.62	197.48
2001–02	153.63	1.55	1.78	32.94	7.44	5.81	203.15
2002–03	157.71	1.52	1.83	34.02	7.70	5.97	208.74
2003–04	165.35	1.66	1.85	35.15	7.85	6.16	218.01
2004–05	166.02	1.73	1.87	35.38	8.10	6.32	219.41
2005–06	164.85	1.88	1.92	36.28	8.39	6.46	219.78
2006–07	166.37	1.95	1.95	37.64	8.58	6.72	223.21
2007–08	165.89	2.01	1.99	38.85	8.70	6.90	224.35

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

Table 6.3 Total vehicle kilometres travelled, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
				(billion vehicle kilometres travelled)					
1989–90	50.78	43.73	29.86	12.86	17.07	3.80	1.36	2.75	162.20
1990–91	50.58	43.29	29.68	12.86	16.93	3.67	1.34	2.71	161.06
1991–92	51.30	43.97	30.77	12.98	17.39	3.77	1.41	2.84	164.43
1992–93	52.61	45.50	32.17	13.29	17.76	3.87	1.46	2.93	169.58
1993–94	53.95	46.85	33.29	13.57	18.19	3.95	1.50	3.01	174.32
1994–95	55.90	48.56	34.92	13.91	18.85	4.08	1.58	3.12	180.92
1995–96	57.03	49.43	35.96	14.05	19.15	4.24	1.63	3.18	184.67
1996–97	58.06	49.98	36.45	14.11	19.23	4.37	1.63	3.21	187.03
1997–98	58.98	51.02	36.86	14.69	19.48	4.36	1.64	3.17	190.21
1998–99	60.22	52.30	38.17	14.68	19.63	4.64	1.68	3.28	194.58
1999–00	61.86	53.25	38.34	15.19	20.31	4.71	1.68	3.30	198.64
2000–01	61.26	52.93	38.59	14.95	20.18	4.64	1.68	3.25	197.48
2001–02	62.88	54.51	39.89	15.30	20.79	4.74	1.73	3.32	203.15
2002–03	64.41	56.02	41.24	15.62	21.44	4.84	1.79	3.39	208.74
2003–04	67.16	58.55	43.16	16.25	22.45	5.02	1.87	3.56	218.01
2004–05	67.56	58.83	43.59	16.27	22.69	5.02	1.89	3.57	219.41
2005–06	67.58	58.82	43.87	16.17	22.87	5.00	1.91	3.55	219.78
2006–07	68.49	59.76	44.77	16.30	23.28	5.06	1.96	3.59	223.21
2007–08	68.77	59.98	45.24	16.26	23.48	5.06	1.99	3.58	224.35

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

Table 6.4 Total vehicle kilometres travelled, by capital city

Financial year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin	Canberra	Total
					(billion vehicle kilometres travelled)				
1989–90	29.04	27.12	11.48	7.86	10.19	1.39	0.60	2.75	90.43
1990–91	28.88	26.96	11.42	7.90	10.09	1.35	0.61	2.71	89.93
1991–92	29.40	27.49	11.84	8.06	10.46	1.41	0.65	2.84	92.15
1992–93	30.36	28.39	12.23	8.31	10.83	1.46	0.67	2.93	95.19
1993–94	31.26	29.24	12.62	8.55	11.19	1.50	0.69	3.01	98.04
1994–95	32.56	30.43	13.19	8.88	11.71	1.56	0.72	3.12	102.18
1995–96	33.22	31.04	13.49	9.05	11.99	1.60	0.74	3.18	104.31
1996–97	33.63	31.37	13.63	9.12	12.12	1.61	0.75	3.21	105.44
1997–98	33.89	32.06	13.84	9.46	12.23	1.58	0.77	3.17	107.00
1998–99	34.54	32.88	14.32	9.53	12.49	1.64	0.78	3.28	109.47
1999–00	35.50	33.48	14.45	9.76	12.83	1.69	0.81	3.30	111.80
2000–01	35.27	33.31	14.41	9.63	12.79	1.65	0.80	3.25	111.12
2001–02	36.30	34.31	14.89	9.87	13.19	1.68	0.83	3.32	114.38
2002–03	37.14	35.12	15.30	10.05	13.54	1.70	0.85	3.39	117.09
2003–04	38.86	36.73	16.06	10.47	14.19	1.75	0.89	3.56	122.51
2004–05	39.20	37.01	16.28	10.51	14.35	1.76	0.90	3.57	123.57
2005–06	39.25	36.98	16.38	10.45	14.47	1.73	0.90	3.55	123.71
2006–07	39.91	37.47	16.69	10.53	14.70	1.75	0.93	3.59	125.55
2007–08	40.13	37.56	16.83	10.50	14.79	1.73	0.94	3.58	126.06

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

Table 6.5 Total road freight, by vehicle type

Financial year	Light commercial vehicles	Rigid trucks	Articulated trucks	Total
		(billion tonne kilometres)		
1970–71	0.9	10.3	14.2	25.4
1971–72	1.0	10.5	15.6	27.1
1972–73	1.1	10.7	17.0	28.8
1973–74	1.2	10.8	18.3	30.4
1974–75	1.3	11.0	19.7	32.1
1975–76	1.4	11.2	21.1	33.7
1976–77	1.6	12.2	23.9	37.8
1977–78	1.8	13.3	26.8	41.8
1978–79	1.9	14.3	29.6	45.9
1979–80	2.1	15.1	32.5	49.6
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	2.6	17.0	45.4	64.9
1984–85	2.7	17.2	48.9	68.9
1985–86	2.9	17.7	51.3	71.8
1986–87	3.1	18.1	53.6	74.8
1987–88	3.4	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	4.0	20.8	58.7	83.5
1991–92	4.2	21.1	64.3	89.6
1992–93	4.3	21.4	69.9	95.6
1993–94	4.4	21.7	75.5	101.6
1994–95	4.5	22.0	81.2	107.7
1995–96	4.6	22.4	86.2	113.2
1996–97	4.7	22.9	91.2	118.7
1997–98	4.7	23.4	96.2	124.3
1998–99	5.0	24.3	101.3	130.7
1999–00	5.3	25.6	104.3	135.2
2000–01	5.6	26.4	107.4	139.4
2001–02	6.0	27.2	112.9	146.0
2002–03	6.4	28.1	116.5	151.0
2003–04	6.9	29.1	120.7	156.7
2004–05	7.4	30.3	129.9	167.5
2005–06	8.0	31.5	133.5	173.0
2006–07	8.8	32.8	140.9	182.5

Source: BTRE (2006b), *Freight measurement and modelling in Australia* (Report 112), BITRE estimates.

Table 6.6 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)				
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
2008	130.2	168.1	98.4	258.2	158.0	130.4	226.3	230.7

Data are not readily available for missing years.

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

Source: ABS (2008d), *Consumer Price Index, Australia* (ABS cat. no. 6401.0) and ABS (2008h), *Producer Price Indexes, Australia* (ABS cat. no. 6427.0).

Table 6.7 Stock of registered motor vehicles, by vehicle type

	Passenger cars	*Motor cycles*	*LCVs*	*Rigid trucks*	*Articulated trucks*	*Other trucks*	*Buses*	*All vehicles*
				(thousands)				
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
2007	11 462.4	512.0	2 189.6	394.5	74.4	64.5	77.5	14 774.9

Data are not readily available for missing years.

Source: ABS (2007b), *Motor Vehicle Census, Australia* (ABS cat. no. 9309.0).

Table 6.8 Stock of registered motor vehicles, by state/territory

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
					(thousands)				
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
2007	4 361.2	3 818.1	3 033.4	1 157.0	1 676.5	381.2	118.2	229.3	14 774.9

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

Source: ABS (2007b), *Motor Vehicle Census, Australia* (ABS cat. no. 9309.0)

Table 6.9 New motor vehicles sales, excluding motor cycles, by vehicle type

Financial year	Passenger cars	Sports utility vehicles	Other vehicles	Total vehicles excluding motor cycles
		(thousands)		
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
2007–08	631.8	210.9	225.5	1 068.3

Source: ABS (2008j), *Sales of New Motor Vehicles* (ABS cat. no. 9314.0).

Table 6.10 New motor vehicles sales, excluding motor cycles, by state/territory

Financial year	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Total
					(thousands)				
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
2007–08	323.7	276.9	233.7	64.6	122.5	20.0	10.5	16.5	1 068.3

Source: ABS (2008j), *Sales of New Motor Vehicles* (ABS cat. no. 9314.0).

Chapter 7

Rail

Chapter 7 figure and tables

Figure

Tables

Chapter 7 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 4 and 5 of this publication.

Recent events

- January 2007: a new rail bridge was opened at Wagga Wagga with a capacity to carry 22 trains per day, each travelling at 80 kilometres per hour.
- 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 replaces 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.
- October 2007: Lang Hancock Railway opens between Hope Downs and existing Rio Tinto railway.
- May 2008: opening of Fortescue Metals Group's 260 kilometre Cloudbreak railway in the Pilbara.
- Mid 2008: Pacific National begins withdrawal of freight services in Victoria and announces its intention to cease Tasmanian train operations.
- July 2008: program of enlarging rail clearances between Parkes and Crystal Brook completed enabling standard double-stacking of containers between Parkes and Perth.
- October 2008: The Treasurer, Hon. Mr Wayne Swan MP announces that Fortescue Metals Group has the right to access Pilbara railways built by BHP-Billiton and Rio Tinto.
- December 2008: Australian Government announces $1.2 billion funding for rail projects on interstate and Hunter Valley networks.

Future plans

- 2009: completion of an extensive upgrade to the North–South rail corridor (New South Wales/Queensland border to Melbourne), which includes the introduction of passing lanes, concrete sleepers, raised clearances (to enable carrying of maxicube containers on conventional wagons) and improved signalling.
- Mid 2009: completion of the rail link between Dynon Intermodal Precinct and the Port of Melbourne.

Figure 7.1 Map of major rail links, by network manager

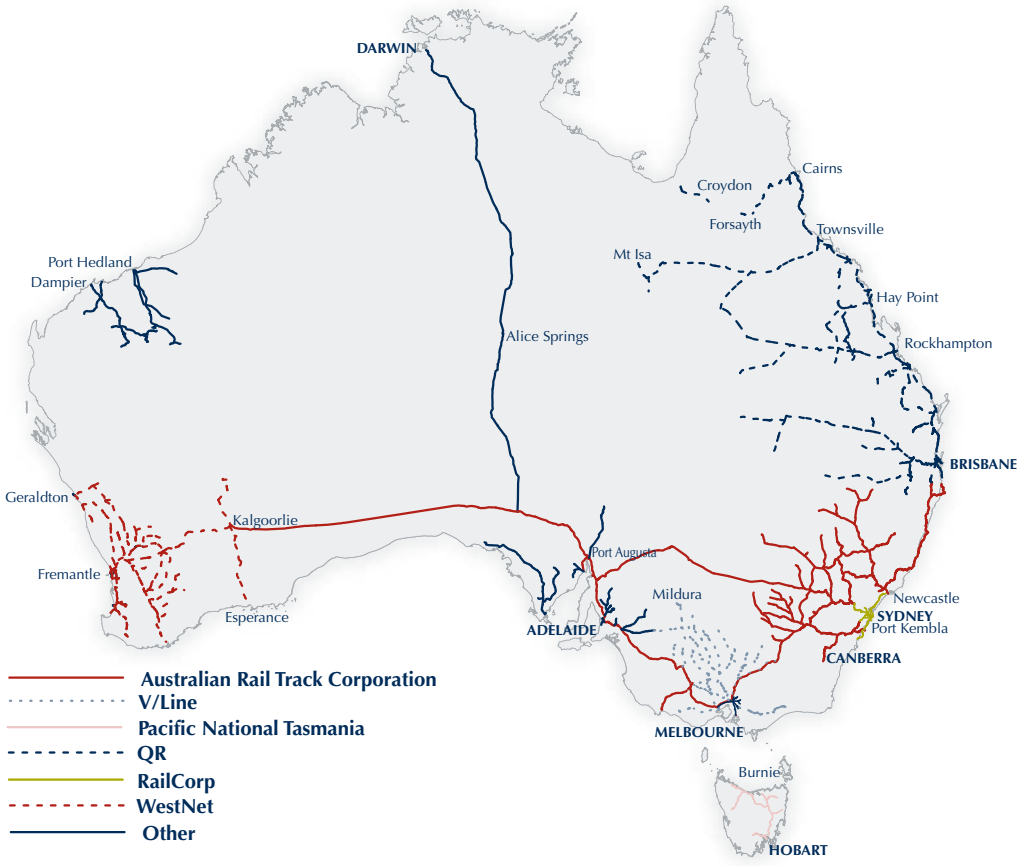


Table 7.1 Intercapital rail distances

	Sydney	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Darwin*	*Canberra*
				(kilometres)			
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 7.2 Interstate non-bulk rail freight, by state/territory of origin

Calendar year	NSW	VIC	QLD	SA	WA	NT	ACT	Total
				(million tonne kilometres)				
1972	1 212.4	1 550.5	414.1	1 212.9	283.9	62.3	na	4 736.1
1973	1 316.6	1 692.6	416.2	1 283.6	475.1	66.4	na	5 250.4
1974	1 423.0	1 830.7	415.0	1 347.6	653.8	70.9	na	5 740.9
1975	1 536.5	1 936.2	410.4	1 402.1	838.5	73.4	na	6 197.1
1976	1 650.4	2 081.3	405.0	1 454.5	1 027.7	77.5	na	6 696.4
1977	1 715.4	2 053.3	431.8	1 531.5	958.4	83.1	na	6 773.6
1978	1 754.5	2 062.9	447.9	1 616.6	899.0	86.5	na	6 867.5
1979	1 805.5	2 047.1	471.9	1 685.2	831.9	90.8	na	6 932.4
1980	1 865.1	2 007.8	483.0	1 758.5	769.3	95.3	na	6 979.0
1981	1 887.5	2 123.2	445.2	1 688.8	931.2	92.7	na	7 168.6
1982	1 654.1	2 029.0	462.6	1 521.6	1 113.5	86.1	na	6 867.0
1983	1 453.5	1 953.2	488.6	1 356.8	1 289.8	74.8	na	6 616.7
1984	1 673.4	2 117.9	488.8	1 574.1	1 162.7	95.6	na	7 112.6
1985	1 644.0	2 205.7	550.5	1 486.6	1 154.7	85.9	na	7 127.5
1986	1 869.8	2 107.4	674.3	1 317.6	1 346.8	77.8	na	7 393.7
1987	2 010.8	2 161.2	728.5	1 629.8	1 401.1	93.6	na	8 025.0
1988	2 567.4	2 481.1	766.9	1 853.0	1 408.2	107.0	na	9 183.6
1989	2 853.9	2 961.8	872.4	2 054.6	1 568.9	113.8	na	10 425.4
1990	2 663.4	2 858.6	955.9	2 246.4	1 470.0	111.1	na	10 305.2
1991	2 367.1	2 842.1	966.6	1 964.5	1 538.5	117.8	na	9 796.5
1992	2 399.1	2 981.3	1 095.2	2 019.0	1 722.5	122.8	na	10 339.9
1993	2 552.2	2 992.8	1 173.1	2 233.3	1 958.8	132.6	na	11 042.8
1994	2 720.9	3 167.3	1 250.2	2 349.7	2 159.6	139.6	na	11 787.2
1995	2 892.4	3 389.7	1 274.0	2 459.1	2 385.5	144.7	na	12 545.5
1996	2 875.8	3 311.5	1 361.4	2 445.5	2 107.2	155.1	na	12 256.6
1997	2 843.2	3 638.4	1 433.0	2 357.6	2 305.3	117.2	na	12 694.7
1998	2 924.2	3 971.3	1 657.2	2 323.2	2 581.3	151.5	na	13 608.7
1999	2 910.9	4 434.7	1 434.2	2 270.7	3 123.8	135.7	na	14 309.9
2000	2 909.2	4 633.8	1 590.4	2 360.0	3 434.7	153.1	na	15 081.0
2001	2 919.3	4 807.0	1 722.9	2 426.7	3 701.6	167.4	na	15 744.8
2002	2 926.2	4 962.1	1 810.9	2 522.0	4 289.6	184.3	na	16 695.2
2003	2 905.9	5 032.2	1 931.6	2 611.7	4 855.9	202.3	na	17 539.6
2004	2 894.3	5 234.0	1 978.5	2 818.4	5 418.1	239.7	na	18 582.9
2005	2 957.3	5 410.7	2 092.1	2 996.8	6 032.7	272.7	na	19 762.2
2006	2 952.4	5 579.8	2 198.0	3 119.0	6 562.8	280.4	na	20 692.4

na: not applicable.

Source: (BTRE 2008a), *Australian intercapital rail freight performance indicators.*

Chapter 8

Aviation

Chapter 8 figures and tables

Figures

Tables

Chapter 8 Aviation

This chapter presents a range of information on Australian air transportation. It includes airline activity, airport performance and a summary of the Australian air fleet. See also air statistics in Chapter 5 Passenger Transport.

Recent events

- 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: 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.
- November 2007: AirAsia X commenced services to Australia.
- November 2007: Tiger Airways commenced domestic operations.
- September 2008: Qantas group took delivery of its first Airbus A380.

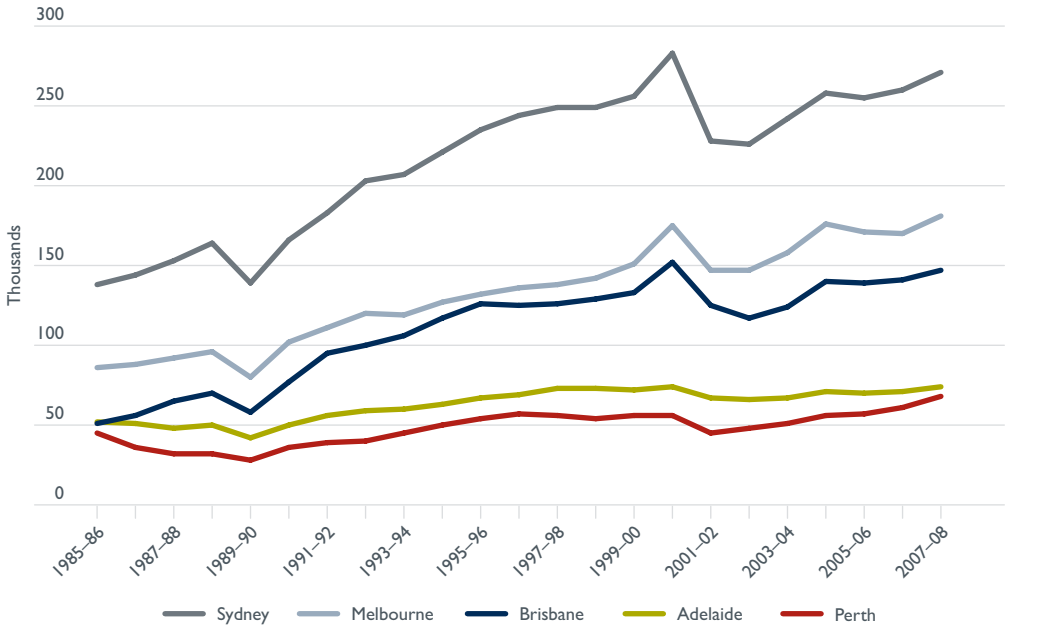
Future plans

- February 2009: V Australia to commence operations to the US West Coast.
- July 2009: Delta Airlines to commence transpacific operations.

Figure 8.1 Aviation passenger numbers and load factors

Source: BITRE (2008e, 2008f), Aviation statistics—website release.

Figure 8.2 Activity at major airports, aircraft movements



Source: BITRE (2008c), *Avline*.

Figure 8.3 Map of top 40 Australian airports

Table 8.1 Intercapital air distances (great circle distances)

	Sydney	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Darwin*	*Canberra*
				(kilometres)				
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: BITRE (2008d), Aviation statistics—website release.

Table 8.2 International airline activity

Financial year	Flights	Revenue passengers[1]	Available seats	Load factor[2]	Freight
	(number)	(number)	(number)	(per cent)	(tonnes)
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	69.3	324 646
1989–90	42 353	8 252 769	12 257 200	67.3	353 898
1990–91	45 300	8 424 511	12 991 767	64.8	357 507
1991–92	48 419	9 042 889	13 773 493	65.7	379 843
1992–93	52 295	9 759 065	15 023 875	65.0	432 810
1993–94	54 781	10 621 976	15 709 444	67.6	476 336
1994–95	60 658	11 565 753	17 443 065	66.9	543 502
1995–96	68 387	12 679 451	19 610 366	66.0	564 914
1996–97	74 347	13 718 480	20 792 015	67.4	614 945
1997–98	77 811	14 080 113	21 604 059	66.7	645 638
1998–99	80 476	14 564 061	21 621 816	68.9	645 587
1999–00	86 751	15 583 694	22 895 592	69.3	687 247
2000–01	93 828	17 126 504	24 565 665	71.1	665 685
2001–02	87 557	16 486 343	22 892 570	73.8	634 341
2002–03	89 374	16 108 417	23 062 891	71.8	635 135
2003–04	100 336	18 131 286	25 885 687	71.5	627 002
2004–05	116 087	20 309 733	29 691 278	69.7	702 418
2005–06	117 790	21 096 951	30 041 002	71.3	726 027
2006–07	119 330	22 137 767	29 768 595	75.6	754 456
2007–08	124 176	23 264 573	30 625 242	77.1	780 993

Data are not readily available for missing years.

1, 2. See End Notes.

Source: BITRE (2008e), Aviation statistics—website release.

Table 8.3 Domestic airline activity

Financial year	Revenue passengers[1]	Revenue passenger kilometres[3]	Available seats	Available seat kilometres	Flights	Domestic load factor[4]
		(thousands)	(thousands)	(thousands)		(per cent)
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
2006–07	45 827 236	52 022 148	59 121	65 670 698	528 863	79.2
2007–08	49 278 702	56 191 023	63 873	71 066 014	549 511	79.1

Data are not readily available for missing years.

1, 3, 4. See End Notes.

Source: BITRE (2008f), Aviation statistics—website release

Table 8.4a Activity at major airports—revenue passengers (thousand)

Financial year	*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	1 868	1 825	854	1 011	628
1998–99	21 585	14 131	9 834	4 677	4 046	2 656	1 864	1 821	860	1 028	653
1999–00	23 098	15 146	10 534	4 891	4 186	2 718	1 959	1 969	909	1 057	682
2000–01	25 814	16 881	12 467	5 162	4 443	2 891	1 888	2 107	974	1 078	732
2001–02	23 150	15 967	11 774	4 766	4 175	2 642	1 736	1 841	958	963	696
2002–03	23 447	16 382	11 841	5 189	4 351	2 900	2 178	1 916	1 010	985	778
2003–04	26 090	18 631	13 780	5 889	4 893	3 222	2 504	2 303	1 226	1 073	923
2004–05	27 954	20 274	15 358	6 525	5 363	3 551	3 142	2 479	1 523	1 211	1 055
2005–06	28 996	21 041	16 016	7 005	5 767	3 731	3 515	2 550	1 606	1 219	1 161
2006–07	31 016	22 157	17 380	7 977	6 181	3 782	3 778	2 687	1 629	1 404	1 279
2007–08	32 701	23 943	18 298	8 952	6 619	3 777	4 323	2 853	1 758	1 562	1 366

Source: BITRE (2008c), *Avline*.

Table 8.4b Activity at major airports—aircraft movements[5]

Financial year	*Sydney*	*Melbourne*	*Brisbane*	*Perth*	*Adelaide*	*Cairns*	*Gold Coast*	*Canberra*	*Hobart*	*Darwin*	*Townsville*
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
1999–00	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
2006–07	260 334	169 831	140 878	60 741	71 277	44 448	27 256	36 851	12 762	17 113	20 247
2007–08	271 035	180 516	146 974	68 201	73 715	42 987	31 125	39 629	13 778	18 380	19 205

5. See End Notes.
Source: BITRE (2008c), *Avline*.

Table 8.5 Domestic on-time performance[6, 7]

Financial year	Sectors scheduled	Cancellations	Sectors flown	On-time departures	On-time arrivals
		(per cent)		(per cent)	(per cent)
2004–05	430 714	0.9	426 662	87.0	86.4
2005–06	457 817	1.0	453 406	87.0	85.7
2006–07	468 809	0.8	464 881	86.9	85.6
2007–08	496 564	1.7	488 112	80.6	78.8

6, 7. See End Notes.
Source: BITRE (2008g), Aviation statistics—website release.

Table 8.6 BITRE airfare index

Financial year	Business	Economy	Restricted economy	Best discount
		(index)		
1993–94	59.2	67.5		96.6
1994–95	62.8	69.1		95.5
1995–96	65.6	71.6		94.6
1996–97	71.7	76.1		103.8
1997–98	76.3	78.7		114.2
1998–99	79.3	81.0		114.2
1999–00	80.0	81.9		113.9
2000–01	89.0	91.6		100.6
2001–02	92.5	96.0		109.3
2002–03	96.8	97.1	102.7	105.5
2003–04	103.0	100.1	100.1	102.0
2004–05	109.8	106.7	106.7	88.0
2005–06	106.8	112.8	99.7	95.1
2006–07	112.1	120.0	103.5	100.5
2007–08	117.6	112.9	111.2	100.3

Data are not readily available for missing years.
Base of index: July 2003 = 100.00.
Source: BITRE (2008h), Aviation statistics—website release.

Table 8.7a Real airport charges (per return passenger)—international[8, 9]

	Sydney	Melbourne	Brisbane	Perth	Adelaide
			(September quarter 2008 dollars)		
Jul-02	55.11	37.24	38.67	44.63	55.66
Jul-03	52.32	38.64	39.20	44.27	54.67
Jul-04	50.84	38.20	42.27	42.34	59.51
Jul-05	52.00	39.25	42.48	49.43	57.80
Jul-06	55.30	41.32	43.53	51.40	79.19
Jul-07	58.19	45.88	53.57	52.20	77.91
Jul-08	52.76	44.92	63.90	49.72	73.24

8, 9. See End Notes. Charges are presented in September quarter 2008 dollars.

Source: BITRE estimates based on price schedules supplied by airport operators, Airservices Australia (2008), Price schedule website release and ABS (2008d), *Consumer Price Index* (ABS cat. no. 6401.0).

Table 8.7b Real airport charges (per return passenger)—domestic[8, 10]

	Sydney	Melbourne	Brisbane	Perth	Adelaide
			(September quarter 2008 dollars)		
Jul-02	11.03	12.22	12.87	18.49	20.82
Jul-03	14.73	12.12	12.58	20.62	19.98
Jul-04	14.56	11.99	12.80	20.43	19.72
Jul-05	14.60	12.65	13.57	21.64	20.98
Jul-06	14.37	12.75	12.86	19.60	35.33
Jul-07	16.44	12.77	13.13	19.88	35.22
Jul-08	15.26	12.35	12.64	18.93	34.94

8, 10. See End Notes. Charges are presented in September quarter 2008 dollars.

Source: BITRE estimates based on price schedules supplied by airport operators, Airservices Australia (2008), Price schedule website release and ABS (2008d), *Consumer Price Index* (ABS cat. no. 6401.0).

Table 8.7c Real airport charges (per return passenger)—regional[8, 11]

	Sydney	Melbourne	Brisbane	Perth	Adelaide
			(September quarter 2008 dollars)		
Jul-02	10.75	12.18	12.70	17.19	13.84
Jul-03	14.67	12.08	12.41	20.52	13.63
Jul-04	14.50	11.94	12.63	20.33	13.40
Jul-05	14.40	12.37	13.18	21.28	14.32
Jul-06	14.28	12.63	12.60	19.34	19.80
Jul-07	14.42	12.63	17.28	19.61	19.58
Jul-08	13.88	12.24	16.44	18.70	19.11

8, 11. See End Notes. Charges are presented in September quarter 2008 dollars.

Source: BITRE estimates based on price schedules supplied by airport operators, Airservices Australia (2008), Price schedule website release and ABS (2008d), *Consumer Price Index* (ABS cat. no. 6401.0)

Table 8.8 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
14 December 2007	8 928	370	52	693	1 479	335	1 085

Sources: CASA (2008), Civil Aircraft Register.

Chapter 9

Shipping

Chapter 9 figures and tables

Figures

Tables

Chapter 9 Shipping

Chapter 9 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.

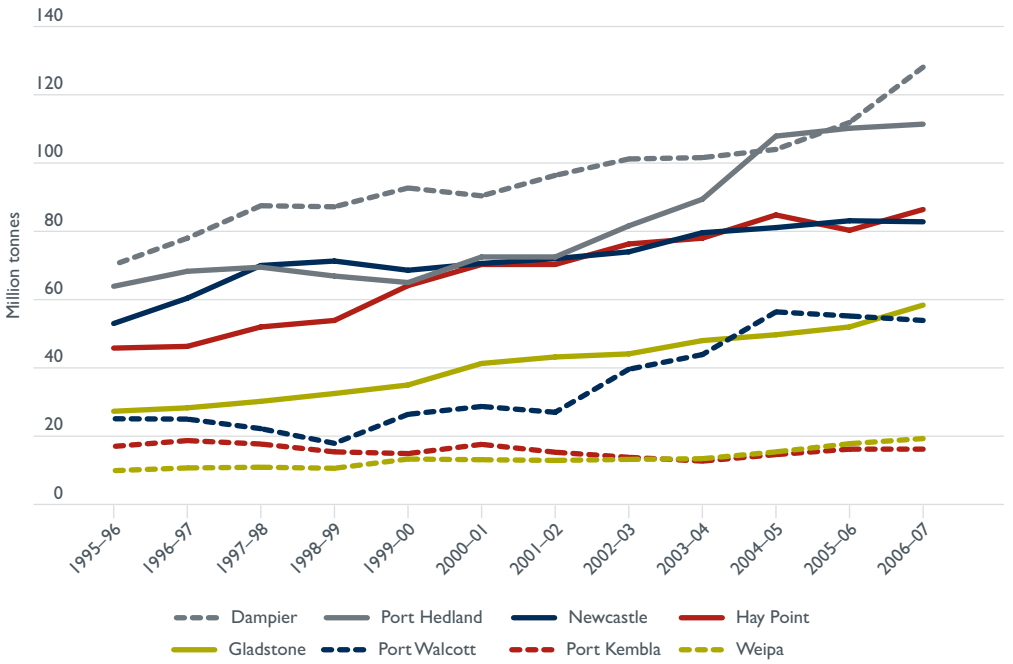
Recent events

- 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.
- May 2008: shipping commenced at Herb Elliot Port at Port Hedland.
- May 2008: work commenced on the Port Botany Expansion project, which will expand Sydney Ports Corporation's container port facilities. Construction is expected to be completed in early 2011.

Future plans

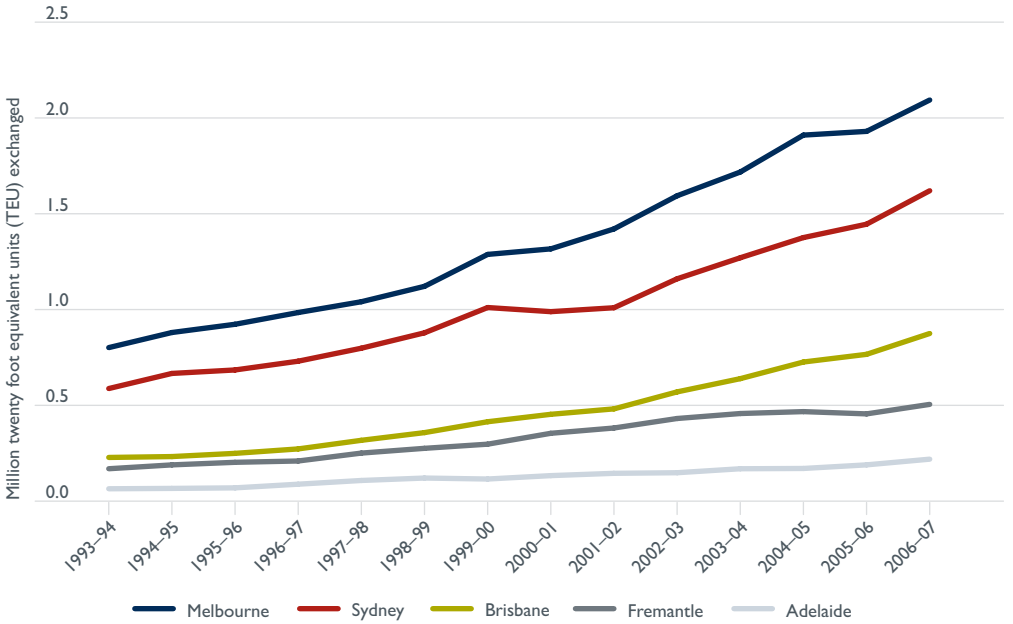
- Late 2009: complete work on the Port of Melbourne Channel Deepening Project.
- 2015: widening and deepening of the Panama Canal is to be completed by 2015. This is likely to result in a sharp increase in the 5000–12 000 teu (twenty foot equivalent unit) container ship size class, enabling the use of 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.

Figure 9.1 Cargo loaded (including exports), by major Australian ports



Source: ABS (2008f), International cargo statistics and BITRE (2008i), Domestic sea freight database.

Figure 9.2 Container cargo exchanged, selected Australian ports



Source: BITRE (2008j), *Waterline*.

Figure 9.3 Map of selected Australian sea ports

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

Table 9.1 Intercapital sea distances

	Sydney	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Darwin*
				(kilometres)			
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 9.2a Number of ships involved in coastal or international voyages that made port calls, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	Total
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	1 807	313	357	3 661
2005–06	1 446	885	2 055	540	1 802	273	350	3 668
2006–07	1 557	921	2 232	482	1 792	303	348	3 852

Source: Lloyd's Marine Information Unit (2008), Lloyd's Ship Movements.

Table 9.2b Number of port calls made by ships involved in coastal or international voyages, by state/territory

Financial year	NSW	VIC	QLD	SA	WA	TAS	NT	Total
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	5 940	2 185	1 022	25 544
2005–06	4 733	4 329	6 451	1 456	5 593	2 085	929	25 632
2006–07	4 785	4 353	7 336	1 273	5 520	2 034	999	26 326

Source: Lloyd's Marine Information Unit (2008), Lloyd's Ship Movements.

Table 9.3a Number of ships involved in coastal or international voyages that made port calls, by major ports

Financial year	*Melbourne*	*Brisbane*	*Sydney*	*Fremantle*	*Newcastle*	*Gladstone*	*Port Hedland*	*Dampier*
1992–93	444	479	464	555	496	331	278	357
1993–94	461	481	493	541	488	235	253	326
1994–95	508	551	527	544	515	250	272	365
1995–96	499	498	495	555	426	284	268	339
1996–97	542	605	545	617	583	302	297	392
1997–98	597	675	636	717	709	384	307	521
1998–99	650	744	654	749	645	399	298	469
1999–00	587	760	638	755	598	421	327	516
2000–01	582	732	607	704	588	461	362	496
2001–02	594	683	578	688	616	469	344	244
2002–03	589	698	610	724	660	533	367	292
2003–04	614	707	627	739	680	640	332	443
2004–05	664	748	615	764	686	652	459	537
2005–06	627	804	649	739	668	685	524	528
2006–07	701	813	700	762	708	731	458	543

Source: Lloyd's Marine Information Unit (2008), Lloyd's Ship Movements.

Table 9.3b Number of port calls made by ships involved in coastal or international voyages, by major ports

Financial year	*Melbourne*	*Brisbane*	*Sydney*	*Fremantle*	*Newcastle*	*Gladstone*	*Port Hedland*	*Dampier*
1992–93	2 573	1 528	2 059	1 224	943	702	503	716
1993–94	2 312	1 276	2 008	1 213	862	498	460	631
1994–95	2 337	1 373	1 945	1 219	865	511	471	668
1995–96	2 223	1 261	1 781	1 149	696	534	438	595
1996–97	2 563	1 687	2 105	1 364	1 041	640	523	740
1997–98	2 774	1 844	2 449	1 668	1 418	737	613	957
1998–99	2 648	2 081	2 508	1 790	1 353	651	614	899
1999–00	2 909	2 241	2 468	1 690	1 231	702	593	977
2000–01	2 864	2 120	2 362	1 661	1 244	855	685	1 002
2001–02	2 944	2 057	2 282	1 639	1 453	1 014	628	356
2002–03	3 185	2 166	2 269	1 596	1 362	1 151	677	462
2003–04	3 234	2 084	2 496	1 613	1 405	1 279	548	1 267
2004–05	3 436	2 240	2 480	1 582	1 577	1 311	983	1 830
2005–06	3 429	2 508	2 613	1 622	1 453	1 432	1215	1 424
2006–07	3 478	2 664	2 633	1 616	1 476	1 466	1455	1 194

Source: Lloyd's Marine Information Unit (2008), Lloyd's Ship Movements.

Table 9.4 International sea freight to and from Australia

Financial year	*Bulk*	*Non-bulk*	*Total*
		(million tonnes)	
1995–96	398.5	21.4	420.0
1996–97	429.6	24.2	453.8
1997–98	451.4	27.6	479.0
1998–99	458.5	29.6	488.1
1999–00	487.2	31.5	518.7
2000–01	520.0	29.9	550.0
2001–02	526.6	32.2	558.7
2002–03	557.3	34.3	591.6
2003–04	585.4	37.1	622.5
2004–05	631.1	49.4	680.6
2005–06	649.4	46.5	696.0
2006–07	702.2	31.6	733.7

Source: ABS (2008f), International cargo statistics.

Table 9.5a Cargo loaded (including exports) at Australian ports, by state/territory

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*Total*
				(million tonnes)				
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	213.71	8.64	6.35	478.45
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
2006–07	106.35	21.73	196.94	12.48	351.24	11.92	10.15	710.80

Source: ABS (2008f), International cargo statistics and BITRE (2008i), Domestic sea freight database.

Table 9.5b Cargo discharged (including imports) at Australian ports, by state/territory

Financial year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*Total*
				(million tonnes)				
1995–96	31.81	15.17	24.88	6.78	11.20	3.75	1.52	95.09
1996–97	31.06	17.26	26.55	7.63	12.46	3.08	1.67	99.71
1997–98	34.19	17.97	26.95	8.39	11.96	4.33	1.79	105.57
1998–99	30.74	21.15	27.74	7.18	11.72	3.98	1.91	104.43
1999–00	31.02	20.43	29.67	7.80	11.96	4.53	2.06	107.45
2000–01	30.95	21.22	28.81	7.47	12.01	3.93	2.11	106.50
2001–02	30.69	21.19	29.34	8.36	12.97	6.18	1.90	110.62
2002–03	31.22	22.84	31.79	8.00	14.60	5.55	1.71	115.72
2003–04	32.11	25.86	31.63	6.93	14.97	5.97	1.79	119.27
2004–05	32.45	25.77	34.27	7.33	15.20	6.05	2.24	123.32
2005–06	31.97	25.44	37.33	8.83	14.66	5.19	3.13	126.55
2006–07	34.36	26.97	39.25	9.73	16.66	4.27	6.42	137.67

Source: ABS (2008f), International cargo statistics and BITRE (2008i), Domestic sea freight database.

Table 9.6a Cargo loaded (including exports), by major Australian ports

Financial year	Dampier	Port Hedland	Hay Point	Newcastle	Gladstone	Port Walcott	Weipa	Port Kembla
				(million tonnes)				
1995–96	70.2	63.9	45.8	53.0	27.3	25.1	9.9	17.0
1996–97	78.0	68.3	46.3	60.4	28.3	25.0	10.7	18.7
1997–98	87.5	69.5	52.0	70.0	30.2	22.2	10.9	17.7
1998–99	87.2	66.9	53.9	71.3	32.5	17.9	10.6	15.4
1999–00	92.7	65.0	64.1	68.6	35.0	26.4	13.3	14.9
2000–01	90.4	72.5	70.3	70.6	41.3	28.7	13.1	17.6
2001–02	96.4	72.5	70.3	72.0	43.2	27.0	12.9	15.3
2002–03	101.2	81.6	76.3	74.0	44.1	39.6	13.2	13.8
2003–04	101.6	89.4	78.0	79.6	48.0	43.9	13.4	12.7
2004–05	104.0	107.9	84.8	81.1	49.7	56.4	15.4	14.6
2005–06	111.9	110.2	80.3	83.1	52.0	55.2	17.8	16.2
2006–07	128.1	111.4	86.4	82.8	58.4	53.9	19.3	16.2

Source: ABS (2008f), International cargo statistics and BITRE (2008i), Domestic sea freight database.

Table 9.6b Cargo discharged (including imports), by major Australian ports

Financial year	Sydney	Melbourne	Brisbane	Gladstone	Fremantle	Port Kembla	Adelaide	Geelong
				(million tonnes)				
1995–96	12.2	10.4	9.4	9.3	8.4	9.5	4.3	3.8
1996–97	15.7	10.6	9.6	9.9	9.9	9.1	5.2	4.7
1997–98	16.0	10.8	11.4	9.4	9.2	11.5	6.3	5.1
1998–99	15.6	12.6	11.1	10.1	9.2	8.7	4.4	5.9
1999–00	17.3	12.4	12.3	10.9	9.1	9.4	4.9	5.8
2000–01	17.9	11.6	11.4	11.0	9.0	9.6	5.7	6.0
2001–02	17.6	12.4	11.7	11.0	10.1	9.5	5.9	6.3
2002–03	18.4	14.2	13.4	10.9	11.4	9.7	5.9	6.1
2003–04	19.7	15.4	13.1	11.5	11.6	9.7	4.9	6.9
2004–05	19.6	16.2	13.9	13.3	12.0	9.9	5.1	7.3
2005–06	20.1	16.2	14.5	15.3	11.1	9.1	6.4	7.0
2006–07	21.8	17.8	16.3	16.1	12.4	9.3	7.5	6.9

Source: ABS (2008f), International cargo statistics and BITRE (2008i), Domestic sea freight database.

Table 9.7a Cargo loaded (including exports), by capital city ports

Financial year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin
				(million tonnes)			
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	4.5	14.2	1.0	0.7
2005–06	5.7	12.4	11.9	5.0	14.1	0.7	1.2
2006–07	6.0	11.1	11.5	4.4	12.3	0.8	3.9

Source: ABS (2008f), International cargo statistics and BITRE (2008i), Domestic sea freight database.

Table 9.7b Cargo discharged (including imports), by capital city ports

Financial year	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Darwin
				(million tonnes)			
1995–96	12.2	10.4	9.4	4.3	8.4	1.1	0.8
1996–97	15.7	10.6	9.4	5.2	9.9	0.2	0.8
1997–98	16.0	10.8	9.4	6.3	9.2	1.1	0.8
1998–99	15.6	12.6	9.4	4.4	9.2	0.8	0.9
1999–00	17.3	12.4	9.4	4.9	9.1	0.9	1.0
2000–01	17.9	11.6	9.4	5.7	9.0	0.5	1.0
2001–02	17.6	12.4	9.4	5.9	10.1	1.1	0.8
2002–03	18.4	14.2	9.4	5.9	11.4	1.0	0.7
2003–04	19.7	15.4	9.4	4.9	11.6	1.0	0.9
2004–05	19.6	16.2	9.4	5.1	12.0	1.1	1.3
2005–06	20.1	16.2	9.4	6.4	11.1	1.1	2.0
2006–07	21.8	17.8	9.4	7.5	12.4	1.1	5.3

Source: ABS (2008f), International cargo statistics and BITRE (2008i), Domestic sea freight database.

Table 9.8 Container cargo exchanged, selected Australian ports

Financial year	*Melbourne*	*Sydney*	*Brisbane*	*Fremantle*	*Adelaide*	*Five ports*
			(twenty foot equivalent units exchanged)			
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
2006–07	2 093 611	1 620 121	875 045	505 082	219 117	5 312 976

Source: BITRE (2008j), *Waterline*.

Table 9.9a Summary of the Australian trading fleet—number of vessels

Financial year	Vessel capacity			Flag		
	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*	*Total Australian trading fleet*
2001–02	94	23	117	62	55	117
2002–03	93	25	118	58	60	118
2003–04	89	26	115	60	55	115
2004–05	86	21	107	58	49	107
2005–06	82	23	105	59	46	105
2006–07	74	22	96	58	38	96

Source: BITRE (2008b), *Australian sea freight.*

Table 9.9b Summary of the Australian trading fleet—deadweight (tonnes)

Financial year	Vessel capacity			Flag		
	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*	*Total Australian trading fleet*
2001–02	3 473 723	12 811	3 486 534	1 734 477	1 752 057	3 486 534
2002–03	3 457 486	14 622	3 472 108	1 580 392	1 891 716	3 472 108
2003–04	3 731 527	15 212	3 746 739	1 607 609	2 139 130	3 746 739
2004–05	3 302 358	12 917	3 315 275	1 464 396	1 850 879	3 315 275
2005–06	3 026 081	14 576	3 040 657	1 370 386	1 670 271	3 040 657
2006–07	3 018 718	13 329	3 032 047	1 364 477	1 667 570	3 032 047

Source: BITRE (2008b), *Australian sea freight.*

Table 9.9c Summary of the Australian trading fleet—gross tonnage (tonnes)

Financial year	Vessel capacity			Flag		
	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	Total Australian trading fleet
2001–02	2 515 439	19 186	2 534 625	1 421 136	1 113 489	2 534 625
2002–03	2 447 286	20 013	2 467 299	1 275 626	1 191 673	2 467 299
2003–04	2 721 189	19 356	2 740 545	1 379 775	1 360 770	2 740 545
2004–05	2 451 883	19 775	2 471 658	1 307 557	1 164 101	2 471 658
2005–06	2 348 830	20 227	2 369 057	1 253 895	1 115 162	2 369 057
2006–07	2 290 422	20 227	2 310 649	1 230 232	1 080 417	2 310 649

Source: BITRE (2008b), *Australian sea freight.*

Table 9.9d Summary of the Australian trading fleet—age distribution (percentage of total deadweight (tonnes))

Financial year	0–4 years	5–9 years	10–14 years	15–19 years	20+ years	Average age
			(per cent)			(years)
2001–02	7.8	24.2	26.9	31.9	9.2	16
2002–03	7.6	22.6	26.5	27.1	16.1	16
2003–04	9.3	21.8	24.7	25.8	18.4	15
2004–05	3.1	31.6	22.7	15.3	27.2	16
2005–06	3.4	16.9	37.3	15.5	26.9	17
2006–07	0.0	10.5	26.4	36.2	26.9	19

Source: BITRE (2008i), Domestic sea freight database.

Table 9.10a Ships in the major trading fleet—overseas trades, 2006–07—tankers

Name	*Products*	*Ports called at*	
		Australian	*Overseas*
Basker Spirit	Crude oil	Fremantle, Geelong, Melbourne, Port Bonython	Indonesia, Singapore
Boral Gas	LPG	Brisbane, Cairns, Devonport, Geelong, Gladstone, Hastings, Hobart	Cook Islands, Papua New Guinea, Fiji, Vanuatu, Norfolk Island, Western Samoa, Tonga, Solomon Islands
Botany Tradition	Chemcials	Brisbane, Bunbury, Melbourne, Sydney	Benin, Guinea, Indonesia, Malaysia, Singapore, Togo, South Africa
Bougainville	LPG	Botany Bay, Cairns, Darwin, Geelong, Hastings	Philippines, New Zealand, New Caledonia, Singapore
Juniper	Chemcials	Adelaide, Brisbane, Dampier, Fremantle, Geelong, Gladstone, Melbourne, Port Bonython	Japan, Saudi Arabia, Russian Federation, New Zealand, United Arab Emirates, Indonesia, United States of America, Taiwan, Thailand, Republic of Korea, People's Republic of China, Singapore, Canada
Nivosa	Crude oil	Geelong, Sydney	Singapore, Saudi Arabia, Papua New Guinea, New Zealand, Indonesia, Vietnam, Brunei, Malaysia
Northwest Sanderling	LNG	Dampier	Japan, People's Republic of China
Northwest Sandpiper	LNG	Dampier	Japan, Singapore
Northwest Seaeagle	LNG	Dampier	Japan, Republic of Korea
Northwest Snipe	LNG	Dampier	Japan, Republic of Korea, Singapore
Northwest Stormpetrel	LNG	Dampier	Japan, Singapore
Pacific Gas	LPG	Botany Bay, Brisbane, Cairns, Gladstone, Hastings, Townsville	Papua New Guinea, Fiji, New Zealand, Tonga, Solomon Islands
Samar Spirit	Crude oil	Botany Bay, Brisbane, Hastings, Kurnell, Sydney	Brunei, Indonesia, Malaysia, Papua New Guinea, Singapore, Vietnam

Source: BITRE (2008b), *Australian sea freight.*

Table 9.10b Ships in the major trading fleet—overseas trades, 2006–07 —bulk carriers

Name	*Products*	*Ports called at*	
		Australian	*Overseas*
Alltrans	Alumina	Gladstone, Launceston, Newcastle, Sydney	New Zealand, Singapore
Eco Chaser	Forest products, dry bulk	Adelaide, Dampier, Fremantle, Launceston, Townsville	Japan, People's Republic of China, Indonesia, Thailand, Vietnam, Malaysia, Singapore, Republic of Korea
Frontier	Iron ore, coal	Hay Point	Republic of Korea, Singapore
Goodwill	Iron ore, coal	Hay Point	Belgium, Netherlands, Brazil, Turkey, Republic of Korea, Singapore
Goonyella Trader	Iron ore, coal	Hay Point	Japan, France, Philippines, Netherlands, Brazil, Germany
Iron Yandi	Iron ore, coal	Hay Point, Newcastle, Port Hedland, Port Kembla	Republic of Korea, Singapore
Orana	Forest products	Burnie, Launceston	Republic of Korea
Pacific Triangle	Iron ore, coal	Hay Point, Newcastle, Port Hedland, Port Kembla	Japan
Pioneer	Sugar	Mackay, Sydney	Singapore, South Africa
Pos Ambition	Iron ore, coal	Hay Point	Brazil, Netherlands, Republic of Korea
Saraji Trader	Coal, dry bulk	Hay Point	Japan, Singapore

Source: BITRE (2008b), *Australian sea freight.*

Table 9.10c Ships in the major trading fleet—overseas trades, 2006–07 —container carriers

Name	*Products*	*Ports called at*	
		Australian	*Overseas*
ANL Australia	General	Botany Bay, Brisbane, Melbourne	People's Republic of China, Republic of Korea, Japan, Taiwan
ANL Escort	General	Botany Bay, Brisbane, Melbourne	People's Republic of China, Republic of Korea, Japan, Taiwan

Source: BITRE (2008b), *Australian sea freight.*

Table 9.10d Ships in the major trading fleet—overseas trades, 2006–07 —livestock carriers

Name	*Products*	*Ports called at*	
		Australian	*Overseas*
Deneb Prima	Livestock	Broome, Darwin, Fremantle, Portland, Townsville	Oman, Malaysia, Singapore, New Zealand, Saudi Arabia, United Arab Emirates, Kuwait, Indonesia
Hereford Express	Livestock	Darwin	Indonesia, New Zealand, Singapore, Malaysia
Kerry Express	Livestock	Brisbane, Darwin, Fremantle, Geraldton, Port Hedland	New Zealand, Singapore, Indonesia, Malaysia, Philippines, Japan
Limousin Express	Livestock	Darwin, Fremantle, Geraldton	Singapore, Indonesia, Malaysia
Maysora	Livestock	Adelaide, Fremantle, Portland	Saudi Arabia, Oman, Egypt, Israel, Jordan, Kuwait, United Arab Emirates, Singapore
Norvantes	Livestock	Cairns, Darwin, Fremantle, Karumba	Indonesia
Torrens	Livestock	Darwin, Portland	United Arab Emirates, Jordan, Brazil, Mexico, Saudi Arabia, Indonesia

Source: BITRE (2008b), *Australian sea freight.*

Table 9.10e Ships in the major trading fleet—overseas trades, 2006–07 —general cargo ships

Name	*Products*	*Ports called at*	
		Australian	*Overseas*
Achilles	General	Darwin	People's Republic of China
Aurora Australis	General	Darwin, Hobart, Macquarie Island, Sydney	Antarctica
Norfolk Guardian	General	Yamba	Norfolk Island, New Zealand
Priam	General	Brisbane, Fremantle, Gladstone, Newcastle, Port Alma, Townsville	United Kingdom, Russian Federation, French Polynesia, Netherlands, Germany, Singapore, People's Republic of China
Protesilaus	General	Gladstone, Newcastle, Port Alma	Republic of Korea, People's Republic of China, New Zealand, Indonesia, Singapore
Telemachus	General	Brisbane, Dampier, Darwin, Gladstone, Mackay, Newcastle, Port Hedland	Indonesia, Papua New Guinea, Singapore

Source: BITRE (2008b), *Australian sea freight.*

Table 9.11a Ships in the major trading fleet—coastal trades, 2006–07 —tankers

Name	*Products*	*Ports called at*	
		Australian	*Overseas*
Barrington	Petroleum products	Botany Bay, Brisbane, Cairns, Gladstone, Mackay, Townsville	
Helix	Petroleum products	Adelaide, Botany Bay, Brisbane, Burnie, Devonport, Esperance, Geelong, Hobart, Melbourne, Port Lincoln, Sydney, Townsville	Singapore
Jasmine	Chemicals	Adelaide, Botany Bay, Brisbane, Dampier, Esperance, Fremantle, Geelong, Gladstone, Mackay, Melbourne, Port Hedland, Townsville	India, Italy, Kenya, Republic of Korea, Kuwait, Singapore, South Africa, Turkey, United Arab Emirates
Palmerston	Petroleum products	Botany Bay, Brisbane, Cairns, Geelong, Gladstone, Mackay, Melbourne, Port Kembla, Townsville	New Zealand, Taiwan, Singapore
Seakap	Bitumen, bituminous materials	Botany Bay, Gladstone, Launceston, Newcastle, Port Kembla, Portland, Whyalla	Taiwan

Source: BITRE (2008b), *Australian sea freight.*

Table 9.11b Ships in the major trading fleet—coastal trades, 2006–07—bulk carriers

Name	*Products*	*Ports called at*	
		Australian	*Overseas*
Aburri	Metal concentrates	Bing Bong	
Accolade II	Limestone	Adelaide, Brisbane, Klein Point	
Cementco	Cement	Abbot Point, Brisbane, Gladstone	
Endeavour River	Bauxite	Gladstone, Weipa, Newcastle	
Fitzroy River	Bauxite	Gladstone, Weipa	
Goliath	Cement	Devonport, Melbourne, Newcastle, Sydney	
Ikuna	Coal, dry bulk	Adelaide, Ardrossan, Botany Bay, Bunbury, Devonport, Fremantle, Geelong, Klein Point, Launceston, Mackay, Newcastle, Port Kembla, Port Lincoln, Sydney, Thevenard	New Zealand
Iron Chieftain	Iron ore, coal	Port Kembla, Whyalla	
Kowulka	Gypsum, sugar, alumina	Botany Bay, Brisbane, Bundaberg, Melbourne, Newcastle, Sydney, Thevenard	
Lindesay Clark	Alumina, fertiliser	Ardrossan, Bunbury, Fremantle, Geelong, Portland	
Ormiston	Gypsum, sugar, alumina	Ardrossan, Bundaberg, Geelong, Melbourne, Port Kembla, Port Latta, Thevenard, Whyalla	
Portland	Alumina	Adelaide, Bunbury, Fremantle, Portland	Singapore
River Boyne	Bauxite	Gladstone, Weipa	
River Embley	Bauxite	Gladstone, Weipa, Newcastle	
Stadacona	Cement, gypsum, dry bulk	Adelaide, Brisbane, Devonport, Geelong, Gladstone, Melbourne, Port Kembla, Sydney, Thevenard, Townsville	New Caledonia
Vigsnes	Metal concentrates, chemicals	Adelaide, Burnie, Geelong, Hobart, Melbourne, Newcastle, Port Pirie, Portland	
Wunma	Metal concentrates	Karumba, Weipa	

Source: BITRE (2008b), *Australian sea freight.*

Table 9.11c Ships in the major trading fleet—coastal trades, 2006–07—container carriers

Name	*Products*	*Ports called at*	
		Australian	*Overseas*
ANL Bass Trader	General	Devonport, Hobart, Launceston, Melbourne	

Source: BITRE (2008b), *Australian sea freight.*

Table 9.11d Ships in the major trading fleet—coastal trades, 2006–07—general cargo ships

Name	*Products*	*Ports called at*	
		Australian	*Overseas*
Claudia I	Blue metal	Newcastle, Sydney	
Frances Bay	General	Darwin, Gove, Groote Eylandt	
Hakula	General, metal concentrates	Adelaide, Ardrossan, Botany Bay, Brisbane, Burnie, Devonport, Geelong, Hobart, Launceston, Melbourne, Newcastle, Port Giles, Port Kembla	New Zealand, Fiji
Iron Monarch	Steel products	Brisbane, Hastings, Port Kembla	
Newcastle Bay	General	Cairns, Weipa	
Searoad Mersey	General	Devonport, Grassy, Melbourne	
Searoad Tamar	General	Devonport, Launceston, Melbourne, Newcastle	
Spirit of Tasmania I	General, passengers	Devonport, Melbourne	
Spirit of Tasmania II	General, passengers	Devonport, Melbourne	
Tasmanian Achiever	General	Burnie, Melbourne	
Trinity Bay	General, passengers	Cairns, Thursday Island	
Victorian Reliance	General	Burnie, Melbourne	

Source: BITRE (2008b), *Australian sea freight.*

Chapter 10

Safety

Chapter 10 figures and tables

Figures

Tables

Chapter 10 Safety

Chapter 10 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.

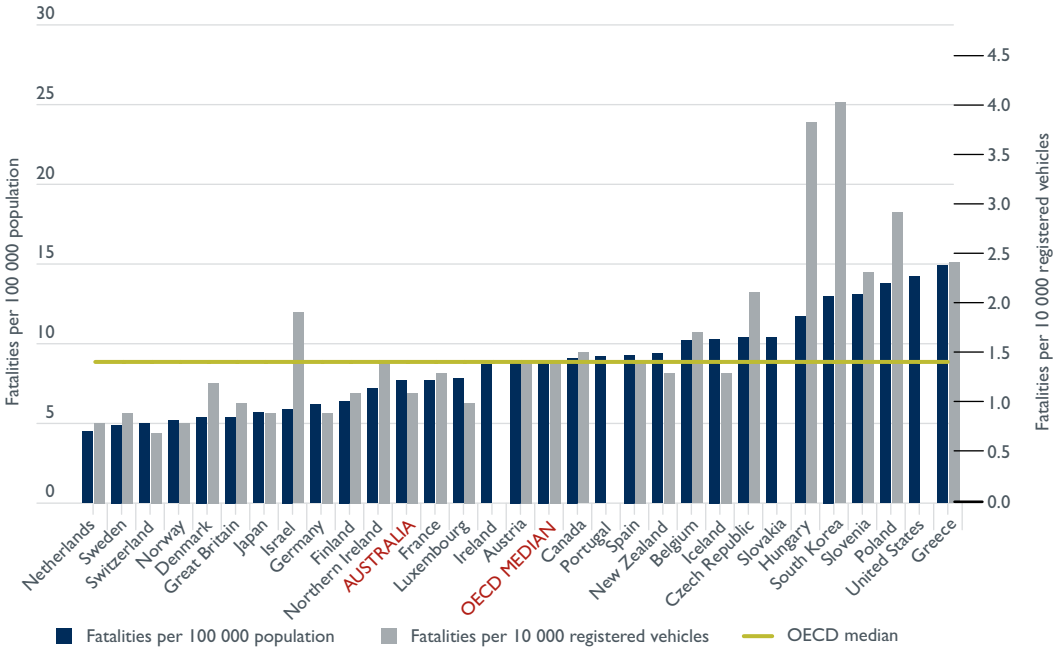
Recent events

- June 2007: Kerang level crossing accident (11 passenger fatalities).
- May 2008: Sydney Harbour boat accident (6 fatalities).
- September 2008: National Heavy Vehicle Driver Fatigue laws introduced in Queensland, New South Wales, Victoria and South Australia, with Northern Territory and Tasmania to follow. Western Australia will retain it's occupational health and safety approach.
- November 2008: the Australian Transport Council adopts the *National Road Safety Action Plan 2009 and 2010*.

Future plans

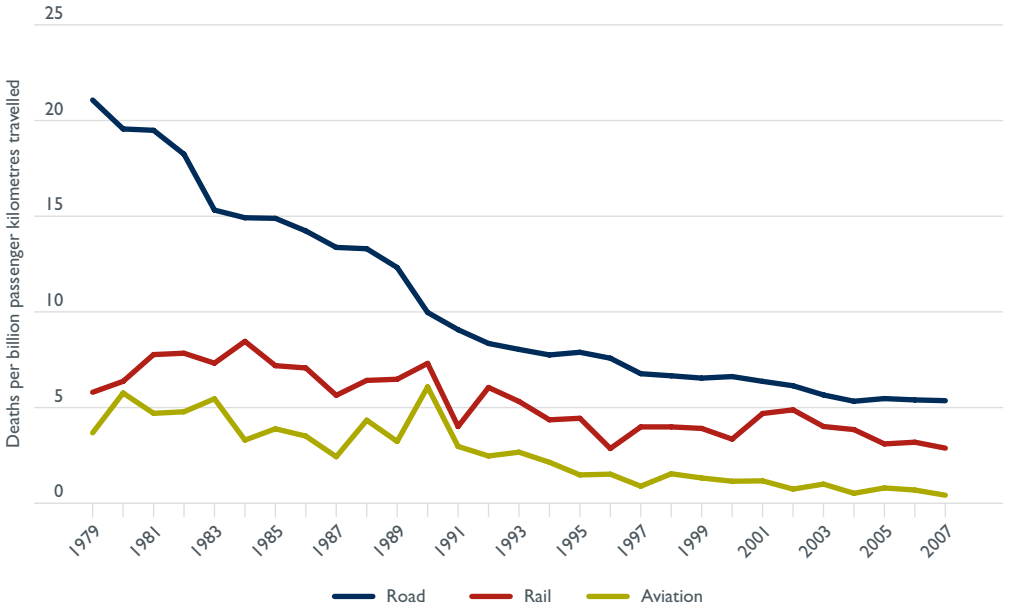
- Early 2009: ATC will prepare Regulatory Impact Statements on a single national system for rail safety regulation, maritime safety regulation and heavy vehicle regulation.
- 2009: a national 'keys2drive' program will be rolled out providing help to learner drivers and parents.

Figure 10.1 Road fatality rates for Australia and other OECD nations—2006



Note: OECD median includes the most recent available data for countries where 2006 data were not available.
Source: Infrastructure (2008b), *International Road Safety Comparisons: The 2006 Report.*

Figure 10.2 Australian transport fatality rate



Source: ATSB (2004, 2006, 2008a, 2008b), Infrastructure (2008c), BITRE (2007), *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates, Office of Road Safety (1984), *Road traffic accident data and rates.*

Table 10.1a Number of fatalities and fatality accidents by transport mode—accidents

Calendar year	*Road*	*Rail*	*Marine*	*Aviation*
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	15
2006	1 453		38	18
2007	1 466		42	13

Data are not readily available for missing years.

National statistics for the frequency of fatal rail accidents are not currently available.

Source: ATSB (2004, 2006, 2008a, 2008b), Infrastructure (2008c), National Maritime Safety Committee (2008), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.1b 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	40	35
2004	1 583	47	47	21
2005	1 627	38	39	36
2006	1 598	40	48	33
2007	1 616	37	52	22

Data are not readily available for missing years.

Source: ATSB (2004, 2006, 2008a, 2008b), Infrastructure (2008c), National Maritime Safety Committee (2008), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.2a Fatality rate and injury rate, by transport mode—fatality rate

Calendar year	Road	Rail	Marine	Aviation
		(deaths per 100 000 population)		
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	0.19	0.18
2006	7.72	0.19	0.23	0.16
2007	7.69	0.18	0.25	0.10

Data are not readily available for missing years.

Source: ABS (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2004, 2006, 2008a, 2008b), Infrastructure (2008c), National Maritime Safety Committee (2008), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.2b Fatality rate and injury rate, by transport mode—injury rate

Calendar year	Road[1]	Rail	Marine	Aviation
		(serious injuries per 100 000 population)		
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				0.28
1999				0.45
2000				0.42
2001		0.43		0.27
2002		0.49		0.19
2003		0.25	0.41	0.30
2004	142.98	0.41	0.63	0.31
2005	146.34	0.34	0.69	0.25
2006	150.75	0.61	0.72	0.23
2007	nya	0.84	0.57	0.21

Data are not readily available for missing years.

nya: not yet available.

1. See End Notes.

Source: ABS (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2004, 2006, 2008a, 2008b), Infrastructure (2008c), National Maritime Safety Committee (2008), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.3a Fatality rate and injury rate by transport mode—fatality rate

Calendar year	*Road*	*Rail*	*Aviation*
	(deaths per billion passenger kilometres travelled)		
1971	30.66		6.63
1972	27.48		8.77
1973	28.38		4.15
1974	25.77		5.24
1975	25.50		4.85
1976	23.78		6.73
1977	22.69		5.65
1978	22.75		6.74
1979	21.00	5.71	3.76
1980	19.49	6.30	5.88
1981	19.43	7.73	4.81
1982	18.18	7.85	4.90
1983	15.27	7.32	5.63
1984	14.87	8.48	3.42
1985	14.86	7.23	4.05
1986	14.18	7.08	3.62
1987	13.32	5.62	2.51
1988	13.25	6.35	4.48
1989	12.27	6.42	3.32
1990	9.94	7.27	6.10
1991	9.04	3.97	2.97
1992	8.32	5.99	2.47
1993	8.01	5.27	2.67
1994	7.73	4.31	2.14
1995	7.86	4.41	1.48
1996	7.56	2.82	1.52
1997	6.75	3.92	0.89
1998	6.64	3.94	1.54
1999	6.53	3.86	1.32
2000	6.60	3.30	1.15
2001	6.35	4.62	1.17
2002	6.13	4.93	0.74
2003	5.65	4.01	1.00
2004	5.29	3.90	0.52
2005	5.42	3.16	0.80
2006	5.35	3.19	0.69
2007	5.36	2.80	0.42

Data are not readily available for missing years.

Source: ATSB (2004, 2006, 2008a, 2008b), Infrastructure (2008c), BITRE (2007), *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates, Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.3b Fatality rate and injury rate, by transport mode—injury rate

Calendar year	Road[1]	Rail	Aviation
	(serious injuries per billion passenger kilometres travelled)		
1971			8.15
1972			8.95
1973			7.19
1974			13.56
1975			7.08
1976			5.34
1977			5.13
1978			10.46
1979			7.51
1980			5.98
1981			8.02
1982			6.63
1983			6.78
1984			7.75
1985			6.41
1986			6.47
1987			15.52
1988			5.58
1989	187.87		10.73
1990	156.77		7.44
1991	139.36		4.62
1992	130.34		3.18
1993	127.88		4.74
1994	133.77		2.56
1995	133.80		2.42
1996	129.41		3.59
1997	124.51		2.49
1998			1.78
1999			2.80
2000			2.48
2001		6.84	1.51
2002		8.11	1.18
2003		4.18	1.68
2004	96.11	6.81	1.53
2005	99.52	5.74	1.13
2006	104.40	10.14	1.00
2007	nya	13.37	0.85

nya: not yet available.

Data are not readily available for missing years.

1. See end notes.

Source: ATSB (2004, 2006, 2008a, 2008b), Infrastructure (2008c), BITRE (2007), *Estimating urban traffic and congestion cost trends for Australian cities*, BITRE estimates, Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.4a Number of road accidents and casualties, by accident severity —accidents

Calendar year	*Fatal*	*Serious injuries*
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	
1999	1 553	
2000	1 628	
2001	1 584	
2002	1 525	
2003	1 445	
2004	1 444	nya
2005	1 472	nya
2006	1 453	nya
2007	1 466	nya

Data are not readily available for missing years.

nya: not yet available.

Source: ATSB (2004, 2006, 2008a, 2008b), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.4b Number of road accidents and casualties, by accident severity —casualties

Calendar year	*Fatal*	*Serious injuries*[1]
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	
1999	1 764	
2000	1 817	
2001	1 737	
2002	1 715	
2003	1 621	
2004	1 583	28 782
2005	1 627	29 850
2006	1 598	31 204
2007	1 616	nya

Data are not readily available for missing years.

nya: not yet available.

1. See End Notes.

Source: ATSB (2004, 2006, 2008a, 2008b), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.5a 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	
1999	8.21	
2000	8.50	
2001	8.16	
2002	7.76	
2003	7.26	
2004	7.17	nya
2005	7.22	nya
2006	7.02	nya
2007	6.98	nya

Data are not readily available for missing years.

nya: not yet available.

Source: ABS 2008i, *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2006), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.5b Road accident rate and casualty rate, by accident severity —casualty rate

Calendar year	Fatal	Serious injuries[1]
	(casualties per 100 000 population)	
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	
1999	9.32	
2000	9.49	
2001	8.95	
2002	8.73	
2003	8.15	
2004	7.86	142.98
2005	7.98	146.34
2006	7.72	150.75
2007	7.69	nya

Data are not readily available for missing years.

nya: not yet available.

1. See End Notes.

Source: ABS 2008i, *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2006), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.6a Number of fatal road accidents and fatalities, by state/territory—accidents

Calendar year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT*	*Total*
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	449	309	313	104	184	43	39	12	1 453
2007	417	290	337	107	214	41	46	14	1 466

Source: ATSB (2006), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates.*

Table 10.6b Number of fatal road accidents and fatalities, by state/territory—fatalities

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
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	496	337	335	117	203	55	42	13	1 598
2007	447	334	359	124	235	47	56	14	1 616

Source: ATSB (2006), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.7a Fatal road accident rate and fatality rate, by state/territory —accident rate

Calendar year	*NSW*	*VIC*	*QLD*	*SA*	*WA*	*TAS*	*NT*	*ACT*	*Total*
				(fatal accidents per 100 000 population)					
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	12.19
1991	9.92	9.84	12.12	11.48	11.43	14.14	36.26	5.53	11.15
1992	9.66	8.19	11.98	9.75	10.31	12.56	24.99	6.11	10.32
1993	8.63	8.52	11.48	13.08	11.38	9.96	24.01	3.68	10.33
1994	9.11	7.69	11.42	9.75	11.45	11.00	20.76	4.98	10.12
1995	9.19	8.21	12.50	11.09	11.19	11.19	31.54	4.59	10.84
1996	8.67	8.38	10.12	10.99	12.46	11.17	31.90	5.51	10.51
1997	8.36	7.53	9.46	8.30	10.25	6.12	29.96	5.50	9.52
1998	7.75	7.50	7.45	10.20	10.92	9.96	31.07	6.45	9.36
1999	7.89	7.36	7.80	8.81	10.22	9.97	22.83	5.44	9.24
2000	8.37	7.87	7.72	10.03	9.82	8.06	24.54	5.08	9.68
2001	7.39	8.41	8.16	9.06	7.94	11.02	21.74	4.70	9.42
2002	7.56	7.42	7.62	9.07	8.26	7.40	20.06	2.48	9.07
2003	7.24	5.97	7.45	8.88	7.94	8.16	21.99	3.07	8.59
2004	6.83	6.26	7.41	8.31	8.17	10.77	16.82	2.75	8.59
2005	6.79	6.22	7.41	8.18	7.49	10.07	24.70	7.57	8.75
2006	6.59	6.03	7.65	6.63	8.94	8.78	18.51	3.59	8.64
2007	6.05	5.57	8.06	6.75	10.16	8.31	21.40	4.12	8.72

Source: ABS (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2006), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.7b Fatal road accident rate and fatality rate, by state/territory —fatality rate

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
				(fatalities per 100 000 population)					
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	7.28	6.57	8.19	7.46	9.86	11.23	19.94	3.89	7.72
2007	6.49	6.42	8.58	7.83	11.16	9.53	26.05	4.12	7.69

Source: ABS (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2006), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.8a 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		5 093	3 517	1 223	2 266	359	324	162	
1999		4 957	3 565	1 239	1 881	363	325	133	
2000		5 187	3 810	1 215	1 665	399	316	130	

Data are not readily available for missing years.

Source: ATSB (2006), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.8b 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		13 287	5 139	1 840	5 018	831	535	247	
1999		12 741	5 231	2 567	4 155	865	539	159	
2000		13 203	5 501	2 497	3 633	923	506	147	
2001									
2002									
2003									
2003–04	9 243	7 834	5 376	2 293	2 271	602	431	328	28 782
2004–05	9 393	8 196	5 874	2 221	2 348	640	392	361	29 850
2005–06	10 108	8 235	5 986	2 347	2 454	736	406	492	31 204

Data are not readily available for missing years.

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

Source: ATSB (2006), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.9a Road accident rate and serious injury rate, by state/territory —accident rate

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
				(serious injury accidents per 100 000 population)					
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		109.81	102.01	82.11	124.32	76.06	170.63	52.28	
1999		105.77	101.82	82.72	101.69	77.00	168.63	42.58	
2000		109.40	106.98	80.73	88.83	84.64	161.59	41.24	

Data are not readily available for missing years.

Source: ABS (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2006), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.9b Road accident rate and serious injury rate, by state/territory —injury rate

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Total
				(serious injuries per 100 000 population)					
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		286.49	149.05	123.53	275.31	176.07	281.76	79.71	
1999		271.87	149.40	171.38	224.63	183.48	279.66	50.91	
2000		278.47	154.46	165.91	193.82	195.80	258.74	46.63	
2001									
2002									
2003									
2003–04	137.74	157.21	137.78	148.86	114.58	124.69	213.20	100.13	142.98
2004–05	138.99	162.28	146.98	143.06	116.45	131.58	189.84	109.31	148.28
2005–06	148.27	160.58	146.30	149.66	119.18	150.23	192.71	147.21	155.01

Data are not readily available for missing years.

Source: ABS (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2006), Infrastructure (2008c), Office of Road Safety (1984), *Road traffic accident data and rates*.

Table 10.10 Number of rail casualties, by severity

Calendar year	*Fatal*	*Serious injuries*
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
2007	37	177

Data are not readily available for missing years.

Source: ATSB (2004), *Railway Accident Fatalities: Australia Compared With Other OECD Countries*, ATSB (2008b), National rail occurrence database.

Table 10.11 Number of rail fatalities, by state/territory

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT[2]	Total
2001	34	10	5	5	2	0	0		56
2002	32	14	3	6	2	0	1		58
2003	26	10	4	5	2	0	0		47
2004	24	12	2	4	1	0	1		44
2005	11	14	7	5	0	0	0		37
2006	9	14	9	4	4	1	0		41
2007	9	19	3	3	3	0	0		37

2. See explanatory notes.

Source: ATSB (2004), *Railway Accident Fatalities: Australia Compared With Other OECD Countries*, ATSB (2008b), National rail occurrence database.

Table 10.12 Rail fatality rate per 100 000 population, by state/territory

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT[2]	Total
2001	0.52	0.21	0.14	0.33	0.11	0.00	0.00		0.29
2002	0.48	0.29	0.08	0.39	0.10	0.00	0.50		0.30
2003	0.39	0.20	0.10	0.33	0.10	0.00	0.00		0.24
2004	0.36	0.24	0.05	0.26	0.05	0.00	0.49		0.22
2005	0.16	0.28	0.18	0.32	0.00	0.00	0.00		0.18
2006	0.13	0.27	0.22	0.26	0.19	0.20	0.00		0.20
2007	0.13	0.37	0.07	0.19	0.14	0.00	0.00		0.18

2. See explanatory notes.

Source: ABS (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2004), *Railway Accident Fatalities: Australia Compared With Other OECD Countries*, ATSB (2008b), National rail occurrence database.

Table 10.13a Number of aviation accidents and casualties, by accident severity—accidents

Calendar year	*Fatal accidents*	*Non-fatal accidents*
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	15	101
2006	18	73
2007	13	105

Source: ATSB (2008a), National aviation occurrence database.

Table 10.13b Number of aviation accidents and casualties, by accident severity—casualties

Calendar year	*Fatalities*	*Non-fatal injuries*
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	36	51
2006	33	48
2007	22	44

Source: ATSB (2008a), National aviation occurrence database.

Table 10.14a 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
2007	0.06	0.50

Source: ABS (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2008a), National aviation occurrence database.

Table 10.14b Aviation accident rate and casualty rate, by accident severity —casualty rate

Calendar year	*Fatalities*	*Non-fatal injuries*
	(aviation casualty rate per 100 000 population)	
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	0.18	0.25
2006	0.16	0.23
2007	0.10	0.21

Source: ABS (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2008a), National aviation occurrence database.

Table 10.15a 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
2007	24	20	27	9	21	2	13	0	2	118

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 (2008a), National aviation occurrence database.

Table 10.15b 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
2007	9	14	24	2	11	0	6	0	0	66

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 (2008a), National aviation occurrence database.

Table 10.16a Aviation accident rate and casualty rate, by state/territory —accident rate

Calendar year	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Other[a]	Total
					(accidents per 100 000 population)					
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
2007	0.35	0.38	0.65	0.57	1.00	0.41	6.05	0.00	0.01	0.56

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 (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2008a), National aviation occurrence database.

Table 10.16b 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
2007	0.13	0.27	0.57	0.13	0.52	0.00	2.79	0.00	0.00	0.31

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 (2008i), *Regional population growth, Australia* (ABS cat. no. 3218.0), ATSB (2008a), National aviation occurrence database.

Chapter 11

Energy and the environment

Chapter 11 figures and tables

Figures

Tables

Chapter 11 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 2006 (DCC 2008).

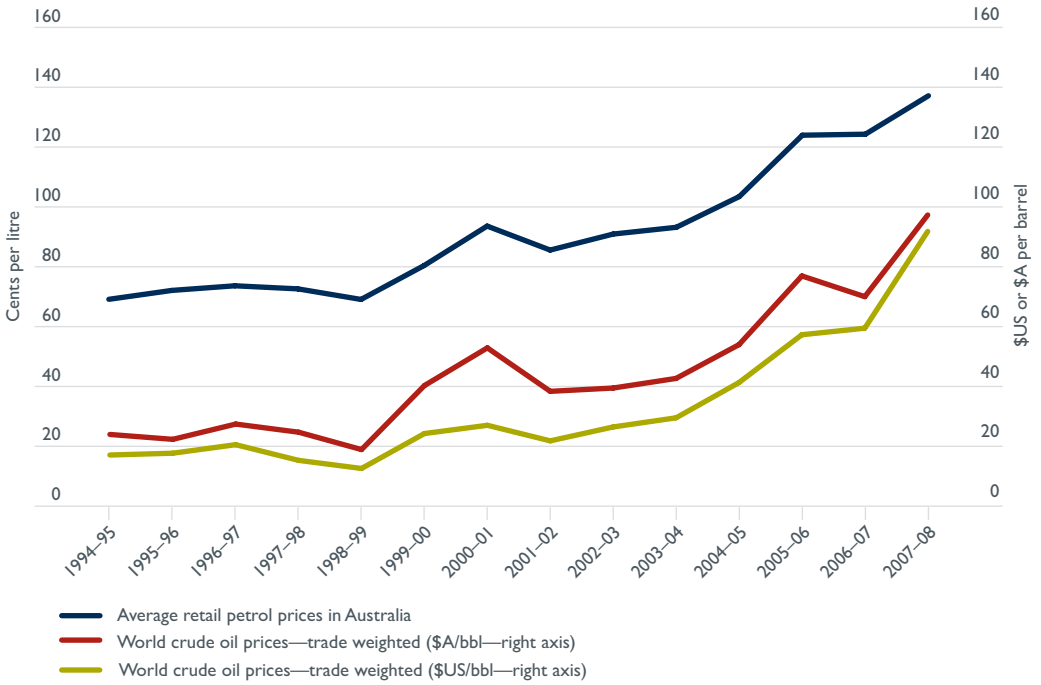
Recent events

- 2008: annual sales of hybrid vehicles reached 5042, up 2 per cent from 2007.
- June 2008: Australian and Victorian governments each pledge grants of $35 millions to Toyota to build a hybrid car factory in Melbourne.
- December 2008: the Australian Government releases the Carbon Pollution Reduction Scheme: Australia's Low Pollution Future White Paper.

Future plans

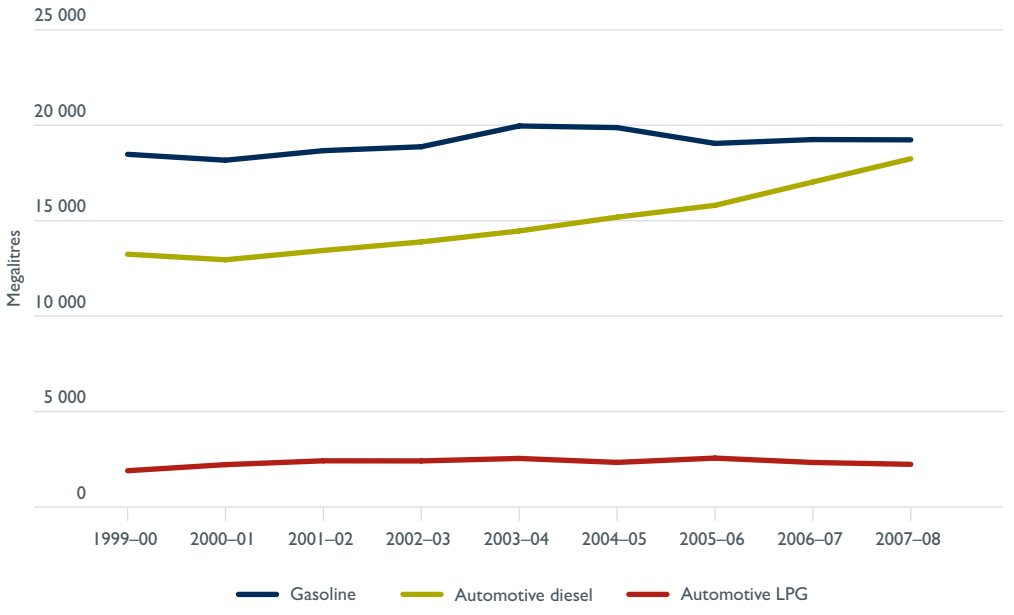
- Early 2010: Toyota Australia to commence manufacturing a hybrid version of the Camry Sedan at the Altona plant in Melbourne.
- July 2010: the Australian Government intends to commence the Carbon Pollution Reduction Scheme.

Figure 11.1 World crude oil prices and Australian retail petrol prices



Source: ABARE (2008b), *Australian Commodity Statistics*, ABS (2008b), *Average Retail Prices of Selected Items, Eight Capital Cities* (ABS cat. no. 6403.0.55.001).

Figure 11.2 Australian road fuel sales



Source: RET (2008), *Australian Petroleum Statistics*.

Table 11.1 Total transport petroleum sales, by fuel type

Financial year	Automotive gasoline	Automotive LPG	Automotive diesel	Industrial & marine diesel	Aviation gasoline	Aviation turbine fuel
			(megalitres)			
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	2 335.3	17 027.6	15.2	89.5	5 837.0
2007–08	19 234.2	2 237.7	18 244.9	11.5	87.8	6 069.5

Data are not readily available for missing years.
Source: RET (2008), *Australian Petroleum Statistics*.

Table 11.2a Australian petroleum production, imports and exports —production

Financial year	Automotive gasoline	LPG[1]	Automotive diesel	Industrial & marine diesel	Aviation gasoline	Aviation turbine fuel
			(megalitres)			
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	119.3	5 332.1
2007–08	17 079.5	1 514.9	12 176.6	3.4	119.0	5 181.8

1. See End Notes.

Source: RET (2008), *Australian Petroleum Statistics*.

Table 11.2b Australian petroleum production, imports and exports —imports[2]

Financial year	Automotive gasoline	LPG[1]	Automotive diesel	Industrial & marine diesel	Aviation gasoline	Aviation turbine fuel
			(megalitres)			
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
2007–08	3 535.9	967.2	7 539.3		0.1	1 847.2

Data are not separately available for missing years.

1, 2. See End Notes.

Source: RET (2008), *Australian Petroleum Statistics*.

Table 11.2c Australian petroleum production, imports and exports—exports

Financial year	Automotive gasoline	LPG[1]	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
2007–08	631.8	2 588.6	463.0	0.0	97.3	149.5

1. See End Notes.
Source: RET (2008), *Australian Petroleum Statistics*.

Table 11.3 World crude oil prices, by region of origin

Financial year	World Trade Weighted	Dubai[3]	Brent[4]	West Texas Intermediate[5]	Gippsland[6]	Tapis[7]
			(US$/bbl)			
1990–91	21.95	20.74	24.64	25.32		
1991–92	17.76	16.96	19.61	20.89		
1992–93	17.74	16.79	18.93	20.43		
1993–94	14.45	13.86	15.39	16.73		
1994–95	16.83	16.18	17.05	18.45		
1995–96	17.44	16.22	17.81	19.37		
1996–97	20.30	19.33	20.93	22.48		
1997–98	15.03	15.08	16.14	17.56	16.52	18.05
1998–99	12.31	12.61	12.61	14.46	13.33	13.08
1999–00	24.05	23.02	24.64	26.04	25.01	24.32
2000–01	26.82	26.05	28.32	30.06	29.48	29.22
2001–02	21.59	21.73	22.72	23.74	23.01	24.13
2002–03	26.26	25.88	27.81	29.90	28.59	28.80
2003–04	29.33	29.27	31.29	33.74	32.99	33.20
2004–05	41.18	40.29	46.16	48.78	48.36	49.18
2005–06	57.25	57.75	62.47	64.24	64.60	66.71
2006–07	59.45	60.86	63.93	63.32	67.53	69.32
2007–08	91.97	90.19	95.37	96.73	98.45	101.00

Data are not readily available for missing years.
3, 4, 5, 6, 7. See End Notes
Source: ABARE (2008b), *Australian Commodity Statistics*.

Table 11.4 Average retail petrol prices in Australia, by capital city

Financial year	*Sydney*	*Melbourne*	*Brisbane*	*Adelaide*	*Perth*	*Hobart*	*Darwin*	*Canberra*
				(cents per litre)				
1994–95	67.4	68.3	60.3	69.3	70.3	73.1	72.9	71.3
1995–96	71.0	71.2	62.5	72.4	74.0	75.4	76.0	74.5
1996–97	73.2	72.0	64.4	73.3	74.4	76.5	79.1	76.3
1997–98	72.0	70.5	63.3	71.2	72.7	77.6	79.9	73.9
1998–99	68.9	66.5	59.4	67.6	68.9	74.1	75.7	71.6
1999–00	80.3	77.4	70.9	79.0	79.8	85.8	87.1	83.2
2000–01	93.5	92.0	83.1	92.9	93.0	96.6	101.6	96.2
2001–02	85.0	83.8	77.2	84.7	85.1	88.7	92.7	87.4
2002–03	90.5	88.8	81.4	89.7	91.7	95.4	97.1	93.0
2003–04	92.8	91.0	84.1	92.7	92.3	98.2	99.6	95.0
2004–05	104.2	101.0	94.5	103.3	101.0	109.6	109.9	104.4
2005–06	123.1	122.5	115.2	123.7	121.3	129.8	129.9	126.3
2006–07	123.2	123.6	116.5	122.2	122.4	126.7	133.2	126.8
2007–08	136.5	136.5	128.5	135.3	135.3	140.5	146.3	138.5

Source: ABS (2008b), *Average Retail Prices of Selected Items, Eight Capital Cities* (ABS cat. no. 6403.0.55.001).

Table 11.5 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)		
1974–75	37 597	2 953	3 911	3 201	47 661
1975–76	39 352	2 967	3 737	2 999	49 055
1976–77	41 620	3 023	4 081	2 848	51 572
1977–78	43 342	3 054	4 487	3 144	54 027
1978–79	45 325	3 069	4 070	3 035	55 499
1979–80	46 168	3 113	4 270	3 170	56 721
1980–81	47 165	3 148	4 313	3 151	57 776
1981–82	49 611	3 125	3 706	3 583	60 026
1982–83	48 818	2 954	3 373	3 453	58 597
1983–84	51 146	3 149	3 413	3 367	61 074
1984–85	53 158	3 352	3 247	3 460	63 217
1985–86	54 404	3 333	3 330	3 721	64 788
1986–87	55 373	3 459	3 292	3 821	65 944
1987–88	58 192	3 474	3 261	4 130	69 057
1988–89	60 478	3 534	2 985	4 056	71 054
1989–90	61 862	3 526	2 682	3 247	71 317
1990–91	60 801	3 513	2 333	4 034	70 680
1991–92	61 633	3 491	2 398	4 379	71 901
1992–93	63 529	3 441	2 179	4 603	73 751
1993–94	65 252	3 539	2 027	4 871	75 688
1994–95	67 763	3 542	2 601	5 742	79 647
1995–96	69 389	3 494	2 742	6 302	81 928
1996–97	70 491	3 619	2 729	6 730	83 568
1997–98	71 726	3 653	2 385	6 103	83 868
1998–99	73 126	3 752	2 052	5 876	84 806
1999–00	74 548	3 884	2 143	6 143	86 718
2000–01	73 978	3 859	1 974	6 844	86 654
2001–02	76 104	3 947	1 997	6 137	88 185
2002–03	78 313	3 982	2 002	5 856	90 153
2003–04	81 140	4 147	2 139	6 126	93 552
2004–05	81 838	4 385	2 361	6 517	95 102
2005–06	81 733	4 427	2 352	7 236	95 748
2006–07	84 087	4 602	2 423	7 884	98 995

Source: BTRE (2006c), *Greenhouse gas emissions from Australian transport: base case projections to 2020*, BITRE estimates.

Table 11.6 Road transport direct greenhouse gas (carbon dioxide equivalent) emissions, by vehicle type

Financial year	*Cars*	*Light commercial vehicles*	*Articulated trucks*	*Rigid and other trucks*	*Buses*	*Motor cycles*	*Total road*
			(gigagrams of CO_2 equivalent)				
1989–90	39 254	8 588	6 468	5 842	1 429	280	61 862
1990–91	39 268	8 307	6 371	5 226	1 382	248	60 801
1991–92	40 010	8 567	6 425	5 035	1 348	248	61 633
1992–93	41 252	8 829	6 903	4 965	1 332	248	63 529
1993–94	42 286	9 099	7 109	5 139	1 374	244	65 252
1994–95	43 420	9 636	7 651	5 416	1 399	242	67 763
1995–96	43 976	9 981	8 047	5 734	1 418	234	69 389
1996–97	44 193	10 080	8 402	6 173	1 409	233	70 491
1997–98	44 496	10 552	8 763	6 265	1 427	224	71 726
1998–99	45 352	10 820	9 068	6 229	1 441	215	73 126
1999–00	46 142	11 046	9 364	6 331	1 450	216	74 548
2000–01	45 641	11 147	9 287	6 192	1 490	221	73 978
2001–02	46 734	11 626	9 610	6 417	1 480	236	76 104
2002–03	47 928	11 992	9 961	6 669	1 527	235	78 313
2003–04	49 788	12 392	10 335	6 816	1 554	256	81 140
2004–05	49 818	12 464	10 671	7 069	1 552	265	81 838
2005–06	48 964	12 560	10 991	7 396	1 534	287	81 733
2006–07	49 693	13 216	11 623	7 697	1 561	296	84 087

Source: BTRE (2006c), *Greenhouse gas emissions from Australian transport: base case projections to 2020*, BITRE estimates.

Table 11.7 Transport direct carbon dioxide emissions, by transport mode

Financial year	Motor vehicles	Rail (electric and non–electric)	Maritime	Aviation	Total
			(gigagrams of CO_2)		
1989–90	60 760	3 470	2 610	3 217	70 057
1990–91	59 618	3 457	2 263	3 999	69 337
1991–92	60 354	3 436	2 326	4 341	70 457
1992–93	62 134	3 386	2 106	4 563	72 188
1993–94	63 740	3 481	1 952	4 829	74 002
1994–95	66 117	3 485	2 517	5 692	77 811
1995–96	67 639	3 439	2 654	6 249	79 981
1996–97	68 660	3 562	2 639	6 673	81 533
1997–98	69 821	3 596	2 297	6 051	81 765
1998–99	71 126	3 693	1 964	5 826	82 608
1999–00	72 464	3 823	2 050	6 090	84 427
2000–01	71 875	3 798	1 880	6 786	84 339
2001–02	73 909	3 885	1 899	6 085	85 778
2002–03	76 036	3 919	1 900	5 807	87 661
2003–04	78 772	4 081	2 030	6 074	90 957
2004–05	79 484	4 317	2 248	6 462	92 510
2005–06	79 421	4 358	2 250	7 175	93 204
2006–07	81 742	4 530	2 320	7 818	96 409

Source: BTRE (2006c), *Greenhouse gas emissions from Australian transport: base case projections to 2020*, BITRE estimates.

Table 11.8 Transport direct methane emissions, by transport mode

Financial year	Motor vehicles	Rail (electric and non–electric	Maritime	Aviation	Total
			(gigagrams of methane)		
1989–90	22.60	1.78	2.30	0.29	26.97
1990–91	22.46	1.77	2.35	0.25	26.84
1991–92	22.94	1.75	2.48	0.24	27.41
1992–93	23.64	1.74	2.63	0.26	28.27
1993–94	24.20	1.81	2.77	0.26	29.05
1994–95	24.94	1.80	2.95	0.27	29.97
1995–96	25.16	1.76	3.10	0.27	30.29
1996–97	25.26	1.81	3.22	0.28	30.57
1997–98	25.24	1.83	3.32	0.28	30.66
1998–99	25.28	1.87	3.48	0.28	30.91
1999–00	25.17	1.95	3.65	0.28	31.04
2000–01	24.22	1.93	3.73	0.28	30.17
2001–02	24.18	1.99	3.92	0.26	30.35
2002–03	24.25	2.03	4.14	0.25	30.67
2003–04	24.47	2.14	4.43	0.25	31.30
2004–05	23.74	2.26	4.58	0.26	30.83
2005–06	22.81	2.30	3.99	0.26	29.35
2006–07	22.54	2.38	4.05	0.27	29.25

Source: BTRE (2006c), *Greenhouse gas emissions from Australian transport: base case projections to 2020*, BITRE estimates.

Table 11.9 Transport direct nitrous oxide emissions, by transport mode

Financial year	*Motor vehicles*	*Rail (electric and non–electric*	*Maritime*	*Aviation*	*Total*
			(gigagrams of nitrous oxide)		
1989–90	2.02	0.06	0.08	0.08	2.24
1990–91	2.29	0.06	0.07	0.10	2.52
1991–92	2.57	0.06	0.07	0.11	2.80
1992–93	2.90	0.06	0.06	0.11	3.13
1993–94	3.24	0.06	0.05	0.12	3.47
1994–95	3.62	0.06	0.07	0.14	3.89
1995–96	3.94	0.06	0.07	0.15	4.23
1996–97	4.20	0.06	0.07	0.17	4.50
1997–98	4.44	0.06	0.06	0.15	4.71
1998–99	4.74	0.06	0.05	0.14	5.00
1999–00	5.02	0.07	0.05	0.15	5.29
2000–01	5.14	0.06	0.05	0.17	5.42
2001–02	5.44	0.07	0.05	0.15	5.71
2002–03	5.70	0.07	0.05	0.14	5.96
2003–04	5.98	0.07	0.05	0.15	6.25
2004–05	5.99	0.07	0.06	0.16	6.27
2005–06	5.91	0.07	0.06	0.18	6.22
2006–07	6.04	0.07	0.06	0.19	6.36

Source: BTRE (2006c), *Greenhouse gas emissions from Australian transport: base case projections to 2020*, BITRE estimates.

End notes

bitre

End notes and definitions

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). Throughout this publication, end notes are numbered consecutively within each chapter.

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 the 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 this lack of additivity on the most recent estimates, the ABS used the reference year (2007-08) 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 in August each year, 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 the overall level of earnings of employees and the 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 compiles average weekly earnings statistics on a quarterly basis in the Survey of Average Weekly Earnings and on a biannual basis in more detail in the Survey of Employee Earnings and Hours. The *Australian transport statistics yearbook 2007* provided estimates of transport industry average weekly earnings based on the quarterly survey. Since the publication of the 2007 Yearbook, ABS has reviewed quality assurance processes for the quarterly survey and as a result no longer provides the industry detail required for the Yearbook. This level of industry detail is now sourced from the biannual Survey of Employees Earnings and Hours. 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 1 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 $490.00 to $510.00.

Table 2.3 includes a number of estimates that are subject to high relative standard errors (greater than 25 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 measured 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 on 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 1991 to 1995 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 Transport infrastructure

Table 3.1

Table 3.1 provides estimates of engineering construction work done on transport infrastructure by both private and public sector organisations. Estimates exclude the cost of land; the cost of repair and maintenance activity; the construction of buildings; the value of transfers of existing assets; the value of installed machinery and equipment not integral to the structure; and expenses for relocation of utility services. Estimates for the construction of airport runways are included in the roads and bridges measure.

Statistics are provided for the sector providing engineering construction services and the sector that is expected to own the project at the time of completion. Thus, statistics for work done by the private sector for the public sector summarise the work done by the private sector engineering construction companies on projects that are owned by the public sector at the time of completion. When a project is undertaken as a Private Public Partnership (PPP) or similar arrangement, it is classified according to the expected ownership of the project at completion. PPPs may be classified as private sector even if ownership eventually resides with the public sector.

ABS provides both current price and chain volume measures for the value of engineering construction work done by the private sector for the private sector; by the private sector for the public sector; and by the public sector. Deflators for these chain volume measures were calculated by BITRE and applied to estimates for transport construction to create approximate volume adjusted estimates for transport engineering construction.

Table 3.2

BITRE regularly prepares estimates of road expenditure sourced from unpublished ABS Government Finance Statistics (GFS) and internal Department of Infrastructure, Transport, Regional Development and Local Government 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 2006–07 prices calculated using the BITRE Road Construction and Maintenance Price Index.

Tables 3.3–3.4

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 changed across states and over time. Annual summaries of these changes were provided in each *ABS Year Book*. Tables 3.3 and 3.4 present the ABS data in time series format, with the addition of estimates for 2005, 2006 and 2007, compiled from a BITRE survey of state road authorities.

Road length data were not available for Queensland, the Northern Territory and the Australian Capital Territory for 2005 and 2006, but have been obtained for 2007. New South Wales 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 kilometres of forestry roads.
5. From June 1988, forestry roads were reclassified from 'cleared only' to 'gravel'.
6. Excludes roads managed by local government bodies, roads on Aboriginal land, and park roads. There have been some roads transferred to local government jurisdiction since the series commenced. Approximately 1000 kilometres of roads were transferred to NT Government jurisdiction as 'Aboriginal Strategic Roads' from 1 July 1997.

Table 3.5

Table 3.5 includes a mix of indexes from ABS and BITRE sources. ABS producer price indexes (ABS 2008h) 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 3.5 are a mean of the four relevant quarters.

Where available, BITRE estimates (base of index 1993–94 = 100) compiled in 1996 (BTCE 1996b) and 2008 (BITRE 2008j) have been included in the table for previous years and as an alternative measure to the ABS index for Australian road and bridge construction.

Chapter 4 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 the load 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 2008k). 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 2006b). 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 2006–07 were based on the results of the 2007 Australian Rail Survey as published in the *Australian Rail Industry Report 2007* (ARA 2008). The Australasian Railway Association Inc commissioned the Apelbaum Consulting Group to prepare the report. The *Australian Rail Industry Report 2007* provides measures of bulk and non-bulk freight based on definitions that differ from BITRE models and, therefore, are only included in estimates of total rail freight in this publication. Estimates for state rail freight are derived from the Australian estimates using BITRE models (BTRE 2006b).

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 8.2). 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 4.1–4.5

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 5 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.

Tables 5.1–5.2

BITRE modelling uses data from a range of sources to provide a consistent time series of Australian passenger travel (PKM). Estimates of air passenger travel (Table 5.1) differ from survey results for revenue passenger travel on domestic airlines (Table 8.3) as Table 5.1 is derived from a statistical model that creates estimates for all motorised modes of passenger transport. Vehicles not classified to passenger cars, buses, rail or air are included in 'other transport mode' (Table 5.1).

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).

For intercapital city passenger travel, estimates of the land based component include travel between origin and principle destination, while the aviation component includes all travel between city pairs.

Table 5.3

These estimates were made for *Estimating urban traffic congestion cost trends for Australian cities* (BTRE 2007) and have been updated using BITRE models. Estimates of passenger kilometres travelled in commercial vehicles primarily represent non-business use of light commercial vehicles. Data for cars, light commercial vehicles

and motorcycles 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.

Table 5.4

Method of travel to work statistics are compiled every five years as part of the Population Census conducted by the ABS. These statistics show the method used to travel to work on the day of the Census by the entire Australian working population, attributed to the state or territory where each worker spent Census night.

2. Counts of persons travelling to work by public transport and other methods only include persons travelling by train and other method and bus and other method. Estimates for ferries or trams and other method are only available for the 1991 Census and have been excluded to maintain the time series.

Chapter 6 Road

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

Map 6.1

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

Table 6.1

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

Tables 6.2–6.5

Estimates for motor vehicle usage are modelled by BITRE, primarily from data compiled by the SMVU (ABS 2008k). In addition to the SMVU, modelling of passenger transport also incorporates fuel use statistics from the monthly *Australian Petroleum Statistics* (RET 2008). *Freight measurement and modelling* (BTRE 2006b) provides an outline of modelling techniques used for freight estimation, while *Greenhouse gas emissions from transport* (BTRE 2002 and 2006c) provide an outline of modelling techniques used for passenger estimation.

Table 6.6

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

Tables 6.7–6.8

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 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.

Tables 6.9–6.10

Data for new motor vehicle sales are sourced from the Federal Chamber of Automotive Industries and presented in *Sales of New Motor Vehicles, Australia* (ABS 2008j). The scope of these statistics is different to motor vehicle registrations data (Tables 6.7–6.8) 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 7 Rail

Table 7.1

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

Chapter 8 Aviation

Table 8.1

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

Tables 8.2–8.3

1. Revenue passengers are fare paying passengers.
2. Number of international 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 5.1) differ from survey results for domestic airline revenue passenger travel.
4. Domestic revenue passenger kilometres divided by available seat kilometres.

Table 8.4

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 8.5

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 seven days of the scheduled departure time).

6. Participating airlines are Jetstar, Macair, Qantas, QantasLink, Regional Express, Skywest, Tiger Airways and Virgin Blue.
7. Series commenced November 2003. Jetstar commenced reporting from May 2004, Macair from July 2005 and Tiger Airways from April 2008.

Table 8.6

Airfare indexes provided are the annual average of monthly indexes compiled by BITRE.

Table 8.7

8. Presented in September quarter 2008 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 9 Shipping

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

Table 9.1

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.

Tables 9.2–9.3

Tables 9.2 and 9.3 provide estimates of the number of ships that visit major ports or states and the number of vessel visits a port or state receive during a financial year.

Table 9.4

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.

Tables 9.5–9.7

Tables 9.5, 9.6 and 9.7 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 9.9

Table 9.9 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 9.10–9.11

A list of the major Australian registered trading vessels (greater than 2000 dwt) engaged in Australian coastal and international trade is provided in Tables 9.10 and 9.11. 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 10 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 10.1

Table 10.1 provides a cross-modal comparison of fatality accidents and fatalities. Road statistics are compiled by the Department of Infrastructure, Transport, Regional Development and Local Government (Infrastructure), 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 10.2–10.9

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 5.1.

1. Between 1989 and 1997, statistics for serious injuries resulting from road accidents were based on statistics compiled from police accident reports. Comparable national statistics are no longer available from these sources. From 2003–04, serious injury statistics are compiled on a financial year basis (year ended 30 June) from hospital records provided to the Australian Institute of Health and Welfare and maintained on their National Hospital Morbidity Database.

Tables 10.10–10.12

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.

2. ACT rail fatalities are recorded under NSW.

Tables 10.13–10.16

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 11 Energy and the environment

Tables 11.1–11.2

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 11.3

Annual world crude oil prices are presented as the average of quarterly prices compiled by ABARE from posted or official selling prices with Rotterdam spot prices for Middle East and North Sea crudes.

3. Middle East crude, 32 American Petroleum Institute (API) gravity.
4. North Sea crude, 38 API gravity.
5. North American crude, 40 API gravity.
6. Australian crude, 42 API gravity.
7. Malaysia tapis blend, 44 API gravity.

API gravity is an international standard measure of crude oil density, with higher API gravities signifying lighter oils. Light crude oil has an API gravity higher than 30.

Tables 11.4

Annual average retail petrol prices are calculated as a simple average of quarterly prices for unleaded petrol collected by the ABS as part of CPI compilation processes.

Tables 11.5–11.9

Emission estimates that are provided in terms of carbon dioxide equivalent emissions in Tables 11.5 and 11.6 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 11.7 to 11.9 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 small number of tables. In addition, some estimates have been updated since the booklet was published.

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Abbreviations

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Abbreviations

ABS	Australian Bureau of Statistics
ABARE	Australian Bureau of Agricultural and Resource 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